relate

REsearch LAbs for TEaching journalists

DISCOVER SCIENCE ...INSIDE OUT

Journalists' diaries

Project Partners

ENEA ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES, ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

TÜBİTAK

Funded by

SEVENTH FRAMEWORK PROGRAMME

European Commission

www.relateproject.eu

Project partners

MINERVA Consulting & Communication - Belgium

A PR agency specialised in management, implementation and assessment of dissemination activities within research projects for the EU programmes.
MINERVA is in charge of the project's administrative coordination,the overall project dissemination and the selection of new research labs.

EJC, European Journalism Centre - The Netherlands

An independent institute dedicated to the highest standards in journalism, operating as a facilitator and partner in a wide variety of training and media development projects. The EJC acts as intermediary with the students. It is in charge of their selection and the evaluation of their work.

ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development - Italy

A public research body operating in the fields of energy, the environment and new technologies to support competitiveness and sustainable development in Italy and Europe.

EPFL, Ecole Polytechnique Fédéral de Lausanne – Switzerland

One of the two Ecoles Polytechniques Fédérales of the country, it is devoted to education, research and technology transfer at the highest international level.

TÜBITAK, The Scientific and Technological Research Council of Turkey - Turkey

The Turkish governmental agency in charge of promoting and coordinating research and development in line with the national targets of economic and technical progress. TÜBITAK contacts Turkish research organisations to send students to their facilities with the aim to improve EU-Turkey dialogue.

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Editorial

The RELATE project has been implemented over the last two years from January 2008 until January 2010.
It addressed young journalists from all over Europe either in their final year at University or starting their first job. The 78 participants were selected from almost 350 applications that were received during the three phases of the project selection.

The participants were carefully selected by the members of the project advisory board which is composed of science communicators, science journalists, journalists and communication experts at European level.

Selected candidates were sent for a one-week visit to a European laboratory involved in a EU-funded research project and currently receiving financial support from the European Union's 6th or 7th Framework Programme (FP6-FP7).

The week-long visit was carefully prepared by a researcher from the laboratory and one person from the project partners. The planned schedule included visits to the laboratory and to its research centre, the possibility of watching, interviewing and making videos of researchers in action, hands-on experience of laboratory tasks and the opportunity to gain a genuine feel for the life, work and activities that researchers go through every day in their working environment.

Each student had to complete a webpage-based, daily diary, recounting their experience and outlining the most relevant aspects of their days, their impressions, feelings, difficulties, opinions and thus providing feedback about their unique opportunity.

This booklet contains the full collection of all the diaries written by the participants of RELATE project, during their laboratory visits.

The visits took place in November 2009, March 2010 and November 2010.

The diaries are grouped by laboratory and date, but are not otherwise sorted into any particular order.

Each diary is introduced by a brief biography of its author, together with links to their publications.
Thus, the core of this book is made of the journalists' stories which put the readers in their place and allows them sharing the same emotions and experiences. Who does not wish to have the same opportunity?

This booklet demonstrates the great success of the RELATE project from the journalists' perspective and I truly hope that it will inspire to launch new and similar projects in the near future.

I have enjoyed it already, now it's your turn!

RELATE project coordinator
Hinano Spreafico

The diaries, called also "blogs", are available online on the RELATE website, **www.relateproject.eu**, in the students' section of the dedicated "Wiki area". **http://relateproject.eu/participants/wiki/doku.php**

1st Session

November 2009

relate
REsearch LAbs for TEaching journalists

ANKARA (Turkey)
//Clara Attene

About me

Education and training:

- JAN-JUL 2009 Diploma in Journalism at The London School of Journalism
- AUG-OCT 2008 Internship at Il Venerdì di Repubblica (National weekly news magazine) - Rome
- JUN-AUG 2008 Internship at ANSA (International news agency) - Brussels
- AUG-OCT 2007 Internship at Radio Popolare (National radio network) - Milan
- JUN-AUG 2007 Internship at IlSole24Ore-NordOvest (National business newspaper) -Turin
- 2006-2008 Diploma in Journalism at IFG – School of Journalism of Urbino
- 2000-2006 Master degree in Media Studies at University of Trieste

Professional experience:

- From JUN 2009 Freelance producer at RAI (Italian State Television) - London
- From OCT 2008 Freelance writer at Il Venerdì di Repubblica (National weekly news magazine) - Rome
- From AUG 2007 Freelance business writer (both press and online edition) at IlSole24Ore (National business newspaper) - Milan
- 2007-2008 Freelance journalist at Radio Popolare (National radio network) - Milan
- 2003-2005 Online journalist (part-time) at Fucinews and Fucinemute (Cultural webzines) - Trieste
- 2002-2004 Sport reporter (part-time) at LunedìSport Trieste (Local weekly sport magazine) - Trieste

Awards and personal grants:

- NOV 2009 RELATE project fellowship - Ankara, Turkey.

Monday

2-11-2009

Writing about nanotechnologies looks like a huge challenge. It's not just a pun. The question is: how to explain to other people something about I almost don't know? Something that seems to be at the same time so rich in potential and so difficult even to imagine, though it is already part of our life?
Actually, we could say that handle an unknown topic is a daily challenge for every journalist and I agree with the perspective that the lack of a scientific background may help on asking for those questions that are the same of the so called common people or to grab some relevant aspect that can be overlooked otherwise, but… Ok, we will see…
Going ahead, I have to say that I am really impressed from the fact that Turkish people seem they want to show that they deserve to join European Union.
Even before coming here I have been strongly interested in this matter as well as about the history of this country, which I find is for many aspects closer to Europe than we probably often think there, inside the EU. Bilkent University is a proof of it: nothing here seems to be really different from a campus somewhere else, like in UK or in Italy. Actually, it remembers to me the atmosphere and the architecture of my university in Trieste (or to be more clear about this last aspect, also the architecture of EUR neighbourhood in Rome). Actually they are a step forward comparing to Italy, if you think that here the most of their lectures take place in English.
In the same way, the attitude of the people makes me feeling like home: great hospitality, that sort of 'Mediterranean chaos' where everything in the end got its place and anyway the willingness to achieve a goal.
Talking about the core part of this visit, after reading a book by Eric Drexler 'Unbounding the future: the nanotechnology revolution', which is in my opinion quite futuristic, I have found the first approach to the issue a bit less difficult than I have thought. Obviously, the best has to come.

Tuesday

3-11-2009

Today we started visiting laboratories. White dressed (with a smock, a cap and a cover on our shoes) and equipped with cameras, notebooks, videocamera and recorders we have the first overview about the process of manifacturing wafers. Well, of course they are not that kind of wafers you can eat (though cookery is another good chapter of this experience), but the basical stuff (crystals to be precise)they work with.
In the afternoon we approached the 5 project we are going to shadow: the most fascinating seems to be that about cloaking with metamaterials. Of course, this is the kind of topics that can easily grab the attention of any common person. Being invisible is like flying: an old dream of human beings.
And according to what they said (and even the weather), I think that something is blowing in the wind.

Wednesday

4-11-2009

Let's start shadowing: that's the theme of today. After briefing during breakfast in Monica's room (yesterday we did it in Viktorija's room) discussing which project we want to follow, we got a small "surprise":

NANOTAM staff have already assigned each of us to one or two projects. Actually, nobody is compelled on doing just it or them and we can arrange according to our needs and wishes.
I have to say that I've been lucky: I would like to follow the cloaking project and I did.
This is my first "official" step on the magic world of metamaterials and nanoscience and I'm really surprised how many information you can get and mainly understand though I'm not an engineer or a physicist. Most of this process are complicated, but at the same time not really far from phenomena we can observe or at least see in our "normal" life.

Thursday

5-11-2009

Keeping on with the shadowing. First, in the morning we attended a group meeting, where all researchers once a week report what they have done and what they are planning to do in the following days.
In the afternoon I went to shadow graphene based transistors project: it makes me muse that nanosciences are promising, but it is quite hard to predict when we can use their application (I mean, for instance, those the scientists are testing here).
Science is a job for patient people: what we immagine outside of laboratories (things like mad scientists and sensational discoveries) are quite far from reality. Or better, they make (fortunately, I think) sensational discoveries but it takes long times, hours and hours spent in labs looking at microscopic samples or just trying nonstop to find a new solution for the same problem. It is not very far from what we do on our life: we just try, like when we start walking, and this is the only way we discover if something works and which is the best way to make it works in the more efficient way.
Approaching scientific journalism is the same for me (and for my colleagues, I think, at least about nanotechnologies): I didn't have so much information, but I'm trying and… it seems to work!
Actually, when I was a child I thought that if a man could spend all his life studying, maybe in a secluded cave or library, doing his best he could learn all knowledge that exists in the world… Maybe now it could sounds funny, but I think this child's fantasy has been a good inspiration for undertaking this career, which has the wonderful feature that makes you learn something new every day.

Friday

6-11-2009

Our last day at Bilkent University has started with breakfast at Miguel's room.
Yesterday night we went to see Ulus, the old part of Ankara: the bazaar, the street that show only one kind of shops each one (like the street with all lamps shops or clothes shops or handicraft shops…), the mosque, the call prayer that resounded in the night across the city made me feeling that kind of "oriental sensation" we so often associate to Turkey. I have found Ankara as a good example of what Turkey is nowadays.
Today, together with Miguel, I interviewed Neval Yilmaz, who is researching on nanobiosensors: this was my last shadowing and now it's almost time to start writing…
I am conscious how often there is a gap between the way scientists communicate and other people (journalists included) do, but as I said during our final meeting in the afternoon with Prof. Ekmel OZBAY's staff, I see good chances of success, not only in this occasion, to improve it.
I am also glad to have more fresh in my mind a concept underlined by Monica: research has a reason to exist in itself (like a paint or a sculpture, as she said), apart from any potential application in our daily life.
It's a common fault of journalists to look always for "something concrete" and it comes straight from the fact that each editor of the world will ask you: "And how could you use that?". It's a matter of educating journalist that before the final aim, it is important to consider all the process: in other words, even covering political or business news we perfectly know that the final big agreement that would gain the headline in the main page is made out of single meetings, compromises and negotiations. There is no reason to think that science is different.
It's almost time to leave: my plane is scheduled at 4.35am, really too early to have more time to enjoy Ankara and Turkey as much as I would do… but this is a good pretext to come back soon!!!

Additional info
Link to my website:
http://s ites.google.com/site/claraatteneit/home
My profile is also available here:
http://uk.linkedin.com/in/claraattene

ANKARA (Turkey)
//Jan Dąbkowski

About me

Education and training: Warsaw University, Laboratory of Reportage
Journalistic experience: Gazeta Wyborcza, WIK (cultural monthly), PDF (monthly about media), Newsweek Poland, yearly and temporary Polish and European event magazines.
Professional experience: Coordinator and animator of journalistic workshops. Creator of Polish and international journalistic projects for youth.
Publications: Co-author of books – „Human without Borders" – collection of texts about disabled people, and „Youth4Diversity" – handbook about human rights, diversity and good practices of antidiscrimination activities.

Monday

2-11-2009

Delayed flights, lost mobile phone, crazy drivers and at last here we are
Nanotechnology Research Center NANOTAM http://www.nanotechnology.bilkent.edu.tr at Bilkent University http://www.bilkent.edu.tr

// We have got intro about Nanotechnology from prof. Ekmel Ozbay, director of our host - Nanotechnology Research Center NANOTAM:

// Small group from different countries with diverse background and experience - here we are

Tuesday

3-11-2009

Study visit in labolatories and presentations of research

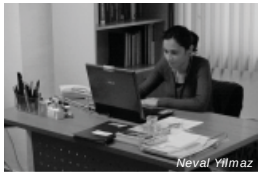


Wednesday

4-11-2009

Scientists job shadowing


Monica Mejia-Chang with Zhaofeng Li

Clara Attene with Ozgur Cakmak

Neval Yilmaz

Thursday

5-11-2009

Continuation of scientists job shadowing
It's really a privilage, that we can talk to scientists personally, ask so many questions, come back to the topics, ask for interpretation, for a draft on a paper :) Today we've got a possibility to take part in a weekly meeting of the whole laboratory



//Then we had a second part of shadowing in the labs.

//And in the end we had something beautiful - sun came back to Ankara

I'm exhausted and satisfied after a hard work today.

Friday

6-11-2009

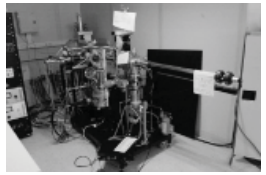
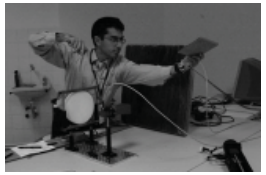
Last chance for the news and informations
The was no meaning for not using the possibility to talk with the researchers from the other departments and institutes:


Prof Omer Dag

Ph. D. Emrah Ozensoy

And their work

Last scientists shadowing

And that's all - we're leaving the lab..

Saturday

7-11-2009

A while for Ankara!
Thanks to our friend Evrim Colak, we had a chance to visit the important places of Ankara in short time. So we visited Ataturk




Then ate wonderful salade with kebap

Sunday

8-11-2009

Safe and sound come back home :)
Flights were totally OK, mobile phone got found in Istanbul, drivers are just normal after this week. A huge satisfaction - it was really worth to be there - perfect organisation - bravo!

Additional info
My profile is also available here:
http://www.facebook.com/inbox/readmessage.php?t=1238769283675#/home.php?ref=home

ANKARA (Turkey)
//Mónica Mejía Chang

Panamanian
March 29, 1972
mmejiachang@gmail.com

About me

Education and training:
- 2009-present: Masters. Scientific Communication. Pompeu Fabra University, Barcelona.
- 2003-2007: PhD. Plant Sciences Departament, University of Cambridge.
- 1997-2000. Masters of Science. Botany Departament, University of Hawaii, Manoa.
- 1989-1996. Biology Licenciatura. Biology Departament, University of Panama.

Professional experience:
- October 2009 – present. Post-doctoral researcher. CREAF, Barcelona.
- September 2007 – September 2009. Scientific writer. Infociencia, Barcelona.
- April 2002 - November 2002. Laboratory technician. Molecular systematic laboratory. Entomology department. Natural History Museum, London.
- January - December 2001. Associate researcher. Ecosystem Science division. University of California, Berkeley.
- April 1998 - July 2000. Research assistant. Botany Departament, University of Hawaii, Manoa.
- October 1997 - June 1998. Research assistant. Malacology Departament. Bishop Museum, Honolulu, Hawaii.
- July 1995 - January 1996. Research assistant. University of California, Santa Cruz and Smithsonian Tropical Research Institute.
- June 1993 - 1996 - Research assistant. Smithsonian Tropical Research Institute, Panama.

Awards and personal grants:
- September 2009. RELATE project fellowship. Ankara, Turkey.
- March 2009. Three-year Post-doctoral fellowship. CSIC, Spain.
- September 2005. PhD fellowship. Programa Investigadores 2005-2010. Secretaría Nacional de Ciencia, Tecnología e Innovación, Panamá.
- January 2004. Short-term fellowship. Smithsonian Tropical Research Institute, Panama.
- September 2003. PhD Chevening Scholarship. British Council, UK.
- July 2000. Bank of Hawaii Fellowship for Educational Enrichment. To attend the meeting Evolution 2000. Bloomington, Indiana.
- April 1998. Research assistanship. Department of Botany, University of Hawaii and National Park Service, Cooperative Park Studies Unit.
- April 1998. Research fellowship. Ecology, Evolution and Conservation Biology Program. University of Hawaii, at Manoa.
- March-June, 1997. Short-term fellowship. Smithsonian Tropical Research Institute, Panama.
- Octuber 1996. Red Latinoamericana de Botánica fellowship to attend the course Biología de la Conservación: bases conceptuales. Tucumán, Argentina.
- February 1996 - October 1997. Lincoln Park Zoological Society Fellowship.
- January-March, 1995. Organization of Tropical studies (OTS). Fellowship to attend the course Tropical Ecology and Conservation 95-2. Costa Rica.
- October 1993 - January 1994. Research assistant fellowship. Smithsonian Tropical Research Institute, Panama.

Monday

2-11-2009

Finally we are all here! Ready at 8:00, we walk under cold rain to the university canteen for a light breakfast. Then, is time to go to the NANOTAM lab, which will become our base for this experience. After a brief welcoming from Ekmel Özbay, the director of the lab, an introduction to the group, to the goals of the RELATE project and few practicalities, we embark on a tour to Bilkent University guided by two super motivated students. Time flies and is lunch time already! We then have the opportunity to visit the chemistry department where Omer Dag leads us to many different aspects of the work conducted here: we go through labs and machines, we talk to several members of his group, and most particularly, we learn about the importance of basic science as a base to develop any technology. This is followed by a brief tour at the biology department, where we are given an introduction to the research performed here. We spend the afternoon in the newsroom, where we are finally introduced to very basic concepts on nanotechnology. Ekmel is the proudest director of a tremendous productive group! He not only talks about nanotechnology, but about the potential of science and technology to improve the quality of life of people. Without those concepts in mind, perhaps the meaning of science weakens. Ekmel is optimist, and believe in his country and its potential to contribute to make a safer world, he is positive that "from a science point of view, Turkey is already part of the EU". That is why we are here, I reckon… And because Ankara is much more than NANOTAM, we decided to have dinner in town. Our hosts from TÜBI.TAK, Ender and Gülnihal, organise dinner in a local restaurant offering Turkish food. The meals pictures in the menu are deceiving: everything is twice as BIG in reality! We can't even finish some starters that keep coming without previous warning: unexpected combinations of flavours and textures, everything delicious. I am lucky I am sitting next to Gülnihal, we talk about Turkey: landscapes, history, music…To finish the night, we go to have a cup of wine at the top of the Atakule tower: at the UFO bar. Wonderful views of a city that, we hope, we could have the chance to visit during our stay. Just in case, Miguel, Clara and I decided to walk for a while whilst the rest of the group disappears in Taxis (Howard and Katja are leaving Ankara early in the morning). The night is quiet, it seems that everybody sleeps now and we go downhill talking about the nano-scale of things, not sure on what to write about, on what to expect from this experience, but liking it A LOT already! The bus back to the campus will take 30 mins to come, we run out of energy and go for a Taxi as well…tomorrow will be an exciting day!!

Tuesday

3-11-2009

To our big surprise our day started with intense sunshine coming through our windows. We celebrate it with a group breakfast at Viktorija´s room: some kind of cheese, potato and spinach filled pancakes, herbal tea, cheese, and of course, yogurt. After running to the NANOTAM we were greeted by Bayram who kindly and patiently introduced us to the wonders of instrumentation on nanotechnology. Dressed as men (and women) in white, we were guided throughout the whole process of crystal deposition, lithography, microfabrication, photoluminescent image and electron beaming lithography. Bayram, Huseyin and all the members of the lab that we encountered answered in detail all of our questions, and allowed us to explore the in and outs of their fancy machines. Finally we were having real images of so many of the concepts we had talked about! Our lab excursion was followed by a talk on immunomodulatory DNA, given by Insan Gürsel from the department of biology. Unfortunately the talk, which was not initially designed for us, was above the level of understanding for most members of the RELATE group. A pity! We recharged batteries with a lunch at the university canteen and took some time to work on our profiles and blog. The last activity of the day consisted on having several members of the NANOTAM lab explaining their topic of research. It was an amazing opportunity to interact with them, learn the basics of their topics, and specially, get a feeling for their motivations and passion for science. From cloaking materials allowing invisibility to the potential of detecting pathogens using nanobiosensors, including the perspective of giving up silicon by using graphene, all the topics were fascinating! The day is almost over, and I still can not make up my mind on where to focus tomorrow: so many new things, and so much passion I could see in all those young researchers! They tried hard to convey difficult concepts into short sentences; they forgot about long formulas and showed us things we could relate to in our daily life… an amazing achievement in itself!

Wednesday

4-11-2009

Our day started with group breakfast and discussion in my room. The idea was to organize the topics in a way that everybody could have the opportunity to shadow the groups of personal interest. Being this my first ever interview I was not sure on how this was going to work. So I just let it flow, and certainly enjoyed a long conversation with Zhanfeng about symmetry, the universe, and the peculiar way of thinking of all those involved in science at this scale. Our day dynamic got me thinking about the perception of what is "hot" in science from the point of view of journalism. It seemed to me that everybody had to come up with super cool ideas on how this basic science could be applied in the near future! As a scientist myself many times I feel that pressure of the applied aspects of my research: "what is this for?", is a question I encounter many times. It may seem obvious, but from the point of view of a scientist is a strange question. Is like asking a painter or a musician what is a piece of art for!! Of course I believe that science should not be detached from the needs of society and that a lot of the things we are investigating now will be the base for future applications, but for sure that is not the main motivation of people doing science. And I think that should never be! If someone answers me, as it happen today, "I am interested on how the universe works", isn't it the hottest possible answer?? Why it seems to me that from the point of view of journalism that is not enough? Many times I heard journalists saying that people need more concrete things, that you would get more attention if you talk about time machines, and so on…well, perhaps is time to risk it a little bit and start changing the tone. Simply because that is not the way people doing basic science approach things. Reflecting the opposite just keeps contributing to some misconceptions on how science evolves and on what keeps motivating people doing science. And what is worse to me, is loosing the chance to modify the perception of people towards a more clear understanding of the personal and social forces behind science. So, "what people is looking for" should not be what determines our approach to scientific journalism. Even if "people" means editors…is like keep saturating children with candies because that is what they prefer! Let's try for some spinach from time to time…at the end is not that bad and you end up appreciating a more balance diet!

Thursday

5-11-2009

At 9am we become voyeurs in the weekly lab meeting of the group. Impressive organization, I am totally jealous, I am want to belong here! Basically each participant presents a very short report on weekly progress and future tasks for the following week. Ekmel, the group director, pays attention, is curious, proposes concrete issues and is very supportive. Few issues arise discussion; other members of the lab contribute…there is also room for some jokes and personal news (someone got married last week!!). I understand how critical is to count with group support, to know you are not alone in the rocky path that can be science. So yes, I am positively impressed by this meeting! The day then moves towards more individual activities with each of us focusing in our topics. Few more shadowing, photo sessions, and overall we spend more time in the newsroom. I talk to Neval, working on bionanosensors. She smiles while talking and seems full of energy. Just before starting her PhD here she worked with the military. I loved her explanation on why the change to academia: she had stop learning, she could not bear that! What a familiar feeling… We decide to go to Ankara, to explore Ulus, the old part of the city. We have no plan, no map, but a lot of curiosity. We get lost in small streets leading to nowhere, we buy some pastries for breakfast, we are surrounded by chaos and smiles, food stalls everywhere, everything is somehow so close to my references! Time literally stops, it seems much later, but no, is not even seven when we have dinner. More walking and exploring, but is time to go back…

Friday

6-11-2009

Our last day, and we are not sure on how the morning dynamic will work. We are supposed to be interviewed by a local journalist, and is not until 2:30pm that we will have our last meeting with the members of NANOTAM. So our morning is spent in our last shadowing, and some of us already start the paper. I have a conversation with Bayran, the member of NANOTAM who has been closest to us. We talk about his expectations in science, his personal motivations, and the unavoidable military service that he has to

start as soon as he finishes his PhD. What a load and uncertainty for someone in his position! Just before the lab meeting we have visitors from TÜBITAK: people in charge of producing magazines directed to the general public. Two different approaches: one of popular science, two directed to small children. I am amazed by the quality of the editions, by the creativity and the innovative approach to the publications, especially the kid's editions. In our last lab meeting we have the chance to thank the lab members for their hospitality and patience, we discuss how our expectations were met and it seems that both sides have learned a lot through this experience. I personally finish with the feeling that this is just the beginning… I want to be involved in the dissemination of science and I feel I still have a lot to learn and offer.

Saturday

7-11-2009

Evrin offers to take us to town. We rush to Atatürk Mausoleum, we are surronded by all kind of people visiting the monument almost as if it was a place of religious pilgrimage. Then, an early kebab lunch where we are served a giant salad in the middle of our table, amazing! Finally is time to get lost in Ulus where we feel we have no time to explore all the wonderful street stalls…food, fabrics, baskets, tea pots. Farewell time, airport and more airport…after a long delay in Munich, I arrive home at 12:30 pm.|

ANKARA (Turkey)
//Miguel Alvarez Peralta

About me

Education and training:
Master in Scientific Journalism and Science Communication. National University of Distance Education (UNED, 2009)
PhD. studies in Ethical, theoretical, and structural approaches to Mass Communication. Complutense University of Madrid, Department of Journalism III. 100% courses completed, writing my Doctoral Thesis Research at the moment.
Graduate in Media Communications Carlos III University of Madrid (September, 2007)
Computer Science Engineering (Specialized as Systems Technician) Complutense University of Madrid (May, 2003)
National Teaching Certificate (Highschool Teacher) Alfonso X El Sabio University of Madrid (April 2008)
One-year-long stay in Germany, taking part of Erasmus Program. Rheinisch-Westfälische Technische Hochschule of Aachen (RWTH Universtiy, 2002-2003).

Research:
Science Culture Unit. Teaching & researching staff. National University of Distance Education, Faculty of Philosophy. Department of Logic, History and Philosophy of Science.

Professional experience:
Professional Technical School Teacher of Operating Systems course. Tomillo Foundation. June 2005 to December 2006
Science Journalism and Popular Science Editor and administrator of the site www.divulgauned.es Practical courses tutor, Master Secretary, from April 2008.

Monday

2-11-2009

As you will notice, I'm still improving my written english skills, so I apologize in advance for the errors.

We started our program with an introduction to the project itself, with the presentations from Minerva, European Journalism Center and Tübitak (Turkish Government Research Council). We receive instructions about our work here: this blog, "shadowing" researchers, write a professional article, basically to "relate" what is being done with the EU resources for research in NANOTAM center, and try to publish it in our countries.

We did a short campus tour, very useful to know where the different services are, and to meet many other researchers whose fields are very close to nanotechnology and metamaterials, the topics on which we will focus.

//After lunch (really good meal here, by the way), we met the director of the NANOTAM research center, let me show you one (bad) picture of him…

//…and at night we all went together to Ankara, to have dinner and a walk. It was nice to discover such a nice people, I really didn't wanted to find the classical much-too-formal enviroment here. These are my partners:

//This is a picture of the campus

Tuesday

3-11-2009

On Tuesday all the journalist had breakfast together in Victorija's room (thank's a lot, Victorija). It was a really nice opportunity to start knowing better each other and talk about our profession and our job here. Then we met Byran, the Ph.D. student in charge of us, who showed us most of the equipment and labs we will be writing about. Here's a not yet edited picture of Byran showing us the mask they us for nanolitography:



This pictures will look much better as soon as I have time to work my magic trough PhotoShop, so that's all about tuesday, I'll write later about yesterday!

Wednesday

4-11-2009

On Wednesday we started to "shadow" the researchers in their labs, so the main part of our job began. It was a good experience to be face to face with the researcher, because he could detect better our understanding of the processes, so he could adapt the explanation to our level.
I shadowed Byram, a researcher on Photonic Sensors and LED's devices. A "photonic guy" as he calls himself. We talked about the theory of his research and then went to the labs in the morning, so I was able to take pictures of the processes he's carrying out. In the afternoon I made more personal questions to him, so I can use them form my article.
I would like to put some pictures of these shadowing sessions, but the system doesn't allow me anymore, don't know why. So I'll try to put them tomorrow.

Thursday

5-11-2009

On Thursday we had the great opportunity to attend the researchers Group meeting. You have a good idea of the kind of organization you are visiting by watching their meetings. In this case, they were reporting the last week's work, and the tasks they planned for next week. We were able to "feel" the relationships between researchers and with the director of the centre, a very respected man in the labs.
After that, we kept shadowing, but this time we changed researchers, so I went with the guy working on cloaking and metamaterials. He was very good at explaining, so you will read about this, for sure.

Friday

6-11-2009

So today (I finally got up-to-date!) we finished our shadowing sessions. I met Neval, the girl who is working on nanobiosensors. Clara and me interviewed her in her office, and she was really good at explaining us her research, the possible applications, and some technical details. After that, a Turkish journalist interviewed some of us in the news room (I guess we could call that metajournalism! Who research the researchers of the researchers?? uh, I got lost!). It seems Tubitak is very interested in this group of journalist that came from the EU to cover their hi-tech research on nanotechnology.
Today is the last day or our program. We are leaving tomorrow back to spain… :'-(It has been a great opportunity for me, a ver meaninful proffessional experiences, and a chance to travel and meet wonderful people! Hope you will read about it soon!

Additional info

Link to my website: *http://www.divulgauned.es*
Some of my pictures
http://picasaweb.google.es/miguelenlared ;
Some of my videos:
http://divulgauned.es/spip.php?article119 ; http://divulgauned.es/spip.php?article121; http://divulgauned.es/spip.php?article28 ; http://divulgauned.es/spip.php?article13 ; http://divulgauned.es/spip.php?article27;
Some articles in journals: *http://www.gara.net/paperezkoa/20080823/92862/es/Una-disputa-cariz-religioso-vuelve-encender-mecha-lucha-Cachemira-su-libertad http://diagonalperiodico.net/Los-maoistas-llegan-al-poder-en.html?var_recherche=Miguel*
Some of my works as TV reporter:
http://divulgauned.es/spip.php?article115 ;
http://www.canaluned.com/carreras/fisicas/presentacion-del-libro-es-eso-cierto-fraudes-errores-experimentos-inauditos-todas-las-respuestas-a-tus-preguntas-sobre-el-mundo-cientifico-2067.html
http://www.canaluned.com/carreras/ciencias-ambientales/las-teorias-darwinistas-en-cine-y-television-ii-3455.html ; http://www.canaluned.com/carreras/formacion-continua/la-razon-estrangulada-esta-en-crisis-el-pensamiento-cientifico-1427.html

ANKARA (Turkey)
//Viktorija Rinkeviciute

About me

Education and training:
EDUCATIONAL BACKGROUND: 2004 September – 2008 July: Vilnius University, Faculty of Communications, Institute of Journalism. The Bachelors degree of Communication and Information. 2006 August - 2007 June: The Danish School of Journalism (with an international student exchange program Socrates/Erasmus):
2006 August - December: "International semester program" (courses on international news gathering, reporting from EU, stereotypes and risk reporting).
2007 January - June: "International TV journalism" (Current affairs stories (3 – 5 minutes))
1992 - 2004: Vilnius Simonas Daukantas secondary school. Graduated cum laude.

Training
2009 November – science journalism workshop RELATE (http://relateproject.eu/), Turkey; 2009 March – Covering the Baltic Sea Environment, Kalmar, Sweden and Vilnius, Lithuania; 2008 October – EU External Co-operation in Action, Brussels, Belgium; 2007 October 11-12 – 'People with mental disabilities in the media', Lithuania;
Professional experience: since 2007 September – the National Lithuanian Radio and Television, TV news department (the morning show "Labas rytas" and the main news program "Panorama) – TV reporter. 2007 June – 2007 September - the online news site of the National Lithuanian Radio and Television www.lrt.lt – online reporter. 2005 June - 2006 August: national daily newspaper „Lietuvos žinios" (stringer) 2004 October - June: Lithuanian student newspaper „Studentų Era" and Vilnius University newspaper „Universitas Vilnensis" (contributor).
Awards and personal grants: 2007 June – the Scholarship of the Lithuanian Journalist Vytautas Gedgaudas.

Monday

2-11-2009

:) Dear Producer and my other lovely colleagues (yes, you can read it all aloud),
I am such a BLOND. Honestly. That NANO stuff is like a dark wood for me. Of course, I've just entered the outer of the wood today and I will have the possibility to explore it deeper during this all week, but after today I have the feeling I want to run away without even looking back. :)
On the other hand, being surrounded with all those scientists, I am surprised just how much of knowledge in his/her brain a man can actually have. And, comparing to my own profession, I can clearly see that these are the people who are really changing the world. Their work is seen clearly, it's useful with all the meaning this word carries. It inspires, though I don't know for how much and if the inspiration is enough for at least one article. :)
I was also surprised by the Bilkert uni. It's like a little town, very hilly, so the lazy students (like me) are getting around on little busses. It's a private university, so no state funding and it's obvious - for example, the equipment for the nano research cost sth around 15 million Euros (if I got it right). It's also fun to see that the university is an international one – of course, it might be due to the fact that I am surrounded by international people in the RELATE group, but you can also feel it while walking around the campus. Probably it's because all lectures, apart some for the law students, are taught in English. Well, at least I am able to communicate with people.
In short, despite the horrible trip to Turkey, I am doing fine. Oh, true, one more thing. When I see half of the people walking with those masks on their faces and rubbing their hands with the anti-bacterial liquid, I am starting to panic. It looks scary. I've read in the university newspaper that the most recent swine flue case was registered here 13th October and that there are 32 confirmed cases on the campus. All alive and getting better, thanks God. :) So I should come back :P
By the way, I haven't seen Ankara yet, but when only I stop being lazy – I just need to get my sleep back – I'll hit the town. On the other hand, they have it ALL on the campus – even Starbucks and Burger Kind – what else do I need?
Ok, ok, don't look at me like that, I know you hate fries and burgers, but the others love it. :) I'll bring you some Turkish pop-corn as the souvenir *being nasty* :) Joking!
More news to follow! Love and miss you all, Vicky

Tuesday

3-11-2009

The sun came back to Ankara. On one hand, it killed me, as I am supposed to be sitting in the conference room or discovering the labs while it's shinning. On the other, I can finally feel I am in Turkey – just got the news that it's like -5 degrees and almost snowing in LT.
Oh, the best news of the day – no need for clothes shopping, as we got some today. A nice, long and white robe, a white cap and blue slippers. They are telling us that tomorrow and until the end of the workshop, when we go shadowing the scientists, we should get something more to dress. :) Good I still have space in my luggage.

If to be serious, it was very interesting to actually enter the laboratories. We did it this morning- fully dressed in white, in order not to bring even a little dust to the clean rooms. Apart from seeing how the scientists are "growing" crystals harder than diamonds, I also got to see how the most expensive machine I've ever seen in my life looks like. It's basically a huge blue thing, which takes 2 rooms, with 2 big black rubber hands. :) *shaking* A little detail – it's all just for the price of 2 million EUR.
It's 2:35 in the afternoon now, and I'm finishing my huge coffee pot – should definitely go for a true Turkish coffee tonight. We're just back from one "extra" session, after which coffee was needed as an adrenalin injection for a man, whose heart is stopping. A professor, who is doing the research on cancer and its treatment with the NANO stuff, agreed to let us into one of his lectures for students. He promised it's not going to be scientific at all.
After an hour in that classroom with no escape, I came to thinking – if that wasn't scientific, maybe all the nanotechnology and all those labs, full of equipment, is just an art class with nice paintings?
My God, for the first time in my life I wasn't able to understand a single word. All those abbreviations of letters, diagrams and charts – it's all what I was hoping to avoid or at least to ask the scientists not to use when communicating with journalists. In short, what I got out of it that it was something about cutting the DNA and designing something from the remaining parts. Or maybe now? Anyway, it's connected to nanotechnology, as they're working on a nano-scale., as I was explained.
Honestly, I was trying to occupy my brain with all I could not to just collapse and start snoring. On the other hand, it was the very last notice to the scientist about the fact that we'd be interested in these things. And I am sure he's not aware we don't have a scientific background, well, at least some of us. Thank God it's over.
Anyway, in 15 minutes I hope to get to know more about the entire project NANOTAM (the labs that are hosting us and answering to all the stupid questions) are having, so I can finally come up with the 3 story ideas. Another trouble remains though: how am I going to write all those 3 stories I promised to the different media houses in LT, but let's take it step by step.
To be continued tomorrow, directly from the labs.

Wednesday

4-11-2009

It was the first day we've actually had a chance to start doing our job – not to just learning the background material (which is very important for someone like me, who's learning the NANO for the first time ever), but also getting one on one with the scientist, chatting, interviewing, annoying them with the stupid questions "and what are you doing now? And now? And what will be later?" in the labs.
I had spent my morning with Serkan Butun, a PhD student, who's now researching the hottest (not in temperature, but interest and popularity) material in the world – graphene. My biggest problem for now is a journalistic one – I am struggling to find a Lithuanian term for that and it doesn't look that easy. And… somehow my Microsoft Word program also underlines this word as being spelled incorrectly.
Serkan took me to the labs, where I got to wear a nice white overall and I was even allowed to keep it. So maybe a theme of this New Year's party may be science – than I could come out as a NANO GIRL. :)
Oh, one more thing – his wife and him are expecting their first newborn – a baby boy.:) Even if Serkan seemed to be a bit pessimistic on his research with graphene, there's one thing he's really happy about. Congratulations. :)
Af graphene, my afternoon was dedicated to nanobiosensors and Neval, who is researching them. It's a funny story with Neval – she has a father, who's a geology professor in one of the Turkish universities, she's being doing her master's research at the military company and she's here for nanotechnology and its implementation into the health care system. I really love such contradictions in life. It actually makes you understand a passion a person has for a thing and, no matter where his roads take him, he comes back to where he's suppose to be.
On the other hand, I was surprised by Neval's attitude that her job is to do research on a technology and come up with an answer if one or other idea could work. She doesn't care about the industrial phase of the technology at all. It's still very hard for me to understand that if you're actually inventing something, coming up with the technology, you don't care how to spread it to the public. I've always thought these are two parts of science and development that can't go one without another.
I am looking forward to shadowing Neval in the lab in a hour or so, as I really see a sense in what she's making. It's something in 10 – 20 years, hopefully, you'll be able to touch, something that might save lives.

Thursday

5-11-2009

It was the first day I've managed to escape the labs quite early – around 15:30. Don't get me wrong – I had spent a very nice and useful morning with the nanobiosensors girl – Neval – in her lab. Even though the equipment was a bit stubborn and didn't want to work normally, it was very useful to talk to her one more time and just clear out the last points.
However, being at Bilkent campus starts to feel like a little prison.
It's not that we're not allowed to go anywhere, but since ALL (and I mean REALLY all – they even have the Starbucks here) is on the campus, the distance to the city is quite big and the nano washes your brain out, there's a risk you'll just spend all your time in the campus. One of the researchers, who's originally from Istanbul (and I've learned that people from Istanbul really hate Ankara) said that he doesn't go out to the city that often at all…

Anyway, we went to the city yesterday night – to the area called Ulus that is supposed to be the Old Town of Ankara. Either we were on the wrong side of Ulus, or the only OLD stuff I've seen was some stones around the mosque. Though apparently somebody important was in the mosque, as it was surrounded by police.
On the other hand, for the girl like me, coming from a little country, which population would perfectly fit in Ankara, a simple walk in the center of the town was quite an experience. I was firstly scared and completely disorientated by so much of traffic, noise, beeping of cars, driver who seem not to know any driving rules. But later I was just enjoying the sight of freshly baked bread, nut and dried fruits, all the people, rushing around or selling stuff, those tiny streets leading to no-where, the policemen, having a barbeque in the park, the prayer time calls. And yes… the food we had close to the Mediterranean museum… yes, I could come live here just for food.
Ankara is big, really big. But it's still possible to find a little Spanish book out there. As far as I've understood, Miguel had lost it on a bus, coming from the airport, and we had tried to find it yesterday. Walking from the main HAVAS bus terminal to the little one just around the corner (corner was like 10 minutes walk). It was there, but since the staff wasn't talking English, Miguel first had to read the time-table of the busses and only after that he managed to find his book. He was happy, I found it really funny looking for a tiny book in huge Ankara.
Back to the last shadowing in the labs tomorrow – the mysterious invisibility is the plan. I'll let you know more when I am done.

Friday

6-11-2009

I had finished this science journalism course on nanotechnology on what I've mostly wanted to cover during all the week – the cloaking effect. No wonder why – from all the projects "Nanotam" has this is the "sexiest" and the guy, researching it, is a very good talker as well.
So this is it – I have the cloaking, the graphene and nanobiosensors, plus – a lot of background material on nanotechnology. I am coming home with the ideas for 3 articles and I hope I am able to nail down all of them.
Usually when a seminar finishes, the thing I mostly hate, is the evaluation and "good-bye" session. On the other hand, all what's happening here, in Turkey, doesn't seem to remind of an usual seminars I've had been attending. The "sad" good-byes where really cleared away with the wonderful Turkish sweets (all different kind of cookies and muffins – I told you, it's a dangerous country) and we managed to have some nice discussions on the way media covers journalism (just focusing on the practical usage and WHEN WHEN WHEN, instead of leaving some space for the passion the scientists have and the development of the science itself) with Monika. I've never came to think of it, but I am doing contemplating all the time now.
The other thing I really liked about this good-bye session was to see how much willing to cooperate, explain and communicate with the media (it means – with the society as well (through the media)) are these scientists. It was a surprise to actually be giving them the feedback what was good and bad with their presentations, as usually in the seminars you just keep it to yourself (i.e. being polite) polite, even if the presentations were boring as hell. But this time it was different - you could speak, as they wanted to learn.
And I've learned so much from them myself. I was thinking nanotechnology is boring, it's something so far away, really – like being surrounded with the crazy dreaming scientists. But these people: Neval, Ozgur and Evrim, Zhaofeng Li, Serkan and Bayram amazed me with their patience, passion and dedication to what they are doing. Again, as I've been telling, these are the people who are changing the world. I thank you all so much for what you are and what you do.
p.s. peak hours in Ankara are amazing: so much noise and movement. And I've almost got run over by a car twice, if not more. Unfortunately, the Ataturk museum was closed, but we've found a nice bazaar (heading back there for presents tomorrow), discussed religion and politics with our host, Evrim (thank you so much) etc. And in the evening, with full bags of the wonderful food, we had a picnic at the leisure room at our dorm. Evrim taught us how to make a meta-nano-kebab, ask Jan for a full video. And don't even question the taste – it's as good as nanotechnology is. :)

Sunday

8-11-2009

Yes, I know, I am missing one day, but our (Monika and Miguel, who left yesterday at around the lunch time, plus Jan and me) day-off was really busy, so there was no moment to tell you about the last RELATE day.
I am now sitting at Riga's bus station, waiting for my bus to Vilnius. Actually, I have around 4 hours until it comes, but I still can't make my mind if to try to take the earlier bus or to have a walk. We had been walking so much lately and especially yesterday.
The wonderful host Evrim came to rescue Monika in the morning, as she realized she had forgotten her computer charger at the "Nanotam". But, as it always is, this appeared to be a good day, as Evrim joined us from an early morning to a late night and we had a splendid time in Ankara (people from Istanbul would ask how is it possible, but there's only one answer – the right guide).
The sun was shining high, so for a Lithuanian like me it was like in the mid-summer – I was walking with my T-shirts. Our first stop – the museum/mausoleum of Ataturk. HUGE. A lot of people and not just tourists from abroad, but actually Turkish people, just coming there to pay their respect and spend Saturday morning there. I like the area very much, as, as much as I've understood, it's the highest building in Ankara, so the views around are just breath-taking. It was so good to just be walking around, or sitting on the steps and enjoying the sun and the view.

Since we had a very little breakfast, we, as Evrim said, had to follow the truck drivers, since they know the best where the good food is. And they do, believe me. Surrounded by various garages, there was this little restaurant, serving "kofte". It was so weird – they brought a pile of salad on the table – it was all covered with "grass", tomatos, cucambers, radish etc. And later – some bread and meet, so we were actually making our own kebabs. Lovely. I've never seen so much salad on one table before.
Miguel and Monika decided to spend their last hour in Ankara shopping at the bazaar, instead Jan and I set off to explore the castle of Ankara. If my memory is not fooling me, we've climbed 315 steps to the very top – just to walk around and to actually stand at the edge of the world, where all Ankara is just lying under your feet.
After we climbed down and said good-bye to Miguel and Monika, Jan and I got ourselves loose in the bazaar. It's not that we got all the presents and food (tea, nuts, dried fruit etc.), but we also had a lovely time – for example, at the shop of one of the best friends of the Lithuanian consul in Turkey (at least, the shop keeper said so, but since I didn't buy anything, maybe it's really the truth?), where we were offered some "cay" (tea). P.s. Jan's really good in negotiating the price, one should learn about it.
Evrim reunited with us after all the shopping (sorry for having to stand those 30% of it that still got o you because of my sweater) to see the ULUS mosque. I just had to cover my head with a scarf and we could come in, though it was really not comfortable to be in the men's side of the mosque. Nobody said a word to me and Evrim told me it's really ok, but I just didn't feel I was being respectful enough – I mean, if it's accustomed that women should be in the other room and cover their hair with the scarf, one should do it.
The evening was topped with a HUGE (again) dinner in my room – Evrim helped to do the dishes – and a lot of Turkish sweets. Since I still have the whole box of it and, hopefully, won't eat it during the 4 hour drive on the bus, my brother will be very happy.
That's it, I must take care of the bus stuff, so, shortly – my first science/nano experience has just finished and I am honestly speechless to express how much I've enjoyed it all. Thanks for all.

Additional info
Link to my website: www.lrt.lt
My profile is also available here: You can contact me on: Facebook - Viktorija Rinkeviciute, skype: vikencija_lt.
Additional relevant information: WHAT I BELIEVE IN: 'I'm starting with the man in the mirror' (Michael Jackson)

ROME (Italy)
//Sophie Stigler

About me

Education:
currently Master of Arts in Science Journalism at the University of Dortmund, specialisation: Physics
Professional experience:
traineeship at Westdeutscher Rundfunk (German public TV and radio braodcaster)
internships at regional newspapers, Nature journal, Max Planck society press office
Favourite topics:
Energy, Quantum physics, Climate research

Monday

9-11-2009

Clairvoyance experiment

Lab for climate models, Building F19 in the research centre Casaccia, north of Rome

F stands for freddo, warm. This means, when the nuclear reactor on the grounds was still alive, this was a zone of higher radioactivity. Everyone in the centre is talking about the nuclear reactor. But then, they're supposed to be enthusiastic about renewable energies here – since it's one of the centre's specialties. During my week here I will wonder from time to time: Do research and the according philosophy come in pairs?
Ceiling, office in lab for climate models

The lamp's space is already taken. A colourful, inflatable globe dangles from the ceiling. Global, yes… something rings a bell. Global warming. But how come the climate predictions made here focus on the Mediterranean and Africa? Two areas that will most likely be hit very hard by climate change. But there is no way blanking out the rest of the world. Wind and waves don't stop at borders. This is why it's called global, I will learn soon.

Desk, another office in lab for climate models

A broken tea cup between project proposals and climbing magazines. With its flower ornaments it looks very girly, fairly out of place in the office of the two bearded Italian men. "My wife would kill me if she knew", Sandro, one of them says. I will actually have the opportunity to talk, not to her, but to Sandro's dad. Not only Italy's energy industry, he, too, could benefit from the climate predictions made in the lab. Moreover, his olive grove could.

Tuesday

10-11-2009

Climate conscience - isn't it ironic?

Our neighbour should be ashamed of himself, for driving such a big car, just because it looks good, we think. And take the plane to go on holiday without turning a hair.

Why on earth do all those people in the supermarket still buy apples from New Zealand, we wonder. And put a month's supply of coffee beans in the trolley.

It is hard to be a good person nowadays, with climate change and all. First, you can't know everything – do strawberries or oranges need more water to grow and thus cause more desertification? Secondly, you can't live like a trapper in the woods for your whole life – and either walk or take the canoe everywhere.
But thank God there are scientists who try to make things easier for us: They breed strawberries that need less water and develop three-litre-cars. Some of these inventions that make the world a better place are visible in the different labs in the research centre of Casaccia. The orange buses circling away on the centre's grounds don't feed on petrol, but on electricity. A fairly insignificant house of the same colour regulates its heating and ventilation itself, trying to save energy.

Even the researchers themselves set a good example: An important part of the about 2000 researchers working here come by train and bus, even though Casaccia is not exactly what you'd call 'central' (about 30 km from Rome's city centre). What an exemplary place, I thought, until I saw the canteen. Or should I say 'the plastic cemetery'? On my tray end up, on by one: a paper sheet; a spoon, wrapped in plastic; a fork, wrapped in plastic; a knife, wrapped in plastic; pudding in a plastic goblet; a cooked apple in a plastic bowl.
The reason for the wrapping frenzy: hygiene standards, someone says.
Definitely, it's not easy to be good nowadays.

Wednesday

11-11-2009

Come together – Research makes the world smaller

Now I know why global warming is called global warming. It's because to predict Italy's climate in 50, 100 years, one has to go as far as the Antarctic. More precisely, climate researchers have to go.

If you are a physicist and you've just discovered gravity, your proof is fairly straightforward. You just drop the apple a hundred times. Falls every time – proof done. If you are a physicist and you develop climate models for the future, it's a different story. Wait 50 years to see whether you were right is kind of out of question. So you gather all information about the climate situation of the past years, say the last hundreds of thousands of years, and actually try to predict the past's climate. You choose a time span, let's say 1920 until 1940, run your model with the data from this time span to predict, let's say the 1960ies, and then see how much you're off the real thing.

And here is where the Antarctic trip comes into play. You can only make a good climate model if you know as much about the past's climate as possible, that is temperature, sea level, covered area by ice sheets, gas composition of the different layers of the atmosphere. The solution: Consult the earth's climate archives – the kilometre thick ice sheets of the Antarctic. Each layer of ice in there has once been fresh snow, just fallen through thousands of kilometres of air, meanwhile absorbing the fingerprint of the air. This layer on layer structure hardly melted (unlike in the Arctic), so that the researchers can drill down to snow fallen about 800.000 years ago. In there, the CO2-content of the time is stored, by-products of algae tell about the spread of the ice cap, oxygen isotopes indicate the temperature… the list is long. This is why climate researchers from ENEA travel all the way to the south pole, to drill holes, a thousands meters deep. Their treasure: ice cores. Their goal: To set the basis for climate predictions also for Italy. Because it is called global warming, not Italian warming.

Thursday

12-11-2009

La mosca

Olive grove in Tuscia, about 100km north of Rome

Green and riper purple olives patter on the green net on the ground. Gianni lifts the red plucking machine up high to shake off the last lot right at the top. Third tree done, about a hundred trees still waiting silently for their turn. The grove is Gianni's hobby. "It's just a little grove", he says. "Only about a ton and a half of olives altogether."

When Gianni's son isn't working on climate models, he comes to help with the harvest. A project at his lab converts one of their models into long-term predictions for the olive yield, more precisely one of its diminishing factors, the olive fly – la mosca. Temperature and humidity determine whether the eggs it lays into olives eclose as larvae. If it's warm and humid enough, the fly can destroy the whole yield.
With global warming the fly could become a much bigger problem for the olive farmers in Italy. But the drier conditions predicted for southern and central Italy could help them, too. Gianni's opinion? "When you're talking about agriculture, everything depends on climate or other uncontrollable factors." Uncontrollable, maybe. But the researchers at ENEA are convinced that farming will have to adapt to climate change soon. Vineyards will eventually move to higher, more humid, altitudes. Crops will have to become more frugal. But I also hear that it's hard to make farmers accept that. "As long as there is one drop of water on the farms, they won't change anything", I hear from the "Combat desertification group". Gianni does not have to. He could use more insecticides if necessary, but this would degrade the quality of his oil. And then, if he harvests less, it's not a big deal. For a full-time farmer it would.

PS: didn't say anything about the broken cup.

Friday

13-11-2009

Tempo, tempo

Note: Mustn't forget what I learnt this week
Note: Write a list.
Note: Don't forget to write the list.
Note: Now really write it.

My list:

#1 Most climate predictions don't consider how air and oceans interact. Quite surprising, considering that 70 percent of our planet is covered by water.

#2 Clouds are nasty little things to simulate for climate researchers. They don't like them.

#3 Green and black olives aren't two varieties, but just unripe and ripe ones. The best olive oil contains a mix of both.

#4 The Italian word 'tempo' means weather AND time. So the whole time Gianni was talking about that … Aaah. So much for my Italian.

#5 Climate research in Italy is mainly financed by the EU, not the Italian state – despite predicted dramatic changes.

#6 My laptop plug does not fit in Italian sockets. (Luckily Christoph's hotel room has a German fridge… hard choice between not working or rotten milk.)

#7 One week is too short.

Additional info
Link to my website:
http://sites.google.com/site/claraat-teneit/home
My profile is also available here:
http://uk.linkedin.com/in/claraattene

ROME (Italy)
//Cristoph Zotter

Austria
19/12/82

About me

Education and training:
- Master degree in Journalism, University of Applied Sciences Vienna, 2008 - Course in Environmental journalism from a Sami perspective, University of Kautokeino, 2009 - Course in Foreign Reporting, University of Helsinki, 2009 - Exchange semester, Kwantlen University Vancouver 2006

Professional experience:
- Freelance for: Die Zeit (Vienna Bureau), Datum (www.datum.at) amongst others - Internships: profil (www.profil.at), Die Furche (www.furche.at), Kurier (www.kurier.at), Wiener Zeitung (www.wienerzeitung.at), Hürriyet (Istanbul, 2006), Durst (Falter-Verlag)

Monday

9-11-2009

Smells from teen spirit

Science used to smell like sulfur and cheap eau de cologne. It also had a name: Herr Heindl. A short man in his mid-fourties, worn-out wool pullover, white lab coat, dandruffs. Herr Heindl teached Biology, Physics and Chemistry in high school and used to say things like "Does anyone know the name of element number 22 on the periodic table? Zotter? Didn't think so." or more frequently "Quiet in the last row!". Science was only a thing to pay attention to when Herr Heindl had one of his more adventureous days and blew something up. About 15 years later science smells like chlorine. Or like a weird mixture of cast powder and make-up. Depends if you are visiting the laboratory where two boyish grinning Italian scientist try to calibrate the software of little submarines in a pool. Or if you listen to a woman in a tailored designer costume explain how she discovered cracks in a miniature version of a Turkish church after she shook it on a seismic table that can simulate earthquakes. Science changed.

This week we are going to see its new face. Seven European journalists arrived in Rome, Italy to talk to different researchers in one of the oldest labs of the Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (short ENEA). We are invited. The European Union pays for our flights, for our food, for the hotel. Why? It seems like that there is not enough public interest in what scientists do and how they change our lifes. It seems that not enough people care to find out what our world is about. That's miserable. Personally, I think, it's Herr Heindl's fault.

Tuesday

10-11-2009

The genius

"Berlusconi is a genius!" The man in front of me engages in wild gestures as if he wanted to make the air in the staff canteen circulate and blow freshness on the heads of his eating colleagues. We are sitting in ENEA's main staff building (sixties architecture, plastic chairs screwed to the floor) and I asked about the reputation of Italy's prime minister among Italian scientists. "He found the perfect way to be married and still have many girlfriends", my lunch break buddy continues, attaching a melodic "e" to the end of each of his words. "He appoints them as ministers so they will not tell his wife. And even better, he makes us pay for them with our taxes". Big smile.

Money for parties, girls, golf club swinging opportunists? Yes. Money for research on climate? No. The people I am sharing lunch with (cold french fries, undercooked maccheroni and something that could have been veal in a former stage) know that. I will spend the rest of this week with them, learning about their job. They all studied physics and are now calculating different models to describe the the earth's past, present and future climate. It's like a weather forecast, only for a longer period. Think of 100 years to start with.
While the weather forecasts mainly tells you that you should have brought the umbrella to work today, climate modelling is a little bit more serious. It's about the whole earth. No more or less. And since we only have one earth and it's quite hard to build a good one out of papp-maché my lunch break buddies spend their whole day in front of computers reconstructing all possible influences on the climate and how they will change. It's a big real life sim city for meterologist.
And the Italian government doesn't really care. Most of the money the climate modelling physics need for the man-sized computers they are using is sent from Brussels not from Rome.

Although the climate in the Mediterrean is severly changing. Tourism, farmers, insurance companies, energy producers - they all are affected and could in the future rely on seasonal climate projections to plan their businesses. Climate modelling is on its way to become a key resource for a number of industries. "Tell that to Berlusconi", is the response from the other half of the table. Well, Silvio, hereby I told you.

Wednesday

11-11-2009

Paint the future

Its name is Giotto. A blue big box, about the size of an average man. The supercomputer. One of around half a dozen that ENEA dedicates to climate modelling. We can not really get close to it, the doors have to stay shut. Changes of temperature in the computer room might be harmful to the hardware. As if the thing couldn't think if it's too hot or cold. So Giotto, called after the Italian painter Giotto di Bondone living in eleventh century Florence, just hums for himself in the corner of a 50 square meter room filled with racks, cables and a significant number of back-up storage boxes as big as the computer itself.

Giotto is filled with 64 CPU's and they are quick. However, it still takes one and a half months to run one simulation of earth's climate. Numbers in, calculating, numbers out. Than the researchers analyse the results, correct errors, try to find out, if everything is going good. New numbers in, calculating, new numbers out.

The amount of computing capacity one needs for climate modelling is impressive. And one simulation is not enough. The more you run, the more thrustworthy the results get. At the moment a high statistical sample is a big part of the job. It should be hundreds of simulations rather than tens. Only this way one can be sure to exclude errors in the models. This is also why in Oxford researchers since almost ten years try to use the internet to run theirs. So everyone from physic genius to cab driver, from a 90 year old pensioneer to a 14 year old school kid can sign up and let his beloved computer do a part of the calculations while, for example, writing a blog.

Link: www.climatepredictions.net

Thursday

12-11-2009

Definetly maybe

One of the most favorite words of climate modellers seems to be "probably". My voice recorder is filled with about four hours of interviews. The number of "probably's" on it goes into the hundreds (one would also have to add a staggering amount of variations of "likely's"). "Most likely" the increase in average temperature on earth is caused by human existence. We can "definetly say" that clouds "probably" have a very big impact on regional climate conditions. Like most of the "probably's" the speculation on clouds is inevitably followed by the ultimate "at the moment this is not very well reproduced by our models" meaning "We don't really know". It could be anything.

Let's stay with the clouds. They can be fluffy, white, sheep shaped or dark, menacing and make you feel like you would want to have a roof above your head within the next minutes. More or less clouds means more or less temperature, or more or less rain or more or less time to lie in the grass and think about dream castles. However, clouds are hard to catch, even if you have a supercomputer to reach out for them. They come quick, they go quick (considering the huge time spans we talk about in climate modelling). And they are dependent on a number of things. Things that are also "not very well reproduced by our models" such as the amount of dust in the atmosphere at a certain time which again is a precondition to generate rain drops. So, why bother if everything is linked to "probably's"? Because science is uncertain. It's the nature of it. And still, even if things are only "likely" or "probably" this uncertain information will be useful. Because the models are constantly being revised and also because knowing something is better than knowing nothing. As long as you are aware of the "probably's". And this is a fact.

Friday

13-11-2009

Time to...

So this is it. Ciao Roma. In one of this summarizing presentations about our experiences we round up the week, we pack our stuff, we move on. The last five days have been intense: Professionally and personally. We learned the state-of-the-art in whatever we were assigned to study, we spent hours and hours wandering through this beautiful city, we got to know each other. As always, there is a note of sadness when you have to leave. But than Fabiola, who has been helping us the whole week, says a line that sounds like out of an apocalyptic action movie: "It's not over. This is just the beginning." Another week in Rome? No, but a life with the beauty of science. Subscriptions to "The New Scientist", "Nature", "Science", "The National Geographic", "Geo" to keep on learning. Travels to Tel Aviv, Istanbul, Ankara, London, Leipzig, München to see each other. There is a lot to come. Ciao Roma.

ROME (Italy)
//Ezgi Capa

Turkish
1983

About me

Education:
M.A. Ankara University, Journalism Department B.A. Yıldız Technical University, Political science Professional experience: News Agency, Middle East editor

Monday

09-11-2009

As soon as we met in the front of Valle Arealia station, we moved to Cassacia. I can honestly say that, I'm so nervous to come in the campus. After many procedures and check-in (equal to an airport security:), we gathered in the news room which will be the base for us. First impression of the research on me is i will have great friends and an intensitive week. First day came to me like ages. I think i met many prople means many names to memorize and new locations, bus numbers and so on. In the morning we were leaded by Fabiola to see some labs in case seeing what is the conditions Cassacia. It was impressive to see Sismic Hall, Robotics, Cultural Heritage labs… funniest thing was mature and clever men were explaining their research as if it's a game:) with a remote control, while they are explaining their aims they were like children to enjoy their play:) After small tour we had our lunch. Then, we met researchers who will lead about our issues during that week. Paulo Ruti and his team gave a general informatin what they are doing. I can't say that i could understand. I hope so! After Casaccia we all went centre to see Rome. That's a pitt that we'll have chance to see only at night. But this doesnt stop eating good meals of Italy:)))

Tuesday

10-11-2009

As i thought i was late, i woke up an hour early than usual. So it was a good time to me sit on the balcony and start to filming that i has to do today. Whenever we arrived at Casassia Paulo Ruti who is the supervisor(Paolo Ruti)of our issue "Climate Change" came to pick up us to pass from the gate. In morning we listened to Paulo for general information to determine which issue we will study about. Paulo explained modelling and how to deal with a research. Climate change which has models under 10 includes some components such as fluid movements, radiaton and transition of water. He told us about AMMA Project which he is one of the resarcher to keep on study on African research. Both Mediterenian and Africa is and will be the most effected places(maybe it can be a reason to thınk on that way is we are from Medeterenian) he mentıoned the importance of straits Gibraltar and Dardanells and Black Sea. I thınk i cought a clue from here to develop a story on it. He said something sound ıs interesting to me. All models can not say the same results. For instance while some says in Mediterenian will be draught in summer, about Middle Africa researches don't say same results. So Climate Change issue can be global, but to be more certain and to see the all picture, we need to go regional measures to follow regional issues before makıng policy. The thing that i dissappointed about is i just learned that we won't take attention on politics. Of course, i don't mean that debating international issue, but before the Copenhagen summit i had thought i was a good idea to learn scientific base all that agreements and process. Gibraltar ıs the clue which was given by Paulo brought me Gianmario who i can work together. I met him to take general information why and how a strait can be important like that? He seems to be a doctor who worked on only a vessel or a small organ of a body. He has srong İtalian accent which whenever i hear somewhere in the world, i could say this should be İtalian. Oh, i brought camera with me as well. But only i carried such a heavy bag. Because of the balance of colours i cound't manage to take footages. I had filmed only some details of corridors and explanations on the wall, Paulo while he was speaking. I am stil not sure to use a visual Project. But i began filming just in case. After lunch, we all gathered in the news room to discuss what happened today. I had no time keep investigation about Gibraltar. I think i had to take some articles even there are related with physics. I got tired today, have strong head ache. Bu at least we had chance to see city together. We went today Spain laders and surround and many streets as soon as i passed i forget their names:)

Wednesday

11-11-2009

Nice weather to start a nice day. Today i began speking with Gianmario who will be the center of my topic. How come such a young man achieved that kind of success or where I was, while these people are doing something?! He is so kind that never bored of speking and also can understand me which point to i want to ask or how difficult me to understand. Because of i had a background from politics, I'm far away physics. If you add my language problems, it can be suffering sometimes to me. Now i have an idea what to do. First my issue should concern local as much as being global. I mean, If i focus on Mediterenian as well, Turkish people also can be interested on it at the same time must involve the global perspective to explain climate change problem. I can make a comparison or similarity between Dardanells and Gibraltar to explain Climate Change circulation on Mediterenian sea. Gianario explained me two way exchanged which upeer strata flow fresh, lower is salty from the Medittereian. As a reason of balance, how the Mediterenian water is getting fresh and changing the current of water.

If there hadn't be any water in cibralta we could have seen the cleave between east and west. He showed me some diagrams about topography on sea depth. I took some materials from him to read later. But of course i dont know how come and when? I took some contacts from Turkey as well to take information about Dardanells. So i keep on research in Turkey about Dardanells. I tink i found realy interesting issue to announce in Turkey as well. Today i went lunch with Fabiola and Sophia. This time i could look for some information. İ have already sent mail to Turkish professor to take an appointment. Now i have to wait. Now we are going night tour again, this time to see Coloseum. I feel really tired and need to sleep!!!

Thursday

12-11-2009

The bag is almost stuck on me. I can feel a pressure on my collarbone even if i dont carry it. But today is the time for filming. Yesterday i tried to catch some details, but todat i must complete. As soon as we arrived i saw Paulo didn't wear same clothes he wore yesterday. İ said, "ohh, it doesn't cohere footages i took yesterday". Anyway, i began workin on one hand camera, one hand my notes, headphone in my ear… Just on that second Cristoff succoured me by holding the microphone. I was almost a She-ra, he could be at most a he-man:) But at that time my battary has finished. What a shame that two researchers spending time with your silly questions, but even you can't manage to record it. Anyway, we looked for an extension cable to continue on the same location in case maintaining the story. Paulo and Gianmarino was standing there, i was sweeting and trembling in order to not to have any other problem. I asked questions which's answers already replied before. Usually general answers i expected. Because i don't know, how the researchers in Turkey will answer me and how to combine these answers. I put Paulo and Gianmarino in same frame, sometimes zoom-in and out while they were speaking. After I had finished my work, i was so relaxed. Today i won't stay so long in the news room. At least i want to see the city in daylight. I'm planning to see Sistina Chapel:)

Friday

13-11-2009

No no no, I couldn't see anywhere:(Sistina was closed at 4pm. I'm saying to Rome for next time. But in the evening we met again to see the Jewish side of Rome. Old and ruined building create a gergous atmosphere. We found there a kousher restraurant. at first sight, it looked expensive until we pay:) But wine was perfect… Today's morning was ordinary. Only it is our last day we must represent what we have done during that project in front of our friends and project leaders. Paulo was absent, Gianmariona as well. Alexandra was busy. So no one from the lab listened us. Both three of us explained what we have done. ıt was not so serious presentation that i had guessed. After lunch we were free. We went to see Coloseum again.during the sightseeing Samet dissapered. We wait for him. but during that time we had a new friend name Daniel. He's a friend of Netta from İsrael. He brogght us such a beatiful Italian restraurant. Meals, waiters were great. It was near the parliament but like a hidden place that no one knows. While we're having dinner, Sophie's Italian friends came. I havent seen for a long time such a beatiful table. All people were laughing and chatting hours and hours. I would like to spend more time. I just realized as a country how we have troubles with countries. On the table Israili and Greek people were sitting, we were kidding for policies. I was asking to Efi to give us two more island in return for Cyprus, Efi was saying only constantinapole can be acceptable for islands:) At that time you can understand thet policy were occured, what have tought us, what is the history. on the way i was thinking these issues. In the morning efi and me will leave from Rome first. We must be on the way at 7 am and get up early. It was such a lovely trip, sooo beatiful friends i make. ı would like to see them all:)

ROME (Italy)
//Abdulsamet Gunek

Turkey

About me

Education and training:
Gazi University, BA: Faculty of Communication, Departman of Journalism
MA: Institute of Social Sciences, Departman of Radio Television and Cinema

Professional experience:
5/2007–2009: Researchers and communications coordinator, SETA, Foundation For Political, Economical and social Research
2007/2009- Text writer and assistant producer: Enine-Boyuna, Wekkly Live TRT 1 Television, Turkish Radio and Television Corporation
2007/2009- Text writer: Enine-Boyuna, Wekkly Live TRT 1 Television, Turkish Radio and Television Corporation
1/9–2007: Correspondent, Today's Zaman (English-language daily newspaper)

Awards and personal grants:
-Arab İmages in Turkey; "Arab Images in Turkish Media" Researchers and authors (2007/9- 2008/1: SETA, Foundation For Political, Economical and social Research Project)
-The Western Perception of the Turkish Society, Research assistant (TUBİTAK project -2008)
Higher Education Report, "Higher Education in Turkey: A Comparative Analysis" Research assistant (SETA, Foundation For Political, Economical and social Research Project)
-"New Erea in Iraq, the Middle East and Turkey, Research assistant (SETA, Foundation For Political, Economical and social Research Project)
-"Structure of Civil Society in Turkey", Research assistant (SETA, Foundation For Political, Economical and social Research Project)

Monday

09-11-2009

Welcome to ENEA. ENEA is quite a large research center. Research is being done in many different areas. There are hundreds of scientists from different fields. Let's visit here… Yes, our first stop is systematic and dynamic test center where seismic surveys are being implemented. Particularly focused on strengthening the historical and artistic buildings. yes, there's a small model of Aya İrini Church. A nice surprise. This is a joint project between Turkey and Enea. now robotics and artificial intelligence systems. Robot will always attract people. Because they are very hardworking …:) Yes, here in the robot makes a lot of work. especially for security … We are now the microbial Technology for cultural haritage center. where research focused on microorganisms. I would get a lot of information about micro-organisms. I am with the smiling face of science these days.:) Absolutely everything here is made protect and to maintain… It is still raining in Roma maybe that's why Rome is so green

Tuesday

10-11-2009

This day is my first day at The SAFENUT that is a research on the genetic structure of hazelnut and almond. The aim of the project is in the Mediterranean region of hazelnut and almond genetic map removed. Lorretta Baacchetta meet me. Lorretta is successful researcher and helpful. She focused on the nuts. First we visit SEFANUT labs. absolutely everything is here too sensitive to be careful. There are many researchers from different countries SEFANUT. I had small interviews with each of them about their study fields. Then Loretta, Ciara and I went to other laboratory. Ciara who studies mostly in the important part of this project is a graduate student at University of Roma.we are agree to meet for this project on Thursday.

ROME (Italy)
//Rupa Jayant Chandarana

English
Age: 21

About me

Education and training:
Bsc Biology with Science Communication, Royal Holloway, University of London : Attained 2.1
Science and Engineering Ambassador (SEA) : Trained to promote science, engineering, and technology, in secondary schools
Professional experience:
Radio:
July 2006- November, 2007: Radio Producer and Presenter of 'The Desi Show', BBC Radio Oxford
Produced ten shows, voluntarily, over two series, aired on Sunday evenings
Television:
21st September- 2nd October, 2009: BBC Oxford Television (Voluntary)
Working in the 'South Today' newsroom, mostly observing, shadowing, and undertaking specific tasks.
27th - 30th August, 2009: Edinburgh International Television Festival: "The Network" (Voluntary)
Selected to attend four days of television lectures and meetings, with industry experts
30th July- 3rd August, 2008: 'The Digital Discovery Animation Workshop,' by The Wellcome Trust (Voluntary)
Communicating ideas of obesity, animal research and evolution by producing a 5minute film
27th July- 20th August, 2005-2006: Local Advisor for BBC TELEVISION & RADIO (Voluntary)
Analysing BBC Oxford's Online, Television and Radio Outputs
Print:
19th June – 18th July, 2008: Summer Placement Fishawack Ltd, Medial Communications (Paid)
Writing biographies for clinicians involved in upcoming medical meetings
15th-19th August, 2005: Elsevier Limited, Assisted with Administrative and Editorial duties (Voluntary)
Proof reading scientific articles

Monday

09-11-2009

Roma! Our first day in cassica research centre. I found this incredibly interesting, as there were so many different projects all part of ENEA. From Robotics, used to find potential weapons undersea, to bacteria in the restoration of prestigious buildings and paintings, to testing the structure of famous buildings by simulating an earthquake. We took a break from our tour by having a full Italian Lunch, consisting of primo (starter), secondo (main course),a side dish, and desert. After, we were introduced to our laboratory and the main researchers, who we'll be with for the entire week.
Efi and myself are both discovering the science of batteries. It seems a shame that such an important area has been given very little attention (as they've had no Journalists reporting their findings to date). Hopefully after our week here, we'll have a greater understanding and make the science of batteries a topic everyone's talking about :)

Tuesday

10-11-2009

Today, we went straight to our individual research laboratories. We firstly had a chat with the head researcher for hydrogen and fuel cells, Dr Fabrizio Alessandrini. He explained to us how a battery is based on a simple model, and the basic science behind voltages, resistance, and current…who said GCSE physics wouldn't be useful?
We were then introduced to a different laboratory, which essentially replaced organic solvents (in batteries) with ionic liquids. Ionic liquids are better because they are not volatile and they are pretty stable at certain temperatures. Although, the purification of the liquid is key - as impurities lead to a decrease in the performance of the battery.
Before having lunch, we enjoyed our 15minutes of fame, with the camera team from ENEA web tv. They filmed us talking and questioning the researchers in the dry room (a place where moisture is kept out where possible). Tomorrow we'll hopefully be able to talk to the German and Korean phd student on their contributions to research on lithium batteries.
In the evening we had some awesome pizza, and traditional Italian ice cream (yes I know …in November… but it was worth the head freeze!)

Wednesday

11-11-2009

In the morning we spoke with Fabrizio about supercapacitators and how they are commonly used in Formula 1 race cars! After lunch we were lucky enough to see how a tester battery is made. If you can imagine a sandwich of, lithium metal, copper, and a spacer inbetween, this is the basics behind the design. Mario, the German phd student, looked like a kid playing K'nex (sorry Mario, if you're reading this!) We learnt that precision and accuracy are incredibly important in the laboratory, as one tiny slip up could ruin weeks worth of work.
Me and Efi (or eggy) both decided to get some retail therapy after our battery filled day! The evening brought more red wine, good food, and great company.

Thursday

12-11-2009

Yesterday, we saw how a tester battery is put together, the fast way. Today, we saw how a battery is put together, using a slower method. One of the reasons for it being slow is the high level of precision. This is why, sadly, we were unable to see this take place, because some of the components contained more than 22ppm of water (i.e. for every million molecules there is 22 molecules of water…now that's what I call precise!)
We then spoke with Maria (the only female scientist in this laboratory!) It was interesting to hear her point of view, and how in the early stages of her career she found it difficult to be taken seriously.
I wanted to interview Mario, using the ENEA surroundings, so I decided to interview him on the electric buse. This could have sounded more professional, had my recorder been of a higher quality. Nevertheless, it was a good experience discussing electric cars, standing alongside other Italian researchers, looking at me and my massive headphones!
We ended the day with an interesting discussion with Fabiola on what makes good story. Essentially it must be : new, relate to the right audience, and tell a story.
After our busy day, we headed for the Jewish Ghetto (no it's not as bad as it sounds!)

Friday

13-11-2009

Last day! So me and Eggy (sorry Efi :p) wanted to get as much audio material as possible, for our own radio productions. After our last interviews, we headed over to the newsroom to give a short presentation of our week at ENEA. This was a really good way to hear what everyone else had been doing over the week, and how the topic of energy links all the research areas.

After our last lunch :(we headed into Roma, one last time. For a change, we were able to see Roma in daylight. We took a break from walking (and searching for each other) with coffee and catucinni(amazing italian biscuits!) For dinner we headed for a traditional Italian restaurant, near the parliament, which was so popular we had to line up outside! The vino rosso, giggles, and grappa was flowing. A perfect way to end a fun filled week. Never again will I look at an AA battery in the same way.

ROME (Italy)
//Efthymia Mourgela

Greek

About me

Education and training:
Ionian University Corfu, Translation and Interpreting, Master of Arts in Journalism, University of Leipzig

Professional experience:
internships in radio and TV stations, freelance journalist for Deutsche Welle TV, traineeship at MDR (german television)

Monday

09-11-2009

7:20 Electric storage?? Polymers and ionic liquids?? I do not even want to get out of bed… 08:01 Meeting in front of the metro station. Hmm…the other guys look pretty normal…I was expecting crazy scientists with their hair standing up or journalists with huge glasses due to reading too much in order to understand science. Exaggerating is part of my greek nature. 09.30 Entering ENEA. I thought it would be a small factory (understating is also due to my greek nature) but it is a huge area, formerly used for nuclear research. Now it is an Agency for New Technologies where over a thousand researchers are working. So it could be intersting. But…electric storage??? At least, Rupa, my workshop-mate has also no idea how this whole thing is working. Registrating every electric device we have lasts very long, which is a great opportunity to meet the other guys. They are all very normal. And nice (it is a public blog, I have to write it- I will spend a whole week with them). I think it will be fun! 14:00 A few hours and a big lunch later I am examining the small battery of my camera. But unfortunately it does not giving me any clue, how this tiny thing is working… Meeting our tutor, Fabrizio, was such a relief. Quote:"We do not know anything about batteries!!" "Don't worry, I will explain to you how a battery works" Uff! 16:05 Entering the "dry room" where the temperature is the same as in the other rooms but the humidity is 0. It feels a little bit colder. Fabrizio sais that while we stay here the moisture of our skin is being evaporated. I immediately imagine of shrinking scientists who work all day long in this laboratory.But Fabrizio is not shrinking. And he is so kind. 18:57 Going out of the metro in Piazza di Spagna. Some people celebrate the fall of the German wall. Rome is such a magical city. I am hungry. 20:14 Eating with the guys in a small italian restaurant. Ordering like half a kilo pork meat was the best thing to celebrate the day. I am falling asleep as I am examining the lithium battery of my laptop.

Tuesday

10-11-2009

Electric storage! Yuhuuuu! Today I learned how a battery works. Guys, it is so simple: you have two metalls for example, called two electrodes, neutrum at the beginning and then you put an electrolyte between (maybe solid or fluid) and so you absorb the positive charge of the one and you have the negative charge. Because of the electrolyte the negative charge cannot go directly to the other electrolyde so it has to take an external way. And that is happening between the two poles of the battery. That's it! We learned also some things about ionic liquids, but I cannot write them, because I am not sure, if I understood them well. More infos tomorrow!

Wednesday

11-11-2009

Today we kept with the theoretical part about batteries with Fabrizio. Fortunately he is very patient and he explains to us many of the things he told us yesterday again and again. Then we learn a few things about supercaps. Before I came here I had googled the term "supercap" because I had seen it in our project description and was very disappointed. I could not understand a thing! But Fabrizio gave us a course "Supercaps and batteries for dummies". It is so simple: A supercap gives a car more power and a battery gives a car more energy. That easy. After a few hours about batteries and their charging processes I feel fully discharged. After our lunch Mario, a german PhD student from Münster, made a battery for us! The whole procedure lasted like 20 minutes! He made us a so called T-Cell battery (because the battery is made in a T-formed thing). After so much science Rupa and I deserved an evening for shopping!

Thursday

12-11-2009

Science is female! Maria, the only woman in the batteries department, explained us in a half page what ionic liquids are! She wanted to show us an experiment in the lab but we got to discover by ourselves that accuracy is very important. Even if one of the materials you want to use in such a lithium battery has 0,0-something water more than wanted then you cannot use it. And it lasts many hours in order to dry them. After that Mario made us a battery. It is like playing with lego: you put the cathode then over it the electrolyte and then the anode. Then you have to seal it. That' it!

Friday

13-11-2009

Our last day at ENEA. After having the security ritual for the last time we first go to the labs one more time. Mario makes one more battery for me. It seems so simple and logical now. It is a little bit sad saying goodbye to everyone. We were here only for a week but you could see from the very first moment how they tried to help us, explain us complicated fields and make us feel comfortable. After that follows a small presentation of all the participants. The whole goodbye-photo-session increased the level of sadness but then we were allowed to go to the cantine for our last lunch, which balanced sadness and happiness again. We spent our last evening in Rome taking pictures, drinking coffee, eating tiny tiramisu, talking about politics and enjoying the italian food but also searching for each other: it is very complicated to find someone in a huge, loud place like Piazza Venezia. And when the metro stops working it is even worse. Goodbye beer in Campo di Fiori. Good night.

Saturday

14-11-2009

Waking up so early sucks. Leaving Rome sucks. At least Ezgi came with me to the airport. In the airplane happens something rare: I did not throw away the science part of the newspaper. Not that I understood a lot, but at least I wanted to see what's in today's news in this field. Funny: they are writing about fuel cells in cellulars. Of all technological topics in today's newspaper they are writing about fuel cells! You must be kidding me…

ROME (Italy)

//Netta Ahituv

Israel
August 31st, 1980
nettaa@gmail.com

About me

Education and training:
Master degree in Environmental Studies at Tel Aviv University; First degree in Biology and Humanities in Tel Aviv University
Professional experience:
Journalist of Ha-ir Magazine - The weekly magazine of Haaretz newspaper; Correspondence of National Geographic Israel; A weekly corner about Environmental issues in the TV news program "Making Order" on the Educational Channel of Israel

Monday

09-11-2009

So We've received a glimpse of ENEA today. Things seem fascinating around here. Until you reach the canteen, it looks like a play-ground more than an adult's place, where deep science occurs. The canteen reminds you of the grown-up working progress that happens on these grounds. Dorky as it sounds - science could be fascinating indeed. There is a reason why I've chosen it somewhere around my childhood to escort me through life as a side kick of whatever I do. Another point for the journalist part - I don't know how it is in other countries, but in Israel journalists are often seen as squiky people, waiting for their prey, wanting to twist the truth to their convenience. From all the people I've met today that has something to do with journalism (from the orginizers to the participants) it is the total opposite. I've met intelligent, thorough, sencere, curious, friendly and most kind future and present journalists. I'm proud to carry the same professional title with them. So the junction I find myself at this week is very much pleasing.

Tuesday

10-11-2009

Journalists and scientists have many things in common, one of them is the constant effort to avoid functioning during the morning hours. Maybe that is the reason why people choose these professions, they allow one the priviledge of working at night and… well… doing other things during the day. Due to the Relate schedule Dr. Izzi and me had to meet each other and indulge in Photovoltaic conversation at 8:30 in the morning. To my gratitude, the subject is interesting and stormy enough that we made it, all the way through lunch time in one breath. During that one breath I have learnt the basic theory behind photovoltaic. Apparantly it involves pure physics (I had the notion that it is more of an interdisciplinary-technological kind of thing). Just to sum up today's material in 2 sentences: 1. "Silicone is the Material of God". 2. The sun provides photons, and the Material of God converts them into electrical energy. (this sentence befolds the whole research. It will be unfolded in the next days).

Wednesday

11-11-2009

On my first day (i.e Monday) I was briefly introduced to the Oven in the photovoltaic lab. The oven that has many functions. Today I had a chance to see it in motion. Dr. Izzi and me adorned the experiment with the code name "The Pizza Experiment", since the oven and all its equipment are similiar to the traditional way of preparing a pizza (and for me, cooking is much more challenging than a physical experiment). So we took the Material of God, covered already with positive electrons, and put it in the oven - where it will go through a procedure that will make one side of it negative. The two opposite characters (positive and negative, also called P-N Junction) are the force that creates the energy that will be produced by the solar cell. I have also been introduced today to the European project in which the photovoltaic lab is taking part at. This project is the link connecting between research and real life. Involved in it are "my" lab, an industrial company, a financial company researching the market for solar cells and a couple of other partners - all incorporated in the mutual aim to upgrade photovoltaic technology to a level in which it will be a product we can all use. To put it simple - they are all trying to make solar cells more efficient and less costly. After incorporating myself in "The Pizza experiment" today, I have no doubt that they will make it. Big time.

Thursday

12-11-2009

This morning I have been relieved to learn that there is also an electrical engineer on board of the Photovoltaic ship. Someone among all those genius physics that will know what to do with all the energy produced there. In the role of the un-physicist on board is Dr. Tucci, whom I've been introduced to his work today. He is exploring creative methods (again I've been proven that science and arts both evolve from the same fountain in the human brain - creativity) how to produce electricity out of solar energy. The wires that will connect the solar cells to our computers are exactly what Dr. Tucci is experimenting on. Well maybe not exactly, but this is the general direction. The second part of the day evolved dear Claudia Malerba and Alberto Mitti, who are both working in a fellowship lab on Copper material. They are trying to make Copper to show the same photovoltaic characters as Silicon does, since Copper is cheaper and since we all need alternatives in life.
The nickname Copper has received by them can shed a light on their success with it so far - "The Material of Satan". But no despair - with the brains and devotion of all this genius physicists and electrical engineer, it's just a matter of time until the Material of Satan will have no choice rather than be tamed to their wills.

Friday

13-11-2009

Luca Serenelli, a physicist who works in Dr. Izzi's lab, was kind enough to explain me the whole bureaucracy behind solar energy. The way it works in Italy is more or less the same as it works (at least for now) all over the world. And this is how it goes: Since solar energy has a major role in dealing with the Global Warming problems - because it displays an alternative energy to fuel and oil, that creates greenhouse gases. And since the technology of solar energy is already known, and has been in use for a while to be proven as functioning. But (in this But rests the problem) it is still expensive to most of the population and governments. The solution so far has been that: One can put solar panels (made out of solar cells) on his roof at his own expenses. In order to encourage people to do so, there is a big motivation kick from the state. And how do states motivate their subordinates? Money, of course. If a family puts a solar panel on her house roof, she gets paid for every kilowatt of electricity it produces. Moreover, if the solar panel on the roof produces more electricity than the family uses, the left over energy goes into a pool of unused energy that can be used in other periods of the year. So the family earns twice - first for getting paid on the kilowatts, and second for not paying the regular electricity bill. Luca's parents have put a solar panel on their house and a picture of it adorns the door to his office. Under the picture are numbers demonstrating how much energy was saved by the solar panel that month. Also indicated under the picture is the fact that the panels are the Silicon kind. After hanging out for almost a week in that lab, this is a fact I was naturally and uncontrollably very proud of.

LAUSANNE (Switzerland)

// Zsófia Lénárt

Hungarian

About me

Education and training:
I am studying communication and media studies in Budapest, I am in my 2nd year

Professional experience:
Besides my studies I take part in the work of the space research group of my university as a member of the PR team.

Monday

16-11-2009

Welcome to the home of chocolate, watches and purple cows!
The third group of ReLaTe arrived to Lausanne today - well, at least this was our first day together. In the chilly morning at 8 am we met Mary who is going to guide us during the whole week. The motel we live in is really close to the EPFL, the school and lab we are about to work in. So we took a nice walk there together and than they give us a tour around the university. The EPFL - École Polytechnique Fédérale de Lausanne - is quite an impressive place. The campus is just huge and - for me - it looks like a whole independent little city, with all the shops, cafeterias and theater. The architecture of the buildings is also stunning. And there's this outstanding new building, the Rolex Learning Center, designed by the japanese firm SANAA, looking exactly like swiss cheese.
The structure of the university reminds me of our university's building 'K' as it is as easy to get lost as there.
Later this morning we got all the basic, not-so-basic and further information about the project ReLaTe. Howard, Hinano and Mary described the aims of our presence this week. In a nutshell we suppose to look into the everyday work of Melody Swartz's research team in order to find out what it is like to be a science journalist - actually a very lucky one who has the opportunity to see these newest processes and results from first hand. I am scpecifically interested in the difficulties concerning communication between scientists and the public. Besides I'll try to keep an open eye to the 'PR' technics of the institute because that's something I'm also interested in - how scientists take steps to satisfy the media and still stay in control of the information generating during research. Of course it's just my field of interest. Every one of us will find a different angle to look at the problem from.
During the afternoon we were introduced in the lab and we met several members of the research team. Three of them explained to us the special part they are doing their project on. The majority of it was really fascinating even for me who has no biology or medical related background. These young people already have a clue about how hard it is to translate every scientific term and complex explanation into plain English.
We also had the opportunity to visit the Institute of Bioengineering's poster session today. It was about scientists making colorful, illustrated posters about their recent results and explain them to anyone interested in the topic. After that we had dinner together with the lab workers because there happened to be a great paella-night and there were more than enough for everyone.
Around 8 pm we returned to the motel to rest and write our blogs about the first exciting day here in Switzerland. To be honest, most of the evening was an endless race for plugs, power points and adapters - but that is another story. |

Tuesday

17-11-2009

Today we started the day in the nice café of the campus, in building SV. After filling up ourselves with caffeine and croissants we were ready to attend a small press conference where Prof. Melody Swartz answered our questions about any further details of the research we were interested in. After that we had the chance to make one-on-one interviews with her and ask our specific questions about the field we have chosen. This interview was absolutely the most interesting point of the day since it was pretty much my first interview in English. Now that I have the notes and the recorded material I really look forward to gather more information and create my final article.

In the afternoon we decided to explore Lausanne a little, so we took a short trip to the city. All the hilly sights and the narrow streets make the old town really friendly and loveable even though the prices are quite… shocking. Well, we at least got a quick impression about a quiet swiss town in November.

The evening is again for work. We are writing our blogs and making the first sketches based on the material we made earlier today. Unfortunately, I'm not yet able to listen to my record I made during the interview so I'm just arranging my ideas in my head.

Wednesday

18-11-2009

Today was the longest day I think, so I'll now just write a quick summary of it because I am really tired.
We started at 8 am in the café and than went up to the labs to meet the people we supposed to be shadow during the day. I am sure all the members of Melody's team are nice people but Jacqui and Marie especially are. They were explaining their studies like for ages, sometimes repeating things three times in order to get us to understand every detail. Even without any medical or scientific background the stories were really fascinating and comprehensible. With Zara we had the chance to witness the tragic deaths of four mice and the removal of their spleens. It was an interesting experience even though I do not recommend it before lunch.
We had a really warm and sunny weather in the afternoon, so we finally got to the lake and relaxed there for a minute. At 5 pm we had this unique opportunity to visit the Rolex Learning Center - together with a thousand other people - before the official opening ceremony which is going to be in February or March? 2010. The idea of the "cheese-building" is really really fascinating, even if it brings up more than one questions for me. Besides, only walking around for ten minutes in the empty halls made me nauseous.
More or less this was our third day in Lausanne. We are all getting closer to the exact topics we will write about after this week of observing EPFL labs.

Thursday

19-11-2009

Dear Diary!
Right now I am way too tired to construct meaningful sentences in English, not mentioning some deep thoughts. Today our schedule started with the group meeting of the immunoteam which was a little incomprehensible for me. This time we saw scientists explaining things to each other so they had no intention to make it clear to general audience.
After that we had a few hours until lunch we spent in the lab to take pictures. It was a great fun for me, I really enjoyed going around the lab searching for interesting things to take pictures of. In my case they won't have any real meaning just to illustrate the main article. Besides maybe I will use them to make a slide show about the week, and about the whole atmosphere of the research going on in Melody's team.
The lunch was pretty nice, we tasted the repertior of the Mexican week in a restaurant at EPFL. We were invited by the head of the EPFL's Communication Departement, Jérome Grosse.
The afternoon was again for work. We stayed in the newsroom to write our blogs and some of us started to process the data for the further steps. Mary was also with us so we went through the program for tomorrow together.

LAUSANNE (Switzerland)
// Zara Barlas

British

About me

Education and training:
- MA History (South Asia) (expected 2010), SOAS, University of London
- BA Journalism & Contemporary History, Queen Mary, University of London & City University, London

Professional experience:
I have been working for a medical communications consultancy since February 2007. During this time I have researched, edited and written numerous articles, particularly related to ophthalmology and optometry, but also in other areas of healthcare and medicine. As well as producing articles for ophthalmic and optometric trade publications, I have provided editorial support to ophthalmologists submitting scientific articles to academic peer-reviewed journals. I have also worked on producing press releases, brochures and newsletters on various products and services within the medical and healthcare fields.
In July in 2007 and 2008, I have participated as a journalist in the Wellcome Trust Narrative Skills Workshop. The Wellcome Trust is the largest charity in the UK, which provides funding for biomedical research in the UK and internationally. During the workshops, journalists worked with scientists on communication and narrative skills within the scientists' respective fields of research.
Since 2005, I have been involved in journalism for various media corporations, including the BBC World Service, CNBC Pakistan, Whitechapel AM (hospital radio) and The News International (English-language Pakistani national newspaper).

Monday

16-11-2009

We started the day with a tour of the EPFL, and despite my every effort to be smart and memorise the routes, I have a feeling I'll be lost in this labyrinth for the rest of the week. The architecture is really impressive and the university is stretched out like a mini city of its own, but it's so easy to lose your bearings when you're there. We were introduced to the institution and then discussed the main aims of the RELATE project. Through projects like this one, it is hoped that journalists can help to mediate and to convey the latest scientific research to a general public audience. There seems to be importance in simplicity and the human angle - the general public tends to be more interested in a story that is somehow personal to them, or is engaging in a way that they can relate with it (and that's just the name of this project!).
After lunch, we had a tour around the labs and had the opportunity to talk to some of the scientists. While talking to these scientists, I became more aware of how difficult it can be for a scientist to convey his/her work to an audience that has little or no knowledge of their subject of research. The scientist will often assume that certain facts are universally known, or will have difficulty translating complex scientific terms into plainer English.
It happened to be IBI (Institute of Bioengineering) day, so were able to get some information through the IBI poster session, where scientists discussed their research and their results. I found that the visuals on the posters actually made it somewhat easier to understand some of the scientific processes. But I have planned to create an audio piece for this project, so I will have to consider other methods of grasping the audience's attention. One thing I've considered is that often when we see an image, we produce a response based on our memories and our preconceptions - we think of what this image reminds us of and that can evoke a reaction. Similarly, in an audio piece, perhaps a description of a scientific process that compares it to something that we experience in our daily lives might help an audience to understand the science better. I will have to keep that in mind throughout this project.

Tuesday

17-11-2009

Day 2. Today we were given the opportunity to put our questions forward for Professor Melody Swartz in a press conference, followed by individual interviews. These two events helped me to decide my angle for the story - to highlight the lack of recognition of the importance of the lymphatic system in the medical field.
I'm looking forward to shadowing some of the scientists involved in the study of how tumour cells silence the immunoresponse in the lymphatic system tomorrow. This will provide more of a pure scientific angle, while Melody's input was a more speculative angle on how this kind of research is often overlooked. It would be great to get a third angle from an external source, outside of a purely scientific background. I will have to do some research on that. But I seem to have a clearer picture of what I'm aiming for with this piece.

Wednesday

18-11-2009

Shadowing the scientists today made me realise just how complicated (but also fun!) their research can be. It's hard work, and it's admirable work. It's not the kind of work that you can put your mind to in the morning and complete by the end of the day - it's an ongoing process with ups and downs and requires great determination.

But I noticed how much easier it was to understand the research by observing exactly what the scientists were doing; instead of just having complex words and formulae thrown at you, you can actually see the process in action. It really shows how important visuals can be in our understanding of complex or unfamiliar work.
The scientists were able to talk us through exactly what they were doing as they were doing it, so we got the narrative and the visual at the same time. It was also a time to interact with the scientists at a more personal level, which was also a valuable experience. I think that at times we tend to forget that scientists are not just defined by what they do - they're people first. My plans for this audio piece are shaping up into a clearer picture now that I've seen and heard the perspectives of the researchers personally.
I just hope that the whirring background noise in the labs hasn't made my audio recordings inaudible! Note to self: Must gain the confidence to ask interviewees not to get too excited and thump the table when the mic is on…

Thursday

19-11-2009

Today we observed the immunoteam during their group meeting. Until that point I had thought that the scientists had at times been explaining their research to us in too much of a scientific way. I now realise that that was actually the plainer English version. The discussion at the group meeting was very intense, and it was extremely difficult to keep abreast of what was being said. With immense concentration, I was able to pick up a few key points here and there, but generally it was just far too scientific and complex for me to understand. It demonstrated very clearly how differently scientists are required to communicate with an unfamiliar audience in comparison to how they interact with their fellows.
But it was great to get another, more scientific perspective on the ongoing research in the labs, albeit through a very limited understanding. After the meeting I worked on listening through and roughly transcribing the recorded audio interviews, trying to plan my audio piece. The angle of the piece seems all the more clearer to me now - it's just a case of editing the audio and working on a script!

Friday

20-11-2009

Day 5 - the end. Today we had a final meeting with Professor Melody Swartz and the researchers that we had been shadowing this week for a Q&A and general feedback. It was a good way to follow up with the scientists on any remaining questions that we had regarding the research and to fill in the gaps that we may have found when planning our articles/audio pieces. The feedback was useful in helping us to share what we had all learned from the experience, and to talk about the problems that we encountered. Everybody seemed generally pleased with the way things had gone this week - there was a lot to learn for both the journalists and the scientists. While the journalists were afraid of being too interfering and distracting the scientists' work, the scientists were worried about the experience being too boring for the journalists. But there were positive comments from both sides, and it seems that the project has been successful in serving its purpose so far. As with any project, there were difficulties that needed to be overcome, and there was a process of learning involved.
It has been an intense week, for me at least, but one in which I've realised a great deal about the work of scientists and of journalists, and the prevailing gap between them. I now have two weeks in which I will be working on my audio piece. It will be difficult trying to consolidate everything into a short audio piece, but that's also part of the challenge.
I have enjoyed being part of this project; as well as learning from the lab, I've gained a lot through working and spending time with the other journalists, whose unique backgrounds have each brought along great colourful perspectives :)

Additional info

My profile is also available here:
http://www.facebook.com/zara.barlas

LAUSANNE (Switzerland)
// Paulina Pielichata

Poland

About me

Education and training:
BA Journalism & Contemporary History
MA European Studies (in progress)

Professional experience:
Polish Press Agency, Thomson Reuters

Monday

16-11-2009

Landed in Switzerland late last night, after not making to the airport before the check-in closed for the first time in my 10-year long experience of flying. This morning I saw Switzerland for the first time in my life with no fog, not after dark and not from the perspective of the Zurich airport. Finally, when we got to labs the ULTIMATE first-time was the feeling of jealousy and even some regret that I picked journalism career over a career as a scientist.
EPFL, after patenting the nanotechnique to deliver vaccines by a single- rather than multiple- shot and at a cheaper cost, is now targeting the lympathic system to establish its role in cancer development and likewise a route to treat it. The researchers live up to neither this complicated and boring-sounding vocabulary nor to various urban legends about them, showing a passionate side instead. One of them said that their most recent studies left even more new questions than actually answered the original ones. Taking this intense peek at their findings made me feel the same about my final article. Perhaps, the one who said that journalists and scientists have in common both the skeptical quest to getting evidence and the empathy that drives a lot what they do….had a point. Now that I am thinking the day through with BBC news in the background I can now understand where my jealousy came from.

Tuesday

17-11-2009

The quote which inspired me today - was EPFL scientists' idealistic idea about their work…. "scientist don't compete with each other because it is impossible for one person to cure cancer". This again made me rethink the possible parallel between the work journalists and scientists do. Accordingly, it may not matter WHICH newspaper covers the story as long as general public has access to it. It does not sound impossible but it does sound far too idealistic. Another problem that occurred to me was the impact of migration on health issues. Not only are current generations of migrants/ immigrants susceptible to factors which could weaken their immune responses but also their children are perhaps already born with genetic makeup irrelevant to their location, making them develop incurable diseases….
The rest of the day was stolen by Lousanne- the city of barber shops. We counted about 6 of them during our stroll downtown. Then we rested our feet in a tiny cafe and had well-presented Swiss tea.

Wednesday

18-11-2009

A novice approach to immune system was revealed to me today as we continued our quest to understand contemporary science by shadowing EPFL's scientists. In order to walk me through cancer vaccination development attempts, a researcher compared an abnormality in human body to a car. "In order to stop that car it is logical to go for the tyres. But the immune system tends to attack the most visible parts instead such as for example the front window," - he said. Our scientists aim to develop a way to train human body to go for the tyres right away rather than get hung up on something else, preventing it thus from fighting cancer cells effectively. Brilliant. They should teach that kids in school.

Thursday

19-11-2009

It contiues to impress me how young and vibrant the EPFL team is -as I always thought of scientists as people hiding behind their glasses and white robes, who must have spent at least 20- years just reading before they even started carrying out experiments. A day in a lab could be a boring preparation for experiments taking place over the period of a whole week or a preparation that exceedes the experiment twice in time. Scientists test different scenarios, often repeating monotonuously the same tests, to determine factors behind changes in the human body. Today at a regular meeting a candidate was criticized for proposing too ambitious idea of developing a preventative vaccine for cancer. I smiled because I have had experience with historical research and this is what I often hear from supervisers. I then smiled again because if they think big we will have all these vaccines in no time.

Friday

20-11-2009

Melody concluded today that "nothing in immunology is for sure and we still don't understand it very well". I never aspired to produce sensual journalism but I came to realisation that science is one of the very few areas where it is very easy to run into doing that unintentionally. Most newsrooms program journalists to look for a time frame..but in scientific research there is no such thing as a time frame. Research takes so much time that it is almost impossible to determine who should get credit for innovation in the eye of the general public..or what the innovation really was- the idea or the final product (especially that most scientist rely on each other's findings)…. But then again life sciences have a strength of their own. People can relate to them regardless of race or religion. Isn't that enough to be a appealing read in a world where everything seems to be for sure? I think so.

LAUSANNE (Switzerland)
// Seema Jilani

British

About me

Education and training:
Present:
Fellow in Journalism, Glamorgan University in Wales
Baylor College of Medicine
Final Year Resident, Pediatrics
Texas Children's Hospital/Ben Taub General Hospital
May 2006: Baylor College of Medicine
- M.D.

December 2001: University of Houston
- B.S., Sociology, Biology Minor
- Summa Cum Laude
- Honors College, Dean's List

Professional experience:
Traveled to Bosnia, Croatia, Montenegro: Reported on Post-War Balkans Issues (June 2009)
- Published article on The Srebrenica Genocide in The Independent (UK),
- Interviewed survivors of the Srebrenica Genocide and toured facilities of the International Commission for Missing Persons
- Visited the Republika Srpska and Bratunac, home to the highest number of war criminals per capita in all of Bosnia
- Reported Live from Sarajevo for Pacifica Radio
- Published an article on "The Algerian Six" in McClatchy Newspapers and The Huffington Post: Interviewed Ex-Guantanamo Bay detainees of Bosnian citizenship who were released after seven years
- Currently producing documentary on post-conflict Balkans issues focusing on war criminals, missing persons, mass graves

Published Review of Asra Nomani's PBS Film, The Mosque in Morgantown (June 2009)
- Asra Nomani, friend and colleague of Daniel Pearl, is a South Asian Muslim feminist who is an activist for progressive change in the faith. She requested that I review a PBS documentary made about her.
- The article, entitled, "Women in the Back of the Mosque" was published in the Newsweek and Washington Post Series: On Faith, Common Ground News Service, Khaleej Times Online, Daily News Egypt, and Asian News Online

Trip to Beirut, Lebanon and Cairo, Egypt: Provided healthcare in an academic teaching institution and reported for The Houston Chronicle and Pacifica Radio (November 2008)
- Awarded Reba Mills Scholarship from the Department of Pediatrics at Baylor College of Medicine
- Provided healthcare in Cairo at the largest Pediatric Referral Center in the Middle East for low socio-economic status patients
- Reported for The Houston Chronicle and Pacifica Radio from these areas

Traveled to Israel/Palestine with a medical delegation whose aim is to promote peace in the region through healthcare and counseling (March 2005)
- Volunteered in many clinics and participated in healthcare in conjunction with Physicians for Human Rights – Israel and The Red Crescent
- Met with and interviewed Israeli and Palestinian health care workers
- Reported live from the region for Pacifica Radio
- Produced a documentary on this trip to the Middle East, which was nominated for The Peabody Award, the most distinguished award in radio journalism

Journalist for Pacifica Radio (September 2002 - Present)
- Report on topics ranging from healthcare, elections and both domestic and foreign policy
- Stories air locally and nationally, and three have aired in over 120 countries
- Have reported live from various locations including the Balkans, the Middle East during times of conflict, and New York City during the Republican National Convention
- Have produced stories on Gulf War Syndrome, Humanitarian Aid Crises in Iraq, interviewed the parents of Rachel Corrie, interviewed the son of Julius and Ethel Rosenberg

Traveled to Sudan on a Medical Relief Trip (June – August 1999)
- Volunteered in rural clinics and assisted in Orthopedic Surgical procedures in Khartoum, Sudan
- Organized delivery of poverty and famine relief goods to villages of Khartoum
- Produced film documentary on medical relief trip to Africa, which documents the various diseases still rampant in the developing countries and the effects of surgical treatment options

Refugee Counselor for Bosnians (December 1997 – December 2003)
- Helped settle Bosnian refugee families in Houston by referring them to appropriate medical care & enrolling them in technical schools.

Monday

16-11-2009

If the public had access to television in the 1920s, Franklin D. Roosevelt would never have been elected. In 1921, at the age of 39, FDR contracted what is now a rare disease: Polio. He was wheelchair bound by age 40 and kept his illness a secret from the worldwide public… a feat that would be impossible in this day and age. And while it is sad to admit it, it is probably true to say that FDR would not have been elected by the naïve public of the 1920s if he'd been seen making his speeches in a wheelchair, which he fully realized, hence his aversion of his illness in public forums.
By 1952, after billions of dollars of research, Dr. Jonas Salk had finally developed the polio vaccine, and by 1955, a massive worldwide campaign for vaccinations moved full speed ahead. People alive at the time remember when lines for the vaccine reaches for miles around clinics across the world. It gave hope that we might be able to eradicate the horrible disease.
Now, in the developed world, polio is a rarity. This is what vaccine technology has done. And that's just for one disease. If you had Hepatitis, H. flu, Pneumococcus, Rotavirus, Tetanus, Rabies, and many others, the number of saved lives is immeasurable.
This is what the researchers at the Ecole Polytechnique Federale de Lausanne, in Switzerland, hope to develop, but for many different diseases. To listen to them talk about their projects can spark interest in even the harshest of skeptics. Except they're not working on polio, but on the newest and most devastatingly killers of our time… Cancer, and also Tuberculosis, amongst others.
The nano-particles that Melody Swartz, head of the EPFL Lymphatics Lab, is working on, with her team of lab analysts, could change the face of future cancer research. She and her partners are working on a way to deliver safer, more effective vaccines, which would cost less to make (hence be available to the developing world.) Her research is based in the confusing world of lymphatics. You know those things that get big when you're sick? The ones under your neck and jaw bones? They are actually throughout your body, and the reason they get larger when you fell ill is that your body is trying to fight an infection, so it is making little warrior cells to go out into your body and fight the battles of disease for you.
Dr. Swartz's research is based in trying to find out how our body recognizes what is safe and what to attack. In some diseases, the body attacks itself; these are called autoimmune diseases, like lupus. Dr. Swartz is trying to find out what is specific to cancer cells that allows them to go undetected and filter through the lymph nodes to spread (AKA metastasize.) Once she pinpoints how that happens, the idea is to attack that area with a vaccine to stop its spread dead in its track.
Pretty complicated, I agree. I am still trying to understand it myself, but perhaps tomorrow, when I interview her one on one, I can step inside her maze of a mind and watch the wheels turn for myself.
While it sounds impossible for me to try to explain everything and put it into a journalistic package, I suppose other people have had rougher challenges in life…
"Once you've spent two years trying to wiggle one toe, everything is in proportion."
—Franklin D. Roosevelt, 1945

Tuesday

17-11-2009

Today was a more manageable day with a press conference and one-on-one interview with the head of the EPFL Lymphatics Lab, Dr. Melody Swartz. Dressed fashionably and incredibly driven, Melody has a way of explaining the complex science behind the lab in ways that are easy to digest. Lymphatics, according to Dr. Swartz, likely play a more important role in the the body's overall balance between health and illness. She claims that they play a much larger role than the scientific community realizes at this point. Her projects are split into many different areas: lipid transport, cancer vaccines (mostly "therapeutic," and TB vaccine research, amongst other topics.
The topic that most interest me at this time, being a specialist in Pediatric International Health, is that of TB vaccines. Tuberculosis can infect humans in many forms. The public most often thins of TB as a lung disease, but one can be stricken with TB meningitis, TB bone infections, TB spine infections; in fact, any organ in the body can become infected with TB, which of course, becomes a life-threatening condition. Interestingly, TB can also remain in a "latent" or dormant phase for years, without people ever developing symptoms. Most recently, MDR-TB has made the news quite a bit. Multi-Drug Resistant TB is TB that does not respond to the typical treatment regimen the scientific community has in their protocol because of mutation of the germ that causes TB, Mycobacterium tuberculosis.
The EPFL Lab in Lausanne has a special unit dedicated to nanotechnology, whereby they claim that they are working on developing a means of delivering a TB vaccine that is much smaller than the typical vaccines, much cheaper to produce, and possibly more effective in producing a host immune response. If true, this is exciting news as TB has reared its ugly head once again, with more worldwide travel and migration. It is also exciting to patients that have weak immune systems, such as HIV/AIDS patients, because TB can often be a cause of death in these patients. As a skeptic, and a journalist, I am trying to find out more about this scientific process and what its side effects might be for the general public. One should note that this research is funded by many different entities, including: the National Institutes of Health, Merck-Serono, The European Commission, as well as others.
This brings me to another topic that is typically not focused on, which is that of the Business of Medicine, which I will get into later. After all, we are supposed to be journalists with a good eye here, trying to find the truth, not just voice boxes for the institutes we are visiting.

For food for thought, I will leave you with this article published by The New York Times in yesterday's paper:
Drug Makers Raising Prices in Face of Health Care Reform
http://www.nytimes.com/2009/11/16/business/16drugprices.html?th&emc=th

Wednesday

18-11-2009

The more you know, the less you know. Each day spent researching more about EPFL's lymphatics lab opens new doors of knowledge for me. I am currently in my eighth post-graduate year, so delayed gratification and constantly learning new things is something I have come to expect from the medical profession. While I deal chiefly in a more clinical setting, whether it is in a Pediatric Emergency Room or an ICU, I rarely see the basic sciences part of research anymore. I'm too busy treating patients. So the visit to the labs today and interacting with the researchers themselves was rather eye-opening. Despite all these years in science, I still felt like I was learning immunology in the labs, which was rather refreshing. It was encouraging to meet people who are passionate about their work and see a light at the end of the tunnel with regard to cancer and TB research. It is clear that these lab researchers really care about the outcomes of their work and the repercussions it will have upon society's health at large.
I find that my scientific background both helps and hinders me in this process. I understand the scientific concepts rather well, and grasp the ideas of the research more quickly than I anticipated. However, because I know the standard of care, and I realize what is practical and what will not work with patients, I also approach these topics with a rather critical eye. For instance, the theory of this lymphatics labs revolve around the idea that tumors, through molecular mimicry, can trick the body into not attacking it. In addition, another central idea behind this lab's work is that lymph nodes might be useful in stopping the spread of cancer. This is where it gets difficult for me to wrap my brain around the research. It has been well-established throughout medical literary and multiple studies (both in humans and in animals,) that cancer spreads throughout the body via the lymphatic system. The current standard of care, worldwide, is therefore, to remove the lymph nodes surrounding a tumor area in order to stop the cancer from spreading and taking over the body. When cancer spreads, the consequences are obviously tragic - if it goes to the brain, one can lose mental faculties, if it goes to the liver or bone, it is rather difficult to cure and can lead to death, depending on the type of cancer. So the EPFL lab's idea to perhaps keep lymph nodes within the body, rather than removing them, is rather radical and very much outside the sphere of generally accepted medical practice at this time. As a physician, the thought of leaving lymph nodes IN the body, in a patient with cancer, is rather terrifying, since I have seen the horrific results of metastatic cancer that is spread through the lymph nodes.
Perhaps it is difficult for me to accept at this time because I see the face of my patients all too clearly. My 13 year old patient that died in the ICU from metastatic cancer, after so many valiant attempts to live and survive it all. My 15 year old patient who lost mental function after cancer spread to her brain. These lists, unfortunately go on and on… So for me to be a proponent of an entirely new and unproven protocol would not be right, neither as a journalist, nor as a doctor, especially without careful examination of the research. I will definitely have to think about it further.
EPFL is really approaching the subject matter from a different perspective though: what would be the possibilities if we, through science, were able to manipulate the immune system to make sure it attacked the disguised cancer cells? The other way to tip the scale is control the immune system so that you ensure it will not attack itself. This has major implications with respect to autoimmune diseases, like lupus, where the body attacks itself at multiple organ sites.
Either way, this is a new way of thinking and examining the issue. This may be a good perspective or a bad one; I leave that up to you to decide. Having been both a patient (and a very ill one at one time,) and a doctor, I know that I have conflicting perspectives and will try to reconcile my thoughts in the coming days. Many reputable studies, both in animals and in humans, have shown that removal of the lymph nodes close to the cancer has improved survival and lessened morbidity and mortality (death.) This is a well-known fact that no one can deny, and any doctor worth anything would not treat his patient differently at this time. Whether this research changes the future treatment, however, remains to be seen…
However, as far as the lab visit today, it was encouraging to talk to others who are in the same boat as I am… waiting for years for all our hard work to pay off, working long hours and difficult days, and hopefully working towards something that will be for greater societal benefit.
As any physician will tell you, we all question our decision to become doctors at some point (usually at 4 in the morning, when we are pronouncing a patient's death.) Other times I've questioned it is when I've missed family events because I am working 90 hours a week, or when I look at my student debt, or when a child patient of mine dies as a result of child abuse, or any childhood death at all for that matter. But those doubts disappear when I get a hug from a patient, or a card thanking me for being a good doctor, or when I comfort the parents who have just lost their child, whether it is because of cystic fibrosis, liver disease, mental retardation, cancer, or congenital heart disease, or even a traumatic car crash. Those are the moments that remind me why I put myself through this all. And I imagine this is the same for researchers here, who meet the patients who will benefit from all their long hours of centrifuges and pipettes. At least it is comforting to know we are all working towards a common goal… even though that goal is many years in the distance still.

Thursday

19-11-2009

In the recesses of this scientific atmosphere, between bunsen burners and centrifuges and mice, I remind myself the faces of my pediatric patients at home. I see them all here. The blue eyes of a six year old with leukemia, the pink nail polish of a 12 year old with rhabdomyosarcoma (type of muscle tumor,) the brown hair of a 9 year old with tuberculosis, and on and on.
These are the real faces of science and medicine. Not mine, not researchers, and not journalists. We have to remind ourselves of this every so often in the world of academia – where it seems like a race to get research published and where one can get too caught up in minutiae and forget the humanity in our sciences. But it is indeed there. Talk to any parent of a child with a chronic illness, whether congenital heart disease or Down's Syndrome. They know that this research matters and are continually following the scientific community's advances, probably more than we do.
I learn from my patients and their parents every time I meet them. Often, they know the latest research's pros and cons and have researched the disease extensively. It is this collaborative effort that I hope to really try to cultivate.
Medicine and journalism have the same goal actually. It is to be the voice of the voiceless. For me, children have no voice in the world, so as a pediatrician, I am their voice, especially in the tragic child abuse cases. Similarly, if a journalist is reporting from a war area, the casualties of war have no voice. That's the journalists' job. With science journalism, it is the journalist's job to identify salient points in the scientific research community and communicate them to the public in a succinct and effective manner.
I found this a difficult task, as I thought about it today, sitting in the lab meeting that the researchers attended this morning. Sterile talk of CD4 and CD8 cells and transfecting mice was difficult to swallow with my morning croissant. How is it possible to convey this information to the public with it dripping with condescension, and without in theoretical jargon? But when I reminded myself of the families that could benefit from all this hard work, and that I could be the vessel that delivers the news, it was empowering and touching.
Imperfect communication between different specialties can be catastrophic. Whether it is H1N1 flu hysteria, or false rumours of autism and vaccines, the erroneous mass distribution of health information can have horrific effects on the lives of millions. For instance, in August of this year, the Centers for Disease Control (CDC) passed new regulations regarding international adoption.
The new CDC protocol requires that internationally adopted children over the age of 2 be tested for tuberculosis in the country of origin before they are granted a visa. If they test positive, they must be treated and determined not to be infectious before the CDC will allow them to travel to America.
This is a perfect example of how scientific miscommunication has affected lives in a negative way. This might be an applicable law when it comes to adults, however, for children, the disease of tuberculosis manifests in a totally different manner. Children generally cannot be contagious if they have TB because they cannot generate enough of a cough to spread the aerosolized particles which carry TB. This new law is not in the interest of the patient, because of course, it would be in the best interest of the child to be allowed access to health care and be treated in the industrialized world, rather than to deny the child access to treatment. For many children, international adoption offers hope and escape from orphanages which neglect or mistreat them. The new CDC regulation has just put up a barrier to a loving home and family based on erroneous scientific information. Families have also suffered greatly. Imagine preparing your whole life for the addition of a new family member, a new child, just to be told that because of a skin test, that may or may not be accurate, you cannot adopt this beautiful child.
Enter EPFL. What would happen in cases such as these, if a TB vaccine could be introduced in the developing world, via nanotechnology, that would be easier, cheaper and more effective than the current TB vaccine, which is the BCG vaccine. The EPFL lymphatics and nanotechnology lab have been working on improving the methods of delivery of the TB vaccine such that this might be a possibility many, many years in the future. If this new technology could make these vaccines more accessible, and induce a sustainable immune response, perhaps this childhood TB would slowly fade from the radar screen, not allowing for a better quality of life, but also allowing for orphans to meet the parents who have waited so long for their arrival.

Friday

20-11-2009

Yes, I know, I am a bit delayed on this entry. And it is probably sacreligious to be late in this country, where everything is perfection. The food, the mountain air, the chocolate. Oh, the chocolate.
The last day was more of a feedback session, with an exchange of ideas about how the week went. We met with the PhD students and Dr. Swartz once again, and spoke about our impressions of the week and how it can possibly be improved for future groups. It was interesting to note that the researchers themselves also found that it was difficult for them to communicate intricate scientific ideas in laymen's terms. It reminded me of my experiences watching my senior doctors try to (key word: Try) explain a complex diagnosis to a patient. Watching the exchange of ideas is rather tragic. The doctor speaks in the mysterious language of medical jargon, the patient nods and pretends to understand, so as not to offend the nice doctor, then the doctor leaves the room, with a self-congratulatory swagger, thinking that he has really done the patient a great service.

LAUSANNE (Switzerland)
// Julia-Anna Photopoulos

Greek

About me

Education and training:
Present: MSc in Science Communication at the University of the West of England, Bristol, UK.
2007: MRes in Developmental Biology and Genetics (fellow), Universitat de Barcelona, Spain.
2006: BSc in Biology, University of Crete, Greece.

Monday

16-11-2009

The day was filled with a range of fascinating, yet so complicated research that goes on in Dr. Melody Swartz's lab at EPFL in Lausanne. Ambitions and hopes for the future in cancer research, as well as other diseases like TB. Imagine a vaccine for these diseases, where with an injection of very very small objects (nanoparticles), your body's cells could fight every single little 'intruder'. These so-called nanoparticles built synthetically are being made in Dr Swartz's lab; apparently they will be more efficient and cheaper than the ones we have today. Another hope where perhaps developing countries would be able to afford it and a step forward to this long battle with cancer…

Tuesday

17-11-2009

We managed to get to EFPL this morning without getting lost - thanks to the team no doubt, as my lack of orientation would have probably taken us to France! We were then given adapters for our laptops, since some of us seemed to have a few problems with the plugs - me being one of the people who desperately tried to save battery yesterday and had limited time on the computer. Tough day living without the computer! Anyway back to our day at the École Polytechnique Fédérale de Lausanne (EPFL)… We started with a press conference and individual interviews with the head researcher, Dr. Melody Swartz. Thousands of thoughts and questions that had come up during our visit to her lab yesterday were answered and everything became more clear. Dr Swartz explained everything in a simple and understandable way, helping my 'story' take some kind of angle.
Even with a scientific background, this area of research is new and complex to me as well. I am so mesmerized by this exciting world of 'lymphatics' and want to be able to fully grasp every aspect of it and disseminate it to the general public. Interestingly, the lymphatic system is a whole network of vessels where the lymph - a transparent fluid in your body with white blood cells - moves from the tissue to the blood. White blood cells defend our bodies from disease or foreign material. Even though it seems that the lymphatic system is 'doubted' by the scientific world, Dr. Swartz thinks that it can give insight to many diseases, including cancer, TB, and even obesity. Tomorrow our day will involve in 'shadowing' a researcher to further understand their work and experience a day in their lab…

Wednesday

18-11-2009

We have a beautiful view from our rooms of the lake and this morning before leaving the motel, I witnessed a spectacular sunrise. All of us met up outside the motel and then headed to EFPL. We then headed to Dr Swartz's lab and 'shadowed' the lab members. All of them were lovely, answering all our questions patiently and in a very understandable way. Not only did we find out exactly what part of the project each one of them were involved in, but we got to experience the lab's environment. From working in labs before, the environment is really important. You spend almost your whole day in the lab, where most of the time you will be working on your experiments and not talk to anyone; it's so important to be able to take breaks and socially interact with the rest of the lab members. As I recently decided to follow the route of science communication and the lab is quite fresh in my mind, I'm finding it very interesting seeing how other labs work and how they communicate between them. Every lab is distinct. Even though every lab, as one of the lab members said and I completely agree, is just like a big family: they have their good moments, as well as bad.
In the afternoon, we decided to take advantage of the beautiful day and walk to the lake. Zara and I had arranged for another interview with one of the lab members and thought it'd be nice to rest for a bit… I think each one of us, through our learning process, has started to form a better idea of what angles our stories will take. Getting input from different people really does help in the understanding of the topic. Everyone has a distinct way of explaining things and it's amazing how they 'fill-in' the gaps.

After the interview, we had the opportunity to go to the 'cheese' building (Rolex Learning Centre) and look at EFPL's future student library. It was a huge and captivating architectural building. I am amazed by all the work that goes on here at EFPL; I had really not known much about it before. Our night ended with a wonderful dinner at the village of St Sulpice, where I was able to practice my French and get to know the girls (the journalist team) better.

Thursday

19-11-2009

Our morning started with attending a lab meeting: the time where all the scientists from the lab meet and talk about their work, other work related to theirs and the next steps. This took me back to when I was also working in a lab.. These group meetings are a great way to get feedback from peer and bouncing up ideas, as well as keeping up with the research - scientists are always learning and continuously asking questions. However that did not make it more comprehensible for me. The discussion was very specific and different from my area of expertise, and therefore it took a bigger effort to understand everything. I was also reminded how scientists communicate between themselves and the amount of the so-called scientific jargon used. It then occurred to me why scientists sometimes find it so difficult to communicate their work to a lay audience, and it made perfect sense: spending an incredible amount of time in the lab and speaking to other scientists in their 'language' makes it hard to just switch to another 'language'. Perhaps it's the same when you're multilingual and you've been speaking a language all day and all of a sudden you're meant to speak a different language; your brain sometimes just gets confused. It's also something that you are so familiar with that sometimes you just forget that you need to step out of that box, and remind yourself that the not everyone knows what you're doing. It happens to everyone - even scientists.
This subject about communication among scientists and between scientists and journalists was further discussed over lunch with the EPFL Communications Department. We got insight on how EPFL deals with the media and their scientists, and shared our thoughts and perspectives about the communication between the two fields. As my interest lies in science communication, it's interesting to learn about the communication in different institutes, as well as different countries. Our afternoon was spent in the news room reflecting and putting together the various material collected that will allow us to create our final pieces…

Friday

20-11-2009

Our last day was probably the most relaxed from the whole week, where we met up with Dr. Swartz and the lab members we had shadowed, to share our views and experiences of the week. We first asked any last questions about the research that were on our minds or unclear areas that we might have ran into. Then both scientists and us journalists gave general feedback about the week. We both shared overall positive experiences, where both groups noticed a developing process of their communication skills with the other group. At the beginning, we both shared fears: we that perhaps would be interfering with their work, and they that they were not explaining it well or plain enough. I remember that this was actually one of the many reasons that inspired me to get into science communication; I had realized while undertaking a masters in genetics how hard it was to explain to friends and family what it was that I actually did in the lab - what my research was about and how this was important to us humans - what did it promise to humankind? How would this help us? And this was hard, considering the fact that I worked with flies. 'How do flies relate to us', they would ask? However, challenged with these difficult questions, I also had noticed that explaining helped me step out of that little world of mine and form other ideas for research. The simplest questions that could have been asked weren't, but instead were asked by friends or family. These fears from both researchers and journalist, however, faded as the week ended and we spent more time together, becoming more comfortable with each other. That definitely gives hope to the gap between scientists and journalists… I think it's a matter of simple communication and understanding of the two groups: scientists and journalists. Both of groups are 'scared' of one another, and there is no need. This project perhaps promises a step-forward; a way to overcome this gap. I also strongly believe that these two groups should somehow learn to work together and create something incredible and beneficial for both. Taking part in the project, has allowed me to learn first-hand about this gap and the two perspectives - of course other than the fascinating cutting-edge science carried out in Dr Swartz's lab. I think an evaluation of this project at the end would be beneficial in a science communication context. It is a learning process for both scientists and journalists, where both must be open to flexibility and change. As a 'new' journalist, I must not forget to mention that except for the learning that occurred directly with the communication between scientists and their work - as I seemed to sometimes cross that barrier with my background - ideas, experiences and knowledge we shared with my fellow journalists also shaped my thoughts, and brought me new and bright ideas that I will take with me in this career path I have chosen.

2nd Session

March 2010

relate

REsearch LAbs for TEaching journalists

ENEA - Rome (ITALY)
//Ayse Bihter Celik

Turkish
02.05.2009
abihterc@gmail.com

About me

Education and training:
Bachelor in Socilogy, Masters in Journalism, PhD in Journalism(continuing). All in Istanbul University.

Professional experience:
Awards and personal grants:Erasmus in Vienna University.

Monday

1-3-2010

The story begins with a visit. Alpha students make a visit to the Conditioning Center and listening the scientists carefully… Yesterday the whole day, I thought about Huxley' s "Brave New World". And the fact is, the things that I saw yesterday was not fiction. So I recovered myself and realized how closed we are to A.F 632 (After Ford 632, the time fiction of Huxley).
So, trying to be a journalist (but cannot manage it practically, because of not having a real job), it worths to write about those scientific studies. Why? To make the public understand what have been done in that area. Why is that important? Because if the science not used ethic then it may cause really huge problems. Like in fiction movies? Some anti-heros who want to conquer the world? So the common point with the scientists and journalists could be that, both of us should be ethic for the public benefit. Meanly, as journalists we should support the science and let the public realize the studies.
As personally I care more about the social side of technology, I used to criticize the development of technology so, this workshop could also change my view of point. So, I have loads of stuff to learn and challenge in my mind. Than we' ll see what comes out….
Ups, I was nearly forgetting about what we' done today and what reminded me about Brave New World. I was so nervous because of not knowing lot about science, but the point was I' ve been really feeling so familiar to the city, I feel like I know here before and I' ve been living here for many weeks. So, that calmed me down.
Than, we were in ENEA and met with some scientists and started to explore the labs. It was quiet difficult for me to adapt myself to the atmosphere and the language (because of the strong Italian accent). Than, it started to come, and I finally started to understand what' s going on.
We first visited the Thermodynamic Solar Plant, it seems quiet smart to have such a system. Comparing with Turkey, this system would work quiet good because there are loads of sun in there. Honestly, I was not following the developments in that area in Turkey but when I go back, I would put myself more into that. The sad side is, as Mads said, instead of doing those studies all together countries are creating their own markets. This is really sad but, it' s capitalism and nothing to do, may be as journalists we can create a public opinion and let the society science literate. Then they would have chance to distinguish if the studies are good or not. Anybody can judge the studies without knowing anything about them. So we, journalists, should step in that.
Second destination was, Sismic and Dinamic Tests Hall. It was also so interesting. They are creating unnatural earthquakes with a certain scale and testing how could the structures can be damaged. And the last destination was "Semi-Anecoic" Chamber. They are measuring the electro magnetic rates in electronic tools and, reporting if the tool suits to the standards or not.
So, that was the ENEA side, we also have a Rome side. After the work we went to the city and walk around the streets. I really liked Rome, but not the foods. Maybe it' s because I only eat vegetables…

Tuesday

2-3-2010

Since we came here, we always have to run to somewhere. That time we deal about not running to the train in the morning, but again we couldn' t make it. The next time hopefully…
We reached to ENEA and our scientist, Sandro Calmati, picked us up from the entry and we went to the climate studies building. There, we met with Florinda Artuso who presented us what is climate and what kind of studies they are doing. I enjoyed it a lot and it was a lightening for me what' s going on inside.
We understood that scientists make researches than they send the data to world commissions or European commissions. After that, policy makers prepare reports/books about those researches. But, what about the result? At the end, all data goes to the politicians and they decide for our future. I' m not going to question their decisions from here. Just do what I have to do as a journalist than let the public lightened like me…
If I talk about the information I got today; I would say that, basically I was back to high school. We were talking about the gases, chemical elements etc, but of course Florinda tried to explain us in the simplest way that we could understand what' s going on and could express it to the public. Simply; they are measuring the emission of greengases in the atmosphere. For this, they need a separate area because the air must be not effected by secondary sources. So they have a measurement study in an island on Mediterranean See which is called Lampedusa. So that, they can get the homogeneous air and analyze the gases inside. They look to the past and present and compare the data and make speculations about future.

And as I said, they send all data to some associations to be synthesized. It' s a nice topic for me, I really liked it both because I care about the nature and animals.
It was too much information so hopefully, soon I could find a good point from all those stuff and express myself…
Than again, we went to the city after work. The weather was quiet nice, we walked a lot again but it was a pleasure for me to walk on those beautiful streets (sadly the gaps between the nice copstones were full of cigarette filters), it' s kind of an open museum. I should come back to Roma for a detailed visit.

Wednesday

3-3-2010

Finally we made it today, we didn' t have to run to the station. Calmly we were in ENEA. After we made the daily check in for our electronic stuff, Sandro came and picked us up to his office. The topic of today was a bit different from yesterday. This time we talked about surface temperature measurements and climate modeling. ENEA is working on Mediterranean Sea and modelling the climate conditions and making speculations about future.
I really enjoyed the day and at the end the ideas were flying on my mind about what would be the point of my article. I' m nearly deciding it, but still not sure and read something about to be sure. So, very soon I' ll be decided about the point of my article.
I cannot pass the cultural side of this travel because it' s as much important as climate changes. So, exploring this amazing city is my second necessity as a journalist, and the day continued with wandering around Rome streets and meeting with two American girls who are living in Italy and when they heard about this RELATE project they were really impressed with it. One of them was an economist in an UN organisation and I told her about the economical aspects of climate change and she really liked the topic. From my side, it was nice to negotiate what I learnt from ENEA, it opened my perceptions and finally decided my point of article.

Thursday

4-3-2010

Today, I was a bit nervous as the first day because I want to write an article that would make sense both for the RELATE project and my academical studies. In the morning, when I met with Ana and Natasha I cheered up because we made such funny conversations. We laughed the whole way and I stored loads of positive energy for the stressful day.
Than the ENEA times started. Sandro picked us up from the entry, we went to the lab and started to work on our questions. After that, I made an interview with Sandro about risk and risk management in climate change area and I tried to understand a scientist' s point of view on the effects of climate change on society. It was quiet hard for a scientist, I know, but as a social scientist I really wondered what do positive scientists think about society, because we always talk about the effects of modernization, industrialism and other scientific and technological developments but I' ve never heard about a scientist talking about society. So, the point of my interview was; risk society and dealing with insecurity in climate change study area, and there came really nice answers. And I had the second lightening of the workshop. This was challenging for Sandro as well. I enjoyed the interview. After this detailed interview, I wanted to ask one question to some other climate modelers and the question was; how they define risk. After that I want to compare the answers with the sociologist' s definitions. So, this will be the academical part of my stay in Rome.
Tomorrow is the final day, and I' m quiet excited for the presentations. Because I really have loads of ideas, still. I feel like, I should write about this, I should write about that, wow this worths to write about… So probably, there would be more than one article, we' ll see soon how it works…

Friday

5-3-2010

It' s sad that I have to leave this wonderful city. But I' ll try to come again, I' m sure I will. So I can calm down and just enjoy the last hours…
So, the day started in ENEA with studying in the news room. After that, I went to talk to Fabrizi about solar energy because I wanted to combine solar energy with climate changes. I couldn' t get the answer that I wanted may be because of the language barrier, may be because of the scientist was stucked on what he was doing. But anyway, I' ll try to make it.
Than, we made the presentations and everybody had quiet interesting topics. All of us talked a bit about our works and we ended that awesome workshop week. I was always interested in science and technology as academically but now I' m sure I will specialize practically as well. But still, I' m hopeless about finding a job in Turkey and have to give my articles freely, so the system would never allow me to have more experiences in that area.
Anyways, we came back to the hotel and going to meet in Ana' s room and have some more good hours together, and than the last hours in the city…
As a last word; it was a pleasure for me to get to know all participants. Finally thanks to Hinano, Fabiola and all researches who helped us to understand their works and to RELATE Project for organizing this workshop.

ENEA - Rome (ITALY)
//Sven Rüdiger Knobloch

German
09.09.1983
sven.knobloch@mdr.de

About me

Education and training:
MA Journalism, Sociology, American Studies - University of Leipzig, 2005-2010

Professional experience:
2006-2009 Radio mephisto 97.6 (Leipzig), Editor and Presenter; since 2010 - MDR Television, Dep. of Programming Culture & Sience

Monday

1-3-2010

Our Comissioner

Germans are always punctual - one of many stereotypes that got disproved on the first day. Also, scientists are not always wearing white coats.

So here we are: 8 journalists in Rome. Ready to get our minds blown by the Italian scientists. But that is the wrong attitude, we are told the first day. We should not just look for the news. We should show processes, explain long-time projects, capture the hard work that is done. A difficult job in these news-oriented times. One of my main goals is to find out the state of the art of research on renewable energy and how the funding of the european Commission brings researchers from different countries together. The new European Commisioner for Energy is German Günther Oettinger. Being the former Gouvernor of the state of Baden-Württemberg, he used to support nuclear energy, because there are several nuclear plants and a big energy company in this state. Now, holding a new office he changed his position and supports clean and alternative energies. A good change? Yes. Believable? No. Anyways, I hope he does a better job as European Commissioner than as Gouvernor.

Tuesday

2-3-2010

Our Vision

First day in the photovoltaic lab. Germany seems to dominate the market in this field in research as well as in distribution and private usage. That is somehow weird, because we have no sun. Wind energy and wave power are much more likely to be useful in Germany. Are we so far ahead in renewable energy because of the Green Party being in the gouvernment for 8 years? No, says Massimo Izzi. He is the head of the photovoltaic department at ENEA. "Germany has a clear vision about the future. Much clearer than for example Italy and Spain, who could really use solar energy.", he thinks. Do we really? Is it a green vision? I doubt both. Maybe it started as a green vision, surely enforced by a fast growing Green Party. But once we got so far ahead in developing renewable energy technologies, it became much more likely a vision of a market that we could dominate in the future. Green politics and business go hand in hand these days in Germany. Even the Conservatives form coalitions with the Green Party in two states so far.
As far as the ENEA lab is concerned, they try to make me understand solar cells from scratch. Holding a 10 kilo silicon block in my hands I can imagine how complicated it is to produce these extremely thin and fragile solar cells. The staff here is researching to make these cells more efficient and less expensive. Those are probably the factors to make photovoltaic energy even more attractive to private households as well as to energy companies.
Tomorrow, I am gonna feel like a researcher myself - they promised to give me a white coat…

Wednesday

3-3-2010

Our Recipe

"Something is wrong!", says Massimo Izzi while staring at a screen with endless columns of numbers. 'Recipe', it says at the top. I am standing in a lab (with my white coat on!) and watching the start of an experiment. Science is like cooking, I think. You make a recipe and you know what you want the result to be in the end. You just have to find out the right ingredients. So, we try out our recipe and risk that it gets burnt. But then we try again as long as we need to create the perfect dinner. I wonder, if Italians are as good researchers as they are cooks? At least I can say, that they are as passionate about science as they are about food.
Today we cook a piece of silicon that we want to add some free electrons to. It is the base for a solar cell. In a solar cell, the silicon works the same as the inside of a normal battery. The danger that the silicon wafer (formed like a pizza) gets burnt today is high, because we cook it at 900° C. Afterwards, we measure the lifetime of the free electrons we added. But as we take our pizza out of the oven, Massimo immediately sees, that something is wrong. There must have been some bad particles in the oven, that ruined our samples.
So today we burnt our pizza. But at least we know why. And apparently that is a good thing in science.

Thursday

4-3-2010

Our Scientists

As you get used to seeing old very buildings everywhere you go Rome, you get also used to talking to scientists every day. Talking to a scientist is a unique experience. All the people in my lab are extremely enthusiastic about their work. But still, sometimes they have troubles to adapt to the layman's language.
Today, we talked about physical and chemical processes that are involved in producing a solar cell. We talked about it very detailed and it was very hard for me to follow. It took several hours (including the days before) until I got an overview of the most important steps, materials and processes. But then we talked about the energy market in general and somehow they could explain this market to me as clearly as I had never heard it before. To cut a long story short: a photovoltaic plant makes profit after just 2 years. A nuclear plant makes profits after 10 years. They live about the same number of years (25-30). The big difference: the profits nuclear plants make are much higher than the ones photovoltaic plants will ever make. And the companies that own the nuclear plants do not have to worry about the waste. You think that would make someone mad who does research on clean energy solutions? No. My tutor Massimo says, there is no right or wrong. For him, it is an individual question of lifestyle. You use a lot, or you don't.
If you want to take glance at the topic of my final article, check out this website: www.greenpix.org . That is the future - fully integrated photovoltaics.

Friday

5-3-2010

Our Goodbye

So here is my final entry. It is as delayed as my flight back to Germany was on saturday. Flying into a terrible blizzard made leaving Rome even harder. But now, inspired by the Oscar ceremony last night, I wanna end this blog acceptance-speech-style.
First, I wanna thank the academy. I wanna thank Massimo for his patient mentoring. I wanna thank Alberto for all the Espresso. I wanna thank Claudia, Karima and Francesco for their time. I wanna thank Fabiola for her passionate work. And I wanna thank my 7 ReLaTives who made my work fun. This week has been amazing.
Now, what does this project mean for me personally? What is the most important thought I take home? It is probably, that I met scientists that are not typical scientists as I expected them to be. They have an open mind and a clear vision about society and the future. They work to make the people independent from oil, from energy companies, from energy politics. They work for a better world and are not afraid to articulate that. That gives me hope. And that is a story a journalist is more than happy to write.

ENEA - Rome (ITALY)
//Mads Qvist Frederiksen

Danish
21.12.1985
madsfred@hotmail.com

About me

Education and training:
Journalism and Contemporary History, final year. City University and Queen Mary University of London

Professional experience:
The Times, United World, Weekendavisen, EU

Monday

1-3-2010

One of the main discussions of the day was that journalist should play a more active role in promoting science to the public. This should be done despite the fact that the researcher would have no news to share. It is a beautiful thought but also very difficult. It is a sad truth that journalism is as much a business as it is idealism. Newspapers are about supply and demand, so if there are no demand for science "news" then there will be no supply. Also, even more importantly, the argument was that we must cover research anyway, even though there wouldn't be a result in the next 5-6 years time. If we (us journalists) are to do so, then the researcher must also change their attitude. No more "trade secrets". No more bad science, it must all be told to us, also when they fail. Furthermore, they must share their research with other researcher so to move faster, hence make it more interesting for any journalists to write about it.

Today we had three quick tasters of what the researchers do at ENEA. First we were shown the solar panels that might change future energy resources (something about 550 Celsius and 400 Celsius and some warm salt - more to come when I have written the article about it.) Then we visited a seismic lab where they see the influence of earth quakes on buildings, very topical indeed. The last visit was about electromagnetism. Basically a lab where they are a part of giving the CE numbers to products being produced in Europe. For safety of course. However, the irony of it all is that they do most of their work for the military. So, basically they make sure that bombs are safe in regards to electromagnetic radiation. The irony of it all. The most common fault for all the scientists that we talked with was that none of them knew how to speak to a layman. This is what we have to teach them this week. They have to learn that they can't just say "This can produce 1 gigawatt a year" when I have no idea how much that is. Is it the electricity that a household use annually?
Tomorrow will be the first day in our group's lab. I am going to mostly be starring at computers and numbers because I am in the Climate Change mapping group.

Tuesday

2-3-2010

Day two was the day when we really got started. After the long time in the line of bureaucracy we finally went into our individually labs. In my group (three in total) were were introduced to measurement of gasses in the atmosphere that was being done on a small island in the Mediterranean. We saw how the Greenhouse gasses (GHG) were measured around the world and sent to Japan, that then made sense of the raw data before it was sent back ENEA for some Climate Change mapping that we will do tomorrow. I have slowly starting to get an idea about what stories I would cover. One aspect is that our researcher said: "Scientists don't have opinions, we have facts" was interesting, because she did have A LOT of opinions when you started to talk with her. I think it is time for scientists to pusht he policy makers in the world of climate change. We also talked about how hard it is to get any funding to do research in Climate Change, because it is a never ending process. It is not like developing a new technology that will make money in the future, like solar panels.
Lastly, I have realised that there are benefits and losses in the fact that the staff doesn't speak perfect English. The loss is that they seem less "experts" on their area and that they don't always understand our questions. However, the benefits are that they are able to explain it in much simply terms and using more drawings and hand-signs that makes it easier for us journalists. Nevertheless, they still have a long way to go in learning to communicate with journalists.

Wednesday

3-3-2010

We were warned before we went to visit the Climate Change modelling lab that it was not really a "real lab" but instead just a small computers and a lot of numbers. However, it turned out to be of the most interesting days of my stay at ENEA. Not to reveal too much (you got to listen to my radio piece and read my articles) but we basically got to understand why some climate change models are better than others, why scientists also think about uncertainty and why ENEA can help olive growers in the future. It was all very interesting and I am looking forward to get some interview done tomorrow.

The problem is that I feel I have too many questions and too little time.
Once again we ate some quite Italian and relatively good food in the "cantina" and once again I was surprised that the leading scientists when it comes to Climate change are so polluting at work. The cutlery and the bread are both packed in individually plastic bags. There are only paper cups. And every tray got a little paper cover. Waste. Waste. Waste and no recycling. The old saying, reduce, re-use and recycle is not really thought about here. This is even though one of the scientists I met today won the Nobel Peace Prize with IPCC in 2007.

Thursday

4-3-2010

As a "journalist in spe" this was probably one of the bet days. It started out with a horrible interview, then a good story and then ended with a perfect radio interview. I already have material for 3 good stories. Not much happened apart from the interviews, but I felt that the scientists actually learned quite a lot by talking to a person with no background in science. It seems that this project works both ways, we learn and they learn. I was quite facinated by the supercomputer that they are using here. One of the climate models takes 8 hours to calculate 1 year, and they cover ca. 50 years. That is 400 hours of calculating from the moment they press the "enter" button. Not only that, the computer has 200 processors (a normal computer has one). So to repeat; 200 "computers" use 8 hours to calculate 1 year in a simple climate model. Wauw. Now it feels like I have to be the scientist. I need to do the same as the researcher we have been talking to. I have all my raw data now and I now have to use my "specialised" knowledge to make sense of it all. Unfortuneately I do not have access to adobe audtion here, so I have to wait to edit my radio piece until I get back to London.

Friday

5-3-2010

The last day of the project has been mostly focused on doing the first steps towards a final article or radio programme. Some went to interview some last people other just stayed in the newsroom and worked, ie. Me. The presentation about our experience with the project was the last thing we did before we left ENEA physically but not mentally. This project has taught me a lot about science journalism and I also believe that the researchers have learned a lot from the experience.

ENEA - Rome (ITALY)
//Anna Maria Balogh

Hungarian
12th June, 1989
annamariab89@gmail.com

Monday

1-3-2010

Our first day visiting the labs was just impressive.
We went to a station of ENEA's (Italian National Agency for Tecnologies, Energy and the Environment) called Casaccia, and had a really great time there. I really mean the word 'station', it is huge, prestigeous and a little bit science fictionic, like in movies, when they transport people with mini buses from one building to another.
On the first day we visited different kinds of labs just to get a general picture of the things they are doing here. First we went to a thermodynamic solar plant - it is huge; at least a hundred metres long. I was thinking that if we can get energy just from of sunshine, why do not we do that? Why do we torture our moriband planet with old techologies?
Our next trip led to the Sismic and Dinamic Tests Hall. Its headroom was just endless with a unique atmosphere and shocking equipment. They are working with 'shaker tables' for testing different kinds of building structures in the case of earthquake. I was just thinking of Haiti, what if it wasn't impossible if they had the modern technologies everywhere for saving lives?
Our third station called 'Semi-Anecoich Chamber' - a chamber with black walls and white squares on it, like a piece of modern-art is functioning as a test room for electromagnetism. The professor told us interesting facts about the effection of cell phones on human brain, it is really worth to read their publications for everybody!

Tuesday

2-3-2010

On the second day we could learn more about the labs of climate changing; about the equipment they use, about the method they work with, and about the researchers; who are they, what are they working on, what are they doing for the human mankind.
The most interesting and important facts that I heard today:
-Actually we NEED greenhouse gases, the average temperature would be -20°C in the Earth without them.
-Climate change has been always existing but never as much as nowadays. The point is if CO2 causes temperature changing, or temperature changing causes CO2 rising.
- We do not know how fast is the climate changing procession.
- There is an irreversible point. - Maybe we have already run out of time with prevention.
- We MUST do something, immediatley. At least in our close environment.

Wednesday

3-3-2010

On the third day we went into details about climate change mapping. I got to know more about their methods, about the future of the planet in seventy years and about the effects on economy and business, which could be the most frightening part of it.
I had fantastic experiences today as well, -I heard a presentation about 'Caribbean Low Level Fet - role a local maisture transport and dynamics, -I got to know that a Nobel-price winner is working in the next room, after whose publication in 2007 no cynical politicion or buggler would say that climate changing does not exist or it is not a problem, -and I finally understood what oceonography means.

Thursday

4-3-2010

This day was about making interviews with researchers.
I had a nice conversation with Florinda Artuso who is specalized in monitoring carbon-dioxide in the athmosphere. She warned me about a shocking fact:
Those people who are not interested in climate changing saying that they will not be alive when it really happens, should be aware that climate change is so much faster than they expect. So maybe they will be still alive.
Then I had the opportunity to make an interview with Vincenzo Artale who got the Nobel Peace Prize in 2007 as one of the leader of IPCC's. Since his results in climate change researching, nobody can disclaim the existence of climate changing or say that it is not a big problem. After the interview we all had a lunch together, so I had the opportunity to talk about that how does it feel like when you get a Nobel Peace Prize. But just in theory. Yet.

Friday

5-3-2010

The last day was about the final steps, we collected the missing informations we needed, made our last interviews, and asked our last questions.
We turned back to the topics we were most interested in. I visited the Semianechoic Electromagnetiq Chambre again, and I asked a few questions about the safe mobile phone using.
At the end of the day, we all met in the Newsroom, and shared our experiences about the the week. I beleive that we all had a wonderful week, we did a good job, we had fun and we really enjoyed the Eternal City.

ENEA - Rome (ITALY)
//Szilvia Drescher

About me

Education and training:
Sep 2009 - Present
Budapest University of Technology and Economics (BME) in Budapest, Hu
nication and Media Studies (expected in 2011)
Sep 2006 - Jun 2009
Budapest University of Technology and Economics (BME) in Budapest, Hu
munication and Media Studies (Community Technology Specialization)

Professional experience:
Mar 2009 - Aug 2009
Faculty demonstrator at Budapest University of Technology and Economics (BME) - Department of Philosophy and History of Science - (Budapest, Hungary)
May 2007 - Jul 2007
Researcher at Kitchen Budapest (KIBU) Medialab - (Budapest, Hungary)
Sep 2006 - Jun 2009
Journalist, online editor at Műhely (BME university fortnightly student journal) - (Budapest, Hungary)

Awards and personal grants:
Apr 2009:
Award of the jury in Philosophy section at XXIX. Hungarian National Scientific Competition in Social Sciences
Apr 2008:
1st place (University Scientific Competition for University Students in Humanities)
Nov 2007:
1st place (University Scientific Competition for University Students in Social Sciences) View website

Monday

1-3-2010

After arriving to the airport yesterday evening I managed to meet with the other participants who arrived before me, and the project coordinator Hinano. I am glad that I decided to choose the taxi, because I felt a little ill by the end of the day. After a few hours sleep we started our first day on Casaccia. Monday was just an introduction to the life of the ENEA researchers. The first challenge is to get through the security which is very tight by the way, we had to check in with passports, they registered our equipments (cameras, laptops). We almost felt like we're travelled back like 20 years or so, into a real spy movie. (Specially because we have very strict rules for taking pictures on the territory.)
After arriving we had a tour. We were lucky to visit 3 main research facilities: one of ENEA's proudest research, the Thermodynamic Solar Plant, where we were guided by Mr. Fabrizi, who filled us in on the contemporary energy efficient solar energy research's world. After that we visited the Sismic and Dinamic Tests Hall, which is used to test and model earthquakes and building movements by the help of a "shaking table", and later where the video recordings are analysed and recreated as a mockup for further study. The third part of the tour was the "Semi-Anecoich" Chamber which used to study electromagnetic waves and effects. After the introduction-tour we have our first experience with italian cuisine and the very traditional way of quickly having a small, but strong espresso. The rest of the day was spent in the news room, viewing some ground rules, the ReLaTe project itself. Talking about the topic: 'how should a good science journalist communicate science' is generated a fascinating discussion about bad journalism and the wrong ways and experiences that how its usually done.

Tuesday

2-3-2010

Tuesday was the first day when we had a chance to meet with the researchers who work on the project that we have to study carefully. I have the opportunity to have an insight to the life and work of the biogenetic lab. They do various researches in Casaccia, both government and EU founded projects. In the ReLaTe Project we focus on SAFENUT project. This is a 3 year period long project, which is ending in this year. The aim of the project is to map and preserve the genetic stock on almond and hazelnut.
It's maybe not the most sexy and presentable research in genetics (like Dolly the cloned sheep) but as one of the head researcher was pointed out: almost one third of the almond and haselnut genetic varieties are dangered to disappear. We use them in big amounts in food and cosmetics industries, but with very specific standards, that some of the varieties are already disappeared. However we have gene banks all over the world, it's still not well organised and syncronised with each other. The project have many objectives, some of them is interesting purely from a biological point of view, and some are from economical and cultural. 6 country's 11 partners working around the clock to finish the project. Today was just the first day, and we are still searching for some angles to find the right topic to the final article. We got a great amount of written material to se as background informations, we'll have time in the evening to study them.

On a subjective level I'm still ill, sneezing all the time. My lab partner the Croatian Natasa is trying to say 'egészségedre' (bless you) in hungarian, with quite a success. Actually I consider myself lucky because with a person, who has similar thinking, but different professional background it's very useful to discuss you ideas, doubts and questions. At the late afternoon we had a quick tour in the city, while we had sunlight to make some pictures, before the dark. After that we had a nice walk from Colosseo to the Piazza della Repubblica to station Termini and back to the Colosseo in a different line.

Wednesday

3-3-2010

Today beginned with a lot of coffee and after arriving to Casaccia, with a big cappuccino. We had an exhausting but very fascinating day. The head researcher of the SAFENUT project, Loretta took us to the Biogenetics lab's other building. We had a closer look to the lab, where they collect, test and preserve the samples. Loretta is an amazing researcher who's not just planning and leading the 3 years project, but she participates in all levels: from making conference presentations to preparing the samples for testing. Of course she has helping hands, like Marco, the Phd student in the lab, and Barbara, who helps in the strategic, organizing and financial matters. At the time that we had our daily insight Loretta and Marco were very excited about some freshly provided plants from Sicily. We observed the process that the plants were examined, documented and catalogised, and prepared for further testing. We had the opportunity to take pictures during the work and ask if we didn't understand something. Loretta also showed us some research and background data, and we discussed some details about the project. One of the most interesting part of this was the cause which resulted the whole project. The process called 'genetic erosion' which means in time and with the modernized forms of cultivation we commonly preferring just a few kind of genetics variations, and of a result we loose some others. This could be one of the the possible angles of the final article, so far.
For lunch I tried the typical italian soup 'Minestrone' and I understood that every soup, that contains mixed vegetables can be called like that.

Thursday

4-3-2010

Today we went back to that lab that we were in yesterday. Loretta showed us the the chamber which contains some of the prepared and the momentarily tested samples. This was one of our best photo opportunities during the week. We had a long conversation with the researcher about the different phases of the whole project. It has 3 main phases: evaluation, preservation and utilization. One of the main practical step is extraction. The many genetic varieties of this two plants (almonds and hazenuts) allows the researchers to compare them by different aspects, for example: nutrition content, vitamin and oil content. Later it can be used to divide which gene is responsible for each attributes. In the knowledge of this information the responsible gene can be extracted from the certain genetic variety.

Friday

5-3-2010

For our last day in Casaccia Natasa and I were already prepared with our final questions for the interview. Natasa made video tapes and I made some voice recording. We asked Loretta to take the pictures and the video in the lab. We fixed the questions, but it was no need, because Loretta is an excellent public speaker. This is not a coincidence, she explained. She strongly feels the need to this project and the similar ones (which are considered as basic research, in opposite to applied research) must be presented for the public, and put it in a commonly understandable form. That's why she took some communication and public speaking lessons. At this point I must underline the fact that it isn't very common thing and requires extra efforts from a person.

Additional info

Link to my website:
Sirubia - my blog (hungarian)
Relate project blog on Sirubia (hungarian)
My profile is also available here:
About me on my blog
My Mendeley profile
My LinkedIn profile

ENEA - Rome (ITALY)
//Ana Torres Menarguez

Spanish
Age: 24
anitatm8@hotmail.com

About me

Education and training:
-I obtained a degree in Journalism from the Cardenal Herrera CEU University of Valencia. (February 2009).

Professional experience:
- Nowadays i work at La Verdad newspapaer of Elche as a Editor. - Press department for the PSOE political party (Valencia office); Editor (September 2008- May 2009). - Le Fabrique, cultural and digital magazine of Valencia; Editor (September 2008-April 2009). - La Verdad newspaper of Elche; Editor (July 2007-September 2007).
Certification:
- Certificate of attendance to Estetic and Political Seminary acredited by the UCH-CEU University of Valencia. 2007 (20 hours) - Certificate of attendance to First International Congress of New Journalism by Generalitat Valenciana (Valencian Goverment). 2006 (20 hours) - Certificate of attendance to Hispanoamerican Literature Seminary acredited by the UCH-CEU University of Valencia. 2006

Monday

1-3-2010

It's difficult to me fixing the beginning of that history, but I'll try to do my best. First of all, it's necessary say that it's surprising how young journalist around Europe are involved in that kind of projects. It's just amazing. The European Commission let us living that experience, I'm sure that we will always remember as our first step in the complex scientific field. All of us, 8 students or already journalists, are excited with the idea of being in touch with researchers, to know deeply what kind of work they develop day by day. The first impression when you go inside ENEA (Italian National Agency for New Technoligies, Energy and the Environment) is that you are crossing a secret door, which key is in high professional hands. Then you visit different labs and you realize that reality is just there, but it's necessary that someone get interested in. Journalist have the power to decide what is going to become news, and this field is absolutely necessary to spread. Because world is changing and humans must adapt to the adversities, otherwise we must close our eyes and pray to god. This is not science, just feelings mixed with faith. Now we must put the researchers in the place they deserve.

Tuesday

2-3-2010

Today I felt really motivated with my issue. My Swedish partner and me are supposed to do an article about a European project called Umbrella. The study aims to find the way to transform polluted soil in fertile field, and micro-organisms are the way to achieve it. The project is financed by the European Union and six countries are involved. The ENEA researchers, a really nice group of six women, are trying to discover which bacteria is the best to fight heavy metals and they have taken samples from the south of Sardenya, a place where fifty years ago there was a mine. Nowadays the landscape is polluted by different heavy metals as Zinc, and plants and vegetation can not grow, so there is a big desert area in the middle of a green village. The study of the bacteria's DNA is very complex, and they are putting into practice three main lines. Speaking with the researchers is wonderful, and the work in the lab is fascinating, but not the communication with them. I have been working in a local newspaper along one year and a half, and I know deeply the profession. It's true that I had never worked with science, and I realized how complicated it is.They don't know what you expect from them, and they explain us their investigations like if we were schoolchildren… so you can be frustrated! But I'm sure that it's not their fault, is just that they never work with journalists. The problem I have found is the fact of not controlling the situation, because a journalist must know what information is needed. So I'm going to prepare some questions to focus my report.

Wednesday

3-3-2010

A new researcher came to the lab. Her name is Ciara, and she gets all the bioremedition approach that we are trying to understand makes sense. Finally I have discovered the key of our topic. It is the difference between making genetic bacteria modifications or just respecting the natural law. The place in Sardenya where they are working on had a mine factory during the 19th and 20th centuries. After two centuries of intense explotation a huge amount of abandonated mining wastes still remain in the area, and there is a contaminated water, soil and air. Also the mining activity left more than 20.000.000 of wastes, heavy metals as Zinc, Cuper, Plumb and Cadmio. When Ciara speaks about bioremediation the concept of how important the ecosystem is comes quickly. She can transmit her biology passion and she shows the micro-organisms as one of the most important factors of the world existence, because they are everywhere. I like the way she explains science because she is honest saying that all the approaches are uncertain and for that reason researchers are always open minded, otherwise they might lose information. I really want to be in touch with her and publish the results of the experiment in a couple of years.

Thursday

4-3-2010

It is too complicated trying to understand how biological and chemical process work. It is true that journalists usually know about everything but are specialists in nothing, this is maybe the problem. I remember when I was at the third year of my degree and I realised how wrong I was thinking that my profession should be act by Journalist Degree students. I was in an international meeting of communication and media and someone explained to us the importance of being an expert in some specific area. It is not enough well done writing, you need feel control in economy, politics, culture or just science. When I finished my studies one year ago, I had forgotten all that stuff and I just started working. Now I open my eyes again, and I know how important is becoming an expert. You need having something special. I am not sure about how necessary are masters or PhDs, but I want more knowledge. On the other hand, researchers must think about the relevance of being in touch with journalist. They have to learn the right way of transmiting approaches and advanced issues.

Friday

5-3-2010

It is surprising the way your mind can change and being open. Before coming here I was thinking about spending one week doing something different, learning how to work with researchers and show the general public some hidding issues. I had to ask my boss in the newspaper to come here, and he told me it was fine because the most important thing is my educational development. Those days my mind has been completely plenty of different feelings, and I realized how important is being in touch with european people and how necessary is speaking english. Because I really want to understand how world works and my aim is becoming an international journalist.
So now on I must decide what to do with myself, because I know if I continue going inside the profession in Spain I will never get my dream and the borders doesn't allow me writing histories in other language, just being able to write for an international public. That kind of intership makes me wake up from the daily local journalism feeling.

ENEA - Rome (ITALY)
//Eva Katarina Hoeije

Swedish
Age:27
katarina.hoije@gmail.com

About me

Education and training:
Europe in the World - Hogeschol Utrecht, The Netherlands/Danish school of Journalism - Aarhus/Denmark Institute of Journalism/University of Gothenburg - Gothenburg, Sweden Internship at Swedish daily Helsingborgs Dagblad and Kvallsposten.

Professional experience:
Reporter at Helsingborgs Dagblad. Freelance journalist for newspapers Goteborgs-Posten and Skanska Dagbladet, magazines Ordfront, ETC and Effekt and news agency TT Spektra.
Awards and personal grants: Europe in the world programme

Monday

1-3-2010

The long struggle
Science in high school was the most fun on those rare occasions when the teacher decided to blow something up. Now, scientists aren't magicians and we shouldn't expect any spectacular results we're told on our first day in Casaccia, a huge research centre a 30 minute train ride from Rome's city centre.
We - are the eight Journalism students who have been selected to participate in Relate, an initiative financed by the EU to increase the understanding between scientists and journalists. We're told to not only see to the result, but the process – the long struggle and the hard work of the researcher. Being news orientated journalists, or journalism students, this is hard to grasp. I clearly have to re-think the way I usually work, and the researchers will have to do the same. Hopefully we can meet somewhere in the middle.
A first introduction to Casaccia shows the various fields the scientist are working in: solar thermodynamic, sismic and dynamic science. I'm hoping to be able to study the process of the energy production from biomass by using anaerobic digestion and combining it with the technology of fuel cells. Entering the lab of environmental microbiology on day two, I'm hoping to find out more.

Tuesday

2-3-2010

Giving nature a push
The second day we start off with the basics, or the "bricks of life" as Anna Rosa Sprocatti calls them. Me and my Spanish partner Ana have been assigned to the environmental microbiology lab where the researchers focus on the smallest living creatures on earth, the microorganisms.
The main focus of the researchers in the lab is the Umbrella project, a joint effort by universities and research centers all over Europe funded by the EU to clean polluted cultural heritage sites by remediation. Some little creatures will eat just about anything, which is handy for the biologic engineers who want to clean up polluted land. Instead of creating a super bacteria which may be harmful to the environment, they simply put nature to work in a process called bio-remediation. As far as the lab is concerned, they're trying to find the best suitable group of organisms to clean the soil. It is basically all about giving nature a helping hand: microorganisms already present in the ground are added to the site. They're mission is to take care of the heavy metals so they become non-bioavailable. Does it work? Only time will tell.
In the afternoon I get the opportunity to visit another lab working with anaerobe bacterias for biomass and energy production. The project is very small scaled and still needs funding. I speak to Roberto Cicoli and we start discussing the modification of cells and gen modified plants. It's an interesting topic and not so far from the superbacteria me and Chiara discussed the other day. I believe I'm getting the hang of this science thing.

Wednesday

3-3-2010

Imagine the most beautiful beaches in Italy and you probably think of the with dunes of Sardegna. Now travel a little further up the coast and the ground is polluted by hazardous heavy metals. It sounds like the outline for a Hollywood script, in that case George Clooney would play the lawyer fighting the company which used to do mining here about 20 years ago and now has left the land poisonous to plants, animals and possibly also for humans. In reality, the real heroes are the scientists in the Enea lab.
The third day begins as usual with a session in Anna Rosa Sprocatis office. She's introducing us to the basic biological and chemical ideas behind the work in the lab. Some of it I recognize from the chemistry and biology classes in high school, while some of the facts are completely new to me. I realize this might be the difference that complicate communication between journalists and scientists. They know it all and expects us to know nothing. Then they try to tell us all, when all we want are good quotes. As a journalist you probably have an hour to collect material for a story, spending a week in a lab us impossible. For the researchers it's the complete opposite. One week is how long it takes to prepare an experiment and to explain what their research is about in one hour can't be done.

On the other hand, we have a lot in common. My desk looks pretty much like Anna Rosa's, covered in books, papers, research material and important facts scribbled down on pieces of paper. Organized chaos is apparently what scientists and journalists do best.

Thursday

4-3-2010

What a beautiful thing science is
"Look, how beautiful!" The scientists might not all be wearing withe coats and plastic googles, but some of the prejudices about them are actually true. Like seeing the beauty in a Petri plate of bacterias, for example. I'm trying my best to see it too. When Chiara Assisi, one of the six female researchers in the lab, explains her love for the tiniest of organisms involved in processes vital to life, I almost get it. Journalists and scientists seem to have more in common than messy desks - the passion for our work. And when Chiara explains the bio-remediation process to me for what seems to be the hundred time, I actually do get it. I think.
Still there are differences in the way journalists and highly specialized researchers think. I want the news, the hard stories, the revelations which affects people's life's. To the researcher it's all about the process, the long and hard work to get a result and the fact that you might end up with nothing and have to start all over again. In Journalism that would mean a missed deadline and an empty in tomorrow's newspaper.

Friday

5-3-2010

Giving science a push
Entering the lab on our last day it's unusually quiet and seems almost deserted. Half of the staff is preparing for a presentation to kick-start a new project. It gives some time to think over and summarize this hectic week. I do a little research and find out that Sweden is involved in the project Casaccia is working on. Clearly there are more stories in science than I first thought.
It's been a valuable experience being in the lab and follow the scientists up close. All of them have been very helpful answering my questions and explaining over and over again how the different processes involved in bio-remediation work. It has helped me create an understanding for their work and I hope they have gained a deeper knowledge for my work too. Next time I have to do an article on a research related topic I'll try to show more of the process and maybe give the whole story. At the moment I have to rush, I have a deadline and a story to write.

Additional info
Link to my website:
www.kollektivetbarbro.se

ENEA - Rome (ITALY)
//Natasa Sudelija

Croatian
26th July 1984
sudelija.n@gmail.com

About me

Education and training:
2002 - 2009 : University of Political Science, Zagreb, Croatia
Bachelors degree in Journalism – major in television and press journalism
June – August 2008 : Boston University, Boston, MA, USA
Summer term: News writing and gathering;
International relations;
Introduction to public relations

Professional experience:
July – September 2007 - Nova TV news room (Croatia's national television), Zagreb, Croatia
field work; taking sound bites
research on a given subject
writing voice over for news anchors
video/sound editing
September 2005: University of Tennessee; Sam Swan's television journalism workshop; University of Political Science, Zagreb, Croatia
Television news 101
news production
video/sound editing on Avid Xpress Pro

PROJECTS:
2009: Croatian cultural institution 'Matica Hrvatska'
qualitative and quantitative national television media research
August 2007: Nova TV (Croatia's national television), Zagreb, Croatia
TV show 'Provjereno'

Monday

1-3-2010

This project is great on so many levels!
I was surrounded with a tone of new things from the first day.
First of, I met the rest of the participants that come from all over Europe - which was very interesting. Than in the morning all of us went to catch the train to go to ENEA (actually we ran) where we met the researchers that are going to be with us for the rest of our stay in ENEA. Because it was the first day - we had a little tour of the place (the place is huge!) where we visited the solar, seismic and electromagnetic lab. Apart from the the amazing giant solar panel, the shaking table and the 'cool' black and white electromagnetic chamber - the scientists level of enthusiasm to explain and share the information about their research in the labs was really great.
After lunch, we sat in the newsroom and discussed about our role in all of this. How to make science more appealing to the public, how to make it interesting, how to find news if there may be non, how to simplify the scientific language and make it understandable…
These are all valid questions and especially for me because this is the first time I will be reporting about science which makes it an interesting challenge.
Tomorrow I am going to my assigned lab with my lab partner Szilvia to get started on my own research…
And last but not least - the chance to be here in Rome and check out the city is wonderful!

Tuesday

2-3-2010

Today Mrs Barbara Di Giovanni picked us up at the entrance (my lab partner Szilvia and me). She is a part of the research team in the Safenut project that consists of recovery, characterization, core collection and utilization of genetic resources of hazelnut and almond in the Mediterranean area. Barbara gave us some material to read so that we can better understand the project objectives and the importance of this research. It is a good thing that I got this project for my story because the Safenut project finishes this year so I can see the entire process of the project and the results of a three year project. We also met Mrs Loretta Bacchetta that is going to be with us tomorrow and talk more about the important points of the project and in that way help me to find the focus of my story.
I still can't decide either to do a A/V story or an article so I am taking pictures and photographs in the same time.
In ENEA you are surrounded with scientific experiments and projects. I mean that literally because Sven told me (one of the RELATE participants) that even the electrical buses that drive the employees of ENEA around the premises are a part of an experimental project! So everywhere u look - science…

Wednesday

3-3-2010

Today was the day to visit the labs with Mrs Loretta Bacchetta who is the scientist in this project. She took as on a tour of the building – the ground floor. There are 3 labs but Loretta and her Marco use one of the labs to study plan college ts and make experiments. Because it was our second day Loretta showed us a Powerpoint presentation of the Safenut project and stressed the important parts of it which was a good thing for me.
I have to say that Loretta is amazing. Multitasking is something she does perfectly. While we were there - she prepared some plants for transportation to Sicily, showed us around and intorduced us to other people and their projects, showed us the presentation, did some work concerning the convention about Biodiversity that is this month and she still had a smile on her face.
Genetic erosion is something that I find very interesting in this project – and I think that is going to be the main point of my story.

Thursday

4-3-2010

Loretta took as today again to the labs and showed us the chamber where they keep and grow the plants from which they will afterwords extract the genetic components that will help other plants and research. We were able to observe her and marco preparing the experiments and marking the plants. later on we also saw barbara and said our goodbyes cos she is not going to be in ENEA tomorrow. I was a bit sad when i said goodbye cos Barbara is a fun and excellent person who helped us a lot in preparing for this topic.
Loretta took as later on to another building where we met students all over the world who came to do their PhD in science (collaboration with ENEA). Maria is one of the students and she helped with the molecular characterization of hazelnuts and almonds in this project.
The safenut project is really an important issue. The preservation of genetic diversity is something that is important for the future. I wont say anymore - you will see it in my final project.
Tomorrow is our last day and the final day to ask some additional questions to our researcher…

Friday

5-3-2010

Every morning we came to ENEA Barbara and later Loretta took as to drink coffee. So this morning this was our last espresso in Enea. After we went to the labs and met with Loretta to answer some of the final questions. I had to hurry cos I had a 11 am appointment with Mr. D' Atanasio in the electromagnetic lab. Ana and Annamaria went as well. We were there for one hour and observed the electromagnetic testing on some military equipment. When we were finished we we on our was to lunch and we had to prepare for our presentation. The presentations begun at 2 pm and all of our researchers were there to hear our feedback on the projects we observed.
At 4 we took our bus and than train to the hotel. Before the hotel we said goodbye to everybody and especially to Fabiolla who helped us a lot in this 5 days. And when I say help I mean help in every way - with our stories, finding contacts and even sightseeing!
I was honestly lucky that I got this opportunity. I met some people (participants) who become my friends, interesting scientists and their projects, cool and kind people as Barbara and Loretta and I got to see Rome which I love more every time I visit!
So Relate is over - now the final project has to be done…
I thank everybody who made this experience so great - You know who you are1

ICFO - Barcelona (SPAIN)
//Jonathan Focke

About me

Education and training:
2nd Year studies in Science Journalism, University of Dortmund, Germany
Professional experience:
Working as a freelancer for "Westdeutsche Allgemeine Zeitung", eldoradio* Dortmund

Monday

1-3-2010

„It was red and yellow and green and blue and cyan and …" - thats not only a line from Andrew Lloyd Webber's successful musical „Joseph and the Amazing Technicolor Dreamcoat", it also decribes the first impressions of ICFO quite well. What a coulorful building. And what a coulorful and relaxed atmosphere. People from lots of different countries are working here, there are huge bean bags on the floor between the labs and offices and everywhere in the building you'll find coffee areas with big sofas and nice people having a break and chatting. Everyone has been very welcoming here. We got our own coffe-cup and ICFO-T-Shirts as a welcome present and during a short tour through the building Lluis Torner, the Director of ICFO, invited us to a quick match of table football. Spain and Germany vs. England: 2:2 drawn. A nice and sporty start into a week of meeting interesting and enthusiastic people. „This man is full of energy", Sinead Kennedy, our contact person at ICFO, says about her boss. Well, obviously most people here are. After lunch we met Alejandra Valencia who is doing outreach work for the institute. „I like physics and I like to tell the people about physics", she says. We are sitting in one of the coffee areas talking to this enthusiastic young woman. At the other side of the huge windows we can watch people waterskiing on the canal olimpic, which has been built for the 1992 Olympics in Barcelona. The weather is warm, no clouds up in the sky. „I want to reach the people out there, because we live in democratic society and I think scientific knowledge is a basic requirement to take part in this society", she says. „It might sound naive but that's my motivation." For me it doesn't sound naive. It's an impressive motivation for science communication. And of course it is for (science) journalism as well.

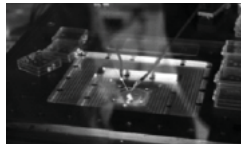
Alejandra takes us to Niek van Hulst who gives us a short introduction to nanophysics, especially to his research subject: nano-antennas. He shows us a lab where two students are up to scan a surface with a nano-antenna. A tiny nanocsale antenna emits radiation and makes you observe things which you could not observe with optic measuring instruments. Impressive but not easy to understand. I hope to learn a bit more about it during the next days. Afterwards it's coffeetime at ICFO. We grab our new ICFO-cups, get a coffee and watch the canal olimpic. It's still beautiful outside. After writing the blog we leave the institute heading to barcelona city.

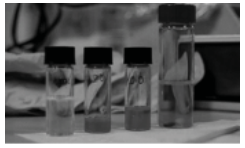
Tuesday

2-3-2010

"I want you to get your hands dirty", Stephanie Cheylan already said to me yesterday. And well, today I did. Stephanie is researching on so called OLEDs (Organic Light Emitting Devices). In contrast to normal LEDs which are already used quite a lot, OLEDs are made of organic materials which make them a lot cheaper in production and offer a wide range of new fields of applications.
To get my hands dirty Stephanie takes me to the lab. Not to normal lab but to a cleanroom. This is very important because you need absolutely clean conditions for producing the tiny electronic devices. During the morning we produce different sorts of OLEDs. That's what Stephanie does almost every day. As a basic component we use a small glass disk with a very thin Indium-Tin-Oxide layer on it. Afterwards we use different organic polymers to put them on top. It's quite a lot of work and Stephanie asks me to support her in measuring the right amounts of chemicals we need and then later on put them on to the glass disks. Her aim in research is to find a good combination of different organic layers to produce an energy-efficient OLED. "It's a lot of trial and error", she says, "but when the light comes out of it's just like "Yeah!"" There already has been lots of research on OLED in other european countries she tells me, but not in spain (apart from ICFO). "The funding-situation of OLED-research in spain has been far behind other european countries." Stephanie pretty much started with OLED-research in spain from scratch seven years ago. Today it is absolutely state-of-the-art, she says. As other countries are mainly focussed on the applied physics of OLEDs, Stephanie is doing more fundamental research on the organic devices. For example, she tries to find new materials that could replace the Indium-Tin-Oxide layer which is quite expensive.

After our coffee break we meet Armand and Giorgio from the ICFO Student Chapter. They also do outreach work for the institute and we talk to them about general aims, problems and tasks of science communication and science journalism. "It is important to connect physics and science in general to the daily life of the people", Armand says. "Physics is not equal to equations. It's intuition." And passion, he adds. "Passion is the driving force in science." That's absolutely right I think. In fact you can see it everywhere at ICFO and you can feel it talking to the people working here.

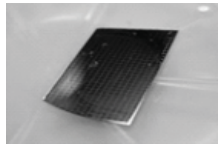


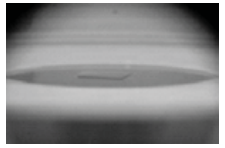


Wednesday

3-3-2010

Another day of getting my hands dirty. As it is rainy and cold outside it is alright to spend the morning in the labs. But today it's not about producing light, it's all about collecting it. I'm in the cleanroom again with Johann, a research engineer from France. He is researching on processes to form the surfaces of solar cell devices. I help Johann with cleaning the devices and putting them into plasma chamber where radicals and accelerated ions shape the germanium-surface of the solar cells. Later on we have a look at the shaped surfaces with an electon microscope.





I won't be able to use any of the stuff I did today for my article but again it has been a good opportunity to see how scientists really work in the labs and how they try things again and again. It is impressive to see how much work has to be done to make just a little step towards a result. If you don't get the result you wanted, you need to start again and change parameters in the process to see if it works better afterwards. That's what (applied) science is about: Trial and error.
I think the whole project is a good opportunity for me to see how research really works. And it is a good opportunity to talk about sciece in a different language as well.
It is still raining outside. It started last night when Henry and me returned from our dinner-trip to Barcelona. Hopefully it's going to stop within the next few minutes because I forgot my umbrella in the hotel.

Thursday

4-3-2010

After an afternoon and a night of rain (and cool pigs) in Barcelona yesterday, spring has luckily returned to Spain again today. So this is not a day to spend in the lab but at the coffee area with its nice view of the canal olimpic. We meet Alejandra, Tania and Marta who do most of the outreach and media work of ICFO. We have a two hour chat with the three women talking about science communication, the need of outreach work and different ways of visualizing science. "Illustration is very important in science", Tania says. She does the visual communications for ICFO. "Because often you just can't see or take pictures of the stuff you try to explain." We get to the conclusion that science needs pictures. After all a picture tells more than a thousand words. The outreach work done at ICFO seems to be quite unique. What is the sense of and the motivation for doing outreach work and presenting science to the public? "We want to reach the people to make them feel enthusiastic about science", Marta says. To do so it is not enough to just explain science in an easy way, she adds. "You have to show the people where science actually has an affect on their daily life. And we want to show the motivation of scientists doing research. They are not only doing it because they want to understand things better. They do it because they are really fascinated and passionate about it." Finally we figure out that most people are not just interested in how scientific phenomenons work. They also want to know how mankind discovered scientific knowledge. They want to know more about the motivation of researches. That's what we do here at ICFO.

Friday

5-3-2010

URGENT RECOMMENDATION for the next participants of RELATE-Project in Barcelona: Keep away from the Port Olimpic at night!

Nice but dangerous: Port Olimpic, Barcelona

It actually startet to be quite a good last day in Barcelona. The sun was out again and we had very interesting interviews at ICFO in the morning. First we talked to Silvia Carrasco. She is head of the Knowledge and Technology Transfer at ICFO. She is sort of the connecting part between the researchers and the industry. „When researchers and companies work together you need trust", Silvia says. „We want to know what the industry is interested in and the companies want to know what our researches do." I was impressed by the wide range of different companies that are linked to the OLED and Photovoltaik-research. It's not just the lighting industry it's also glass-companies that could integrate transparent solar cells or OLEDs in their windows. Afterwards I talked to Goncal Badenes. He is chief of the Nanophotonic lab and coordinator of the „Nanophotnics for Energy Efficiency" project. Nine european partners take part in this network of excellence. Its aim is to put together the best institutes of nanophotonic research. One of the tasks is to do outreach and convincing work in order to promote the efficiency of OLEDs and organic solar cells. „We have lots of opportunities to improve efficiency of solar cells", Goncal says. The network also works together with industrial partners. „It is a win-win-situation." Goncal says that the attidute of researchers towards outreach and getting their research to the public has changed a lot. „More and more researchers work on things that have an impact", he says. „That is because our todays challenges have become visibly. Todays problems are health and energy." The interview was very helpful. It probably would have been better to do it right at the beginning of our week at ICFO. Now I am pretty sure that my article is going to deal with the OLED technology and the future ways of efficient lighting. I am going to get in contact with german lighting companies which do applied research on that technology. But it was great to see the fundamental research of organic devices at work. I can use a lot of the information I got at ICFO.

After saying goodbye to ICFO and the very nice, welcoming and passionate people we met there Henry and I spent the afternoon in Barcelona. Park Guell, Gracia, Barceloneta, the beach - it certainly was a great day. Until we got to port olimpic at about 9 o'clock. In an unexpected moment two strange guys came towards us and pickpocketed Henry. Luckily Henry was able to attack one of the guys and he got back his wallet. But the money was gone. We really had to have a drink afterwards in the gothic quarter.
Anyways, this incident should not sour the great time we had in Barcelona. Spending time at ICFO, talking to different researchers and other people has been a great opportunity to see research and science at work. It has been awesome to have a look at the very top research in europe. Spending one week as a journalist with top researchers really confirmed my decision to study science journalism.
That's why I finally want to say thank you to everybody at ICFO, especially to Stephanie and Johann who spent a whole day with me in the lab, to Sinead Kennedy, Goncal Badenes, Alejandra, Tania and Marta. It has been an very intersting and inspiring stay. And of course I also want to say thank you to Henry for the great time we had in Barcelona!
Adios, Jonathan

ICFO - Barcelona (SPAIN)
//Henry Lau

About me

Education and training:
MSc Science Communication - Imperial College 09/10
MPhys Physics with Astrophysics with a year in Europe - University of Leicester 2005-2009

Monday

1-3-2010

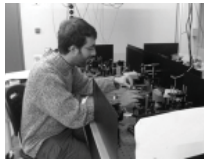
Catalan phrase of the day: Em dic Henry - My name is henry

My first day at ICFO was bathed in the brilliant Barcelona sun. There was not a cloud in sight.
I'm here with Jonathan, a science journalism student from Germany (read his blog)
We've been given our mugs, t-shirt and a tour. Everyone we've met so far has been very welcoming. The place seems very modern with bean bags next to the whiteboards and table football in the coffee area. We bumped into the director of the institute and had a spontaneous quick match with him. We lost, but then we are on his home turf.
The rest of the day has progressed far too fast. We sampled the delights of the canteen in the science park. The food was tasty and not too expensive. It brought back memories of eating in the university canteen in France, where food is a priority; a far cry from the university food in London.
In the afternoon we had a chat with Alejandra about outreach and the forthcoming LaserFest. LaserFest is celebrating 50 years since the invention of the laser. It's not often that you think about how lasers have changed our lives.
After Alejandra, we spoke to Niek van Hulst. He spoke about what ICFO are doing in the realm of nanophotonics. The first thing he asked us was what is nanophotonics. I didn't really have an idea before but after spending a short time with Niek I can say it's dealing with light at the nanometre scale. This is almost counter-intuitive as light is something that operates in the several hundred nanometre scale. What was really interesting for me what how Niek talked about working in science, and this really struck a chord with the philosophy of science we study as part of the Imperial College Science Communication course link.
I'm excited to see what tomorrow brings.

Tuesday

2-3-2010

Catalan phrase of the day: Vull denunciar un robatori - I want to report a robbery



This is Arnaud Gardelein. Here he is setting up an experiment in entangling photons. By the end of the morning I was witnessing for the first time the passing of entangled photons. These manifested themselves as blips crossing an oscilloscope screen. Not monumental I know. It is only when Arnaud explains what the entangled photons can be used for, do they start to merit the importance they deserve. Entanglement is the description given to an object that mathematically appears as one object, but in reality is two. In our case, the photons are our objects. Interesting things happen when you deal with entangled photons. Photons can be aligned to a certain direction, but this direction is not known. With entangled photons, once you measure the direction of a photon, the other unmeasured photons changes so that it's direction is the corresponding opposite direction. This is useful in creating a system for quantum cryptography.
With standard cryptography over the internet, large prime numbers are multiplied together. This is used as the code for encrypting data. In theory, with enough computational power and time, this multiplication can be cracked. Quantum cryptography, as Arnaud says is "unconditionally secure". It has been mathematically proven, that even with imagined future capabilities of technology that communications can be secure. It will not be secure in the traditional way as in it will be hard to read data, but you will know if someone is listening in to you data.
Another way of doing quantum cryptography is using a "faint pulse source". This is what Marc Jofre Cruanyes is doing. The goal of Marc's work is to produce technology that will allow a "global quantum communication network". This requires making his bench-worth of equipment fit into the size of a shoebox. Oh, and the small matter of making it survive in space; withstanding the intense launch vibrations and g-forces, the huge variability of temperatures and the high radiation exposure.
To finish the day at the lab, we had a meeting with Armand Niederberger and Giorgio Volpe. They talked about the student chapter here at ICFO and the OPfocus magazine they run.

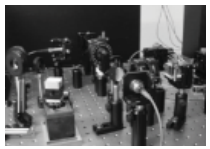
Wednesday

3-3-2010

Catalan word of the day: pluja = rain

Oh what horrible weather for an ICFOnian (a resident of ICFO)! That is unless you're a seabird riding the strong winds. This morning was the second time I took advantage of the close proximity to the beach to do some fitness training for my upcoming ultimate frisbee tournament. There is a great beach here at Castelldefels and only a short jog from the hotel. I was quite envious of the seabird rising the strong ocean breeze as I puffed and panted doing my rocky-style sprints. Unfortunately I didn't have Apollo Creed to run again.

Last night we ventured into Barcelona city again. I remembered a restaurant I went to when I was here with my parents. Los Caracoles or something similar. I just knew it meant snails in Catalan or Spanish. However when I went there last, we spent a considerable amount of time trying to find it as it's hidden in the old part of the city, where the streets are narrow and many. By pure chance, we were able to find it. Success!



My time in the lab started with Guillermo Alejandro Cárdenas Sevilla. He showed me his work on making a biosensor out of some fiber optic. I noticed in his lab book many diagrams explaining the processes accompanying the laboratory notes. Sometimes a picture is worth a thousand words.

My next stop was with Vittoria Finazzi in the industrial lab. The industrial lab worked with companies to bring new technology to applications that could possibly one day become commonplace. During my chat with Vittoria I asked her about how she felt about commercial partners setting the science agenda, in her case ESA. She replied that it was a great "honour" to work for ESA.

Thursday

4-3-2010

Catalan phrase of the day: Tens uns ulls molt bonics - You have very beautiful eyes

Last night we ventured in the wet to look round the sights of Barcelona. Being from Germany and Britain we dismissed the rain as mere drizzle and walked around as it is was sunny. This was the first time we saw Barcelona during the day. On passing through the narrow streets of the old town. We passed a shop called Happy Pills. It had a white, clinical appearance, clearly reference hospitals and pharmacies. But instead of pills, they sold sweets.

I managed to meet up with my Catalan friend Pau who I knew from my internship in Finland. We had a great night, and I took the last train back to Castelldefels.

In the morning the sun returned, energising us for the penultimate day at the lab. We chatted this morning with Marta García Matos, Tania Gómez Manchado and Alejandra Valencia (again) They talked about their roles at ICFO in visual communication. This encompassed a variety of tasks including creating illustrations and videos for scientists to help them communicate their science to general and specialised audiences, designing name badges for conferences and laying out the programs and running the website. Alejandra and Marta both work on outreach projects for ICFO and they commented on how little details like giving school children a well designed name badge with their name printed on it made them feel important.

For me it was interesting seeing sides of art and science mix; the creative with the accurate. What was enlightening and surprising to hear was that Maria felt scientists benefited from having to explain their scientific concept from words to an image; tackling tough concepts such as what do quantum spin states look like. It is encouraging to hear that the visual communications aspect of the institute's work, whether though outreach or reports, is supported from the "upper sphere".

I would like to end on something which I found very profound. Marta talked about the motivation for communicating science; "what's important is for people to know the human desire to know." People are not interested in facts, but rather they are fascinated by the motivation, value and passion displayed by scientists in their pursuit of knowledge. And I think this is the crux of why science is respected as such a noble activity.

Friday

5-3-2010

Catalan phrase of the day: Fins ara - See you soon

I sit on the hard seats in Barcelona airport waiting for my flight. My time here has been short yet significant. I came with an open mind about what this project would be about. I think the divide between art and science, highlighted by C. P. Snow as "the two cultures" still exists today. So would a project like this make some ground to bridging the gap? In some ways, I don't think it has. Science will still keep churning as the giant machine that is it. Journalism plays its role on the periphery, vying for attention, causing science to look up for a fleeting glimpse. I feel this is the case because although the institute was welcoming and I'm grateful for all they did. I was not completely accommodated by the scientists. Some gave me time to talk to them, but some did not, feeling the pressure from the science world to produce science. At times I thought the project had unrealistic aims, mainly due to the artificial stimulation of the news process; how often would a journalist spend a week in a lab looking for a story. But on the other side of the coin, I did learn more about the political, commercial, managerial and social aspects around science. And I hope I gave something back to the people I met at ICFO. I refound my passion to learn again, as I found myself becoming engrossed in the scientific details.

So Friday. The last of my days at the lab. My last day started well but unfortunately ended badly. My morning run to the beach was uplifting. The smell of the oil from the fir trees filled my lungs with energy. Running up a bridge, rising above the tree line, I almost felt like I was taking off. The sun fought to rise above and clouds, and I thought of the way ICFO was trying to use light to control nature. And then a plane came by. During the morning we spent a short while chatting with Silvia Carrasco about the commercial side of science. I did not realise the extent to which science and business are linked at the applied end. I just thought business and science worked through collaboration, but they also need each other for consultation, hiring of personal and the exchange of licenses.

Following this, I had a talk with Niek van Hulst about European science funding, particularly the framework program. I had been interested in this topic before I came to ICFO and had intended to write an article about this. It was good to hear the view on FP7 and Spanish science from a Dutchman. From the material gathered, I think I will write an article based upon this interview.

In the afternoon we departed for Barcelona again. We visited Parc Guell, which is a huge tourist trap. And strolled through the district of Gracia. Gracia used to be a neighbouring village, before being encompassed into the expanding Barcelona. The streets are narrow, breadshops are a stones-throw from each other and the plazas filled with children playing. It was very pleasing to find this village atmosphere still thriving.

At the end of the day we ventured to Barceloneta and to the Olympic Port. Unfortunately, here I was a victim to a pickpockets. I lost 35 euros but nothing else, due to reactionary shoulder barge. I keep replaying the scenario in my head thinking about all the warning signs and what I should have done. But in the end of the day, I have to be grateful I was not hurt and I did not lose anything else.

I would like to thank Jonathan for being great company during this week. Thank you Sinead for looking after us so well. Thank you to everyone we spoke to at ICFO (Marc Jofre, Valerio Pruneri, Niek van Hulst, Alejendra, Vittoria, Arnaud Gardelein, Armand, Giorgio, Guillermo, Tania, Marta). Finally, I would like to thank the European Journalism Centre for allowing me this great opportunity.

VON KARMAN - Brussels (BELGIUM)
//Leonardo de Cosmo

Italian
Age: 30
leonardo@discienza.org

About me

Education and training:
Master degree in Science and Technology Communication

Monday

8-3-2010

Brrr! A very icy embrace welcomed me here in Brussels, how far seems the Rome tropical weather I left home! But anyway I'm very happy to be finally in Europe!
What about the von Karman Institute? At fisrt sight it's very singular to come in VKI: you can find here same of the best fluid dynamic technologies in all over the world but from outside everything looks like very old.

Tuesday

9-3-2010

Such a interesting day! This second day, after we arrived in the von Karman Institute, Guillermo Paniagua explained us what do Turbomachinery&Propulsion Departement. Very complex items but fortunately we found same very friendly researchers who spent many hours just to make us understand how does a turbine work, it was a really hard job for them!
Tolga, a Turkish researcher, told us that there are many researches in this moment in turbines because airplane producers have the challenge to build airplanes with very lower impact than today. The problem is they must do it before 2020 and they don't have the technology yet to do it! And in VKI they try to find new innovative solutions.
Furthermore there are a lot of very interesting researches here: Ramjet and Scramjet - new hypersonic aircraft without any moving mechanics, controrotative turbines and also micro turbines, shorter than a pen and able to substitute batteries.

Wednesday

10-3-2010

Passing time in VKI I understand each day better how a nice place is. Everyone is very friendly with us, looks very relaxed and they spend a lot of time explaining us very patiently what they do. A
French PhD student told me "there are many facilities here, every facility is used for different kind of research but if you need you can use easily different ones without worries".
Every Wednesday there's a party in some facilities, starting from 5 students and teachers stay together drinking beer and having good time… of course we were there!

Thursday

11-3-2010

Nan started making her video and it's so funny to stay watching how researchers are scared by video cameras. I also help Nan bringing the microphone and maintaining a white sheet for white balancing… I'm so proud to be so helpful!!!
Patricia Corieri explained us about her researches in bioflows, in particular experimental and numerical investigations of flows in bifurcations within lung airways; fundamental researches can could help the develop the clinic use of aerosol insulin and many much medicines.

Friday

12-3-2010

The most exciting experiment is reserved for the last day: Yassin, a French professor showed us the Plasmatron. This facility is maybe the most important among many present in VKI and almost unique in the world, Plasmatron can creates a plasma flow. Inside it are recreated the same conditions of atmosphere re-entry, it generates a flow of 10.000 K.
Before to go home I want to thank everybody, students and professor, of the institute for their friendly availability and particularly to Nan, my Relate colleague.

Additional info
Link to my website:
www.discienza.org
My profile is also available here:
http://it.linkedin.com/in/leodecosmo

VON KARMAN - Brussels (BELGIUM)
//Hannah Lucy King

About me

Education and training:
Education and training: This section is coming!

Monday

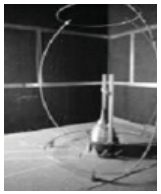
8-3-2010

Who would have thought you needed a passport to go from the UK to Brussels? Crazy! After a slightly blond moment involving me and a passport, I finally managed to bustle myself onto the correct train bound for Brussels.
Later that night we were treated to a feast of beef steak in cherry ale and chips, washed down with lashings of cold Belgian beer and rounded off with the most amazing desert that oozed chocolate gu when you broke its spongy outer layer… ANYWAY…enough about the food. On with the physics!
We waited quietly in 'Classroom 2', as Patricia, one of the researchers explained that our host was stuck in the Brussels traffic. "Professor Carbonaro is retired" she explained to us, by way of an introduction in his absence, "but here at VKI there is a tradition of the retired people coming back!"
In due course an impeccably dressed Professor entered the room. The day that followed involved a superb presentation about VKI past and present (VKI is the Von Karman Institute for Fluid Dynamics), plenteous coffee breaks and a whistle stop tour of the three main labs. I have to admit this involved some explanations of processes and equipment which floated elegantly above my head and away into the distance. Luckily my accomplice Leonardo de Cosmo has a physics degree…or part of one at least and absorbed plenty of knowledge on my behalf, whilst I wandered around wind tunnels and sound chambers, camera in hand, admiring the true splendour of such magnificent scientific apparatus and snapping away to my hearts content.

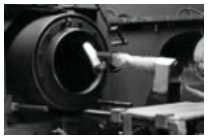
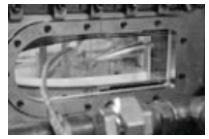
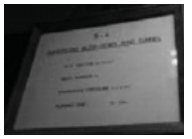


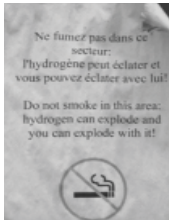








Tuesday

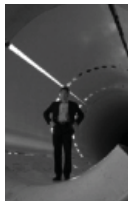
9-3-2010

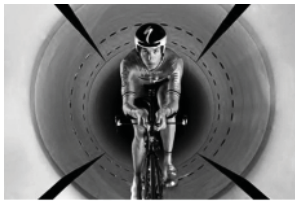
Talk this morning from Guillermo who heads up the Turbomachinery and propulsion lab. Abandoned all attempts to understand first time round and have truely become the 'but why' child in the class.
Later that morning we were passed over to one of the phd researchers - Tolga - who showed us the search for a more efficient aeroplane engine in more detail.
In the afternoon we caught the second half of 'the balloon lecture'! Which turned out to be fascinating - all about the potential use of stratospheric platforms. These include commercial use by television and telecommunications companies, use by the military and for national security, use in emergencies, after natural disasters for example, to resume telecommunications quickly and of course all the scientific research applications as well.
One of the other phd researchers - Mike from Chicago, took us to show us a couple of interesting bars in Brussels in the evening. It is a beautiful city. At night the grande place is perhaps the most majestically elegant place I have ever seen. I wanted to waltz in the middle of the square, but restrained the urge at fear of being referred to an asylum before I hit 30!

Wednesday

10-3-2010

Filming begins. Spent some time with Tolga, forcing him to walk into his office several times over whilst I filmed from different angles and then made him shrink his hugely complex research into the simplest of simple things. He was very patient. I am also becoming increasingly endebted to Leo who has become a swift dab-hand at being a sound man/white balance paper holder/caddy. Couldn't have managed without him.
Later we talked to Jeroen Van Beeck, finding out about adventures in the wind tunnel - past and present, including Tour de France cyclists, a solar powered car and the national Belgian bobsleigh team! Anything you want to go faster or to destroy by wind force, Jeroen is your man!





Beers in the evening – in what appeared to be the sports hall changing room where researchers gather each Wednesday after work in an age old tradition – so we're told. Met scientists from Morroco, the Czeck Republic, America, France, Italy and Turkey. This night is an image of all that VKI seems to stand for: young researchers chatting to others from all over the world; sharing beers and building the international links of the future. Good to see.

Thursday

11-3-2010

Insane day of running round talking to as many people as possible and filming lots of fascinating experiments and processes. Have ditched shooting script in favour of doing as much filming as physically possible as just don't have enough time to plan things out accurately and I don't want to miss any filming.

There is so much diverse work going on here. Relate requires us to produce one piece. I think so far I am planning about 4. Not too sure when I am going to manage to produce them all though.

Friday

12-3-2010

This is it. Writing this late afternoon as I wait for Professor Carbonaro to return from his meeting at the European Commission for the final but fairly crucial part of my piece. This morning we filmed possibly the most exciting process. The plasmatron. It even sounds exciting! This is a machine which blows extremely hot air at very high speeds. It looks a little like a giant horizontal blow torch. It aims to simulate the conditions space vehicles experience on re-entry. Using this they can test various materials to see how they behave under such conditions. Anyway, best run now and make the most of my final hours in Brussels.

Additional info
Link to my website:
www.nakedlittleape.com
****My profile is also available**
here:http://www.elements-science.co.uk/author/nan/*

INRA - Jouy-en-Josas (FRANCE)
//Lucy Elisabeth Holmes

About me

Education and training:
BSc (hons) Biology, University of Bath, 2006-2009
MSc Science, Media and Communication, Cardiff University, 2009-2010 (pending!)
Professional experience:
Science Communications Intern, Norwich Research Park (England); Summer 2009

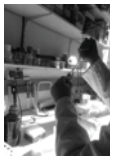
Monday

15-3-2010

The sun is shimmering on the river, the trees are still and the horses are grazing. Walking up the INRA campus is tranquil and beautiful after the hustle and bustle of central Paris.







Amongst the bringing-outdoors-indoors foliage, Roland found us. He's our leader for this week, is very friendly and is the king of olfactory receptors!
Howard gave our RELATE intro, which turned into a thought-provoking discussion on balance in science journalism. I think I'm going to learn a lot of journalism skills from Elena this week, and learn a lot about different cultures; by this I mean the amount of coffee an Italian consumes (and in tiny cups!)
Elena and I were made to feel really welcome and a lot of people were prepared for our visit. We were given presentations about the entire agricultural institute – it ranks a pretty impressive first place in Europe. Not bad then!

The rest of the day was full of introductions to the NO&MI team (that's the Neurobiology of Olfaction and Model Imaging) and they stretch across multiple disciplines to create the bigger picture.
Edith is head of the lab and told us about the projects going on. In short terms, they are making bio-electronic noses, in collaboration with many laboratories around Europe. It's called BOND. No, not the 'James' sort, although the idea of artificial intelligence isn't far off here. It stands for Bioelectronic Olfactory Neuron Device. It's pretty handy that everything is shortened!
The route from a chemical to a nervous signal during odour detection is extremely interesting, albeit complex. To fit within the department's aims of relating to society, it has many helpful applications. It can detect gone-off food, drugs and even diseases by 'smelling' the odour from bodily fluids. The best application I cannot disclose – I bet you're intrigued! Maybe you'll find out in a couple of years! Luckily we discovered that we do not have the receptor to smell horrible boar taint, much to Roland's disappointment! Oh just a quick note about the canteen – they know how to do it in France! I'm already looking forward to lunch tomorrow. Take-home message today: smell is an under-rated sense but is so important in detection, protection and behavioural responses. Play Time: for now, I'm signing off to rest my legs and saturated-brain – we've cruised the Seine tonight and watched the Eiffel Tower Dance. Life is sweet!

Tuesday

16-3-2010



We've mastered the art of the metro and our P.B. travel time is now one hour! Greeted by a grinning Roland, we went to our massive newsroom and set-up for the day.First on the agenda, battle of the 'ists': Journalists VS Scientists. Scientists don't trust journalists as they think that they over-simplify, distort the truth and portray everything as a causal fact. Journalists find that scientists need to appreciate that stories must be given interest and do not play the same role as a published paper. The B-word (balance). Time. Truth. Process. Application. Translation. There's so much to think about when reporting science. Lunch: 10/10 again! I can't believe how cheap it is too! We also visited another lab on proteomics which has some phenomenal equipment. Our time to shine: the afternoon brought a Press Conference. We got to question a range of researchers to add some depth to our olfactory knowledge. We also got a looksy into the range of labs. Take-home message today: journalists must put in more effort to gain the trust of scientists and do their work justice.

This includes a responsibility to educate the public on the long process of science and peer review – discovery moments do not happen in an instant! Play Time: literally. Tonight Roland is taking us to a play – in French, so Elena is going to have to be my whispering translator! The actors have spent time in NO&MI and have constructed a detective play based on bioelectronic noses! I can't wait, dinner should be interesting with them! Au revoir!

Wednesday

17-3-2010

"So what about the play?" I hear you wonder. Well, the dramatic actions meant that I vaguely knew what was going on as they smashed up fruit and the police came, using smell to solve the crime, naturally! It's fun to see how science can be adapted into an art form.
Wednesday was interview day. We just about navigated our way around – I feel like we are the lab rats in a maze sometimes! We saw how diamonds are used to cut sections into smaller pieces than imaginable, heard about rat brain surgery and grilled Julien, who works solely for the BOND project. I became a VIP as the team meeting was done in English for yours truly. It's a complicated world of budgets and deadlines! Then we got our nose stuck into another intriguing topic. Regeneration. The olfactory system is one of the few where neurons regenerate throughout your life. Studying rat behaviour and measuring their brain activity gives hope to treatment for regenerative diseases and neurological damage repair. Take-home message today: scientific conclusions really just cause more questions! Certain responses do not exist in this world! Play Time: Now for the Arc du Triomphe.. From Paris, with love!




Thursday

18-3-2010

Why did you choose olfaction? What are you working on? What are the techniques? Why is this important? .. So.. What does that mean..?! We continued to interrogate as many researchers as we could find! They are really kind giving up their time for us and I'm finally getting the bigger picture into my head of how everyone's research interlinks. The applications are diverse and can contribute so many positive things.

The calcium imaging suite was amazing. You just can't comprehend how they insert a miniscule glass needle into a single cell to get its contents! Take-home message today: personal aspects surround research, including researchers' moral compass. Wider issues like this have given us some interesting perspectives to consider. Play time: tonight we went for a meal with Roland and Edith. It was absolutely DELICIOUS - I tried crazy things like a frozen fennel and pineapple dessert! - thank you so much!!


Friday

19-3-2010

The week has flown by at INRA.
The morning started with a very kind visit from Cecile, who is a French science journalist. We found out about her past and she gave us lots of invaluable tips for science reporting. For example, you must be clear when research is only currently in rats and not make over-enthusiastic claims about its replication in humans. After our last lunch in the world's best canteen, the tables were turned. A local news reporter came in to interview us about our internship – we're going to be famous for one evening in Versailles! The afternoon was filled with feedback and reflection. We have learned so much this week. Not just the specifics about olfactory receptors, but we have got a brilliant overview to the complexities of research. We have discovered how people overlap, how budgets are tight and the long process of experimental procedures, repeats and publishing your data. We also offered a view that we hope will aid the scientists in their approach to journalists, for example that it is our job to find an interesting angle, and that we have a different function to their publications. We also got in a speedy last-minute interview with Christine Baly, who filled in the gaps we needed for our articles. T ake-home message for today: the appreciation of scientific research from this week can be applied to all future journalist work. It is important to tell scientists who you are interviewing of the journalistic procedures so that they do not think you are being deceptive when only perhaps using one short quote from an hour's interview! Play Time: tonight we went to the studenty Latin Quarter and really 'felt' Paris. Elena finally got her onion soup and I sampled the snails! I don't want to go home! It's been a brilliant week; the skills I've developed will definitely help me in the future. Now it's time to finally get some sleep! Oh and write, of course! But with so many interesting options, choice is going to be the hardest part! Big thanks: I'd like to give a massive thank you to the EJC and everyone who gave me this opportunity and especially to Roland for welcoming us in and the other researchers for their time. Last but by no means least, thank you to Elena for being a great project partner this week (remember, YOU-YOU-YOU!!).

INRA - Jouy-en-Josas (FRANCE)
//Elena

About me

Education and training:
Master in Journalism and Publishing and Degree in Literature and Communication at the State University of Milan

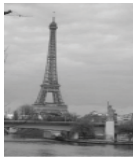
Professional experience:
Freelance journalist for a local newspaper and for a monthly magazine in Como (Italy), intern at the Italian Cultural Institute in Oslo (Norway)

Awards and personal grants:
One of 200 best authors in "The International Essay Competition 2009" of the World Bank concerning climate change

Monday

15-3-2010

Finally, I am in Paris! The Eiffel Tower is completely enlightened during the night: it was the first "parisienne monument" that I saw leaving the metro from the airport yesterday. It was wonderful!




My first day here was great: full of new things, information, people I met. I left the hotel in the morning, destination Jouy-en-Josas where the Inra lab is settled. It is a lovely village in the countryside: it doesn't seem Paris, at all. Trees, hills, horses and a little river that arrives till the city centre and flows into the Seine.


I started my day with the study tour briefing to let known about the project: how to spend my study time here, how to be a good relate student, how to get acquainted with science. Science: a huge, massive subject, difficult for the majority of people but, at the same time, really fascinating.
The lab is full of doors, like a labyrinth: I am lucky because Lucy always helps me! Without her I couldn't find the newsroom…
After the first day here I can talk about olfaction, olfactory receptors, brain activity in transforming chemical signals into electrical ones: a real scientist, just after one day!
Just two "problems": in Paris coffee is extortionate and internet doesn't work in my room! I have to become accustomed!

Tuesday

16-3-2010

Are journalists able to write or talk about science without prejudice and in objective way? Are they be able to understand scientific issues? These are the two day's questions and, unfortunately, it is difficult to answer.
We started our lab day with a fundamental problem: how to improve communication between researchers and journalists. It is a tricky subject, I know, but I feel positive. We have to analyse lab work, deeply, and translate it for "our public". It seems simple, isn't it? Some researchers are quite suspicious: «Will you really able to understand our subject?», it is a common question. «I will try – it is my answer – I know that it is difficult but, with some efforts, I can do it!».
After my day lab I am fully convinced: in order to write and to talk about science you have to "feel" it spending some days in a lab, talking with scientists and being curious about their experiments. It is the only way to understand this fascinating subject.
It is for that reason that, after our afternoon meeting with researchers, Lucy and me have taken our cameras to discover the "labyrinth lab", like real photo reporters! Electronically experiments, papers with Dna, microscopes, rats' cells, freezing room (-20°C!), many different machines: it is a magic world!


The day is not already finished. Now we are in the newsroom waiting for our head lab: tonight we will go to theatre with him. We will watch the play "Clowns talking through their noses", a performance of some actors who spent six months in our lab, working on olfaction. The play will be in French: don't worry Lucy, I will translate for you!

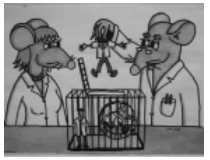
Wednesday

17-3-2010

The lab is full of "strange" devices! I spent my lab day like a child at Disneyland: I was completely mesmerised by electronic microscope, many different coloured liquids in glass bottles, pipettes, big (expensive!) machines, video about rats' experiments, pictures of cells, etc.



We met some researchers and asked them about their work: it was amazing! I learnt a lot about their daily work, their objectives, their sense of being a part of a group and their way of thinking about "Science".
Now I know that studies about neuron regeneration are useful for people injured in accidents and for people with degenerative diseases. Moreover we watched a video about an experiment on ten days older rats. It was just a video so I wasn't really impressed…I would prefer to have seen it myself!
We talked to another researcher about our purposes, our objectives. Lab scientists are very interested in our work, in our way of spending time here and they are very kind. We attended a lab meeting and they spoke English all the time, just for us!
The evening was quite "complicated". After a gorgeous visit to "Arc du Triomphe" we decided to go to Montparnasse to have a dinner but it was very late so all restaurants were closed. We had to be content with a ten Euros pizza…!

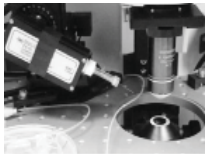



Thursday

18-3-2010

Not only scientific issues but also ethical problems. Today we spent some time with a researcher talking about "how to balance science and ethic". I had never thought about this subject before: that's a tricky one! If you work as a journalist you have to balance "stimulating curiosity and telling the truth", "talking to a large audience not specialised and being precise". If you are a scientist you have to decide: "do experiments with animals or not?", "working with clones or not?". How many difficulties!
Now we really feel a part of the lab: we are independent, we know all the researchers and we walk around, up and down, we knock the doors to interview scientists and we can recognise every machines and devices (more or less!).
During the morning we visited the last part of the lab that we hadn't visited before: the electrophysiological section where scientists work on neurons stimulated by odours. The electro physiologists are able to create incredible images of cells. It was amazing!





Tomorrow will be the last day and my personal objective will be: try to navigate our lab labyrinth without Lucy's help! Am I too optimistic?
The evening was lovely. We had a dinner in a very nice restaurant next to our hotel with Edith and Roland, the bosses of the research team. Our olfactory receptors had a busy night because of many French "cuisine" perfumes!

Friday

19-3-2010

The last day at the lab was a mix of all the things we have learnt during our week.
First of all we had a meeting with Cécile, a French journalist, Phd in Chemistry and freelance for some scientific newspapers. We discussed some important issues about scientists vs journalists. Cécile told us that there are some questions a journalist has to think about before writing a scientific article: "what's new?", "why is it interesting?", "what are the implications for the future?". «Science is very complicated and the problem for a journalist is "what can I say?". So, it is impossible to be impartial but definitely we have to be honest», Cécile said. Some scientists are too suspicious about our work on their field but we can assure: we are on your side, definitely!

After our lunch (at the lab's canteen, the best canteen I have never seen!) a journalist for a local newspaper interviewed us about our lab's experience: now we are VIP in Versailles!
In the afternoon we exchanged our "on the spot" impressions with the lab staff and we concluded our relate week. To sum up: fantastic staff, impressive machinery, very interesting project, good location. Now it's up to us: write a good article and make efforts to be published!

In the evening we went to the Latin Quarter, it was amazing: the best place in Paris to feel Paris! Finally I got my onion soup and my crème brulée, whereas Lucy the snails!
It was a fantastic week! Lab, people, experience, city: all was wonderful! Thanks especially to Roland for welcoming us and thanks to all the researchers. Thank you Lucy, I couldn't imagine a better relate partner than you!
Au revoir Paris, à la prochaine!

BILKENT - Ankara (TURKEY)
//Charlotte King

British
24th June 1988
csking24@gmail.com

About me

Education and training:
Currently studying for my MA in Science Journalism. Formerly studied BSc Natural Sciences at the University of Bath.

Professional experience:
Intern at New Scientist magazine, UK (current). Intern at Informa's Scrip clinical research magazine (January 2010)

Sunday

14-3-2010

Today I travelled 2846.32km from London to Ankara, Turkey. Now this is the same as 2.84632 × 10^15 nanometers. Nanometres is the scale of the materials measured that I travelled all this way to see.
Until a couple of weeks ago I wasn't totally sure what nanotechnology was, but doing a bit of background reading made me quite excited. Tiny particles, that can only be seen by the most powerful of microscopes are the subject of much research. The main thing about nanotechnology is that smaller particles of a material have different properties to the larger form. So nanoparticles can have very unpredictable and unknown properties. Exciting. But what does all this mean? Hopefully it will all become clear.
It was a very long day of travelling that culminated in a very-worth it bedroom which is a mini-apartment. I would not mind living in this room all the time with the a double bed, big silver Bosch fridge, personal table and chairs and more. There were even some white fluffy slippers waiting for me in the en-suite.

Monday

15-3-2010

Me; Dr. Ozgun Akyuz; Hinano Spreafico; Dr. Nihan Kosku Perkgoz

We then went on to meet Professor Hilmi Volkan Demir who explained the work that they do in the department. The concept of using nanotechnology to combat climate change was introduced to me, and the concept of self-growing polymers sometime in future. Dr Urartu and Dr Nihan showed us around and throughout the day I was very happy to meet many members of the nanotechnology team and laser department. Everyone was very friendly and the campus and they are obviously very proud of their facilities. A lady was even washing the walls above the staircases - something I have never seen in England.

A tree and some campus steps

We were showed their equipment, such as electron microscopes, and where they do the experiments and I already have lots of story ideas that I could write about. Much of the equipment was things that I have always studied, but only theoretically, so it was good to see them in the flesh. I am learning about an area that I do not currently have that much knowledge about although is very interesting, and I can apply some knowledge. It is very useful to be able to think of questions to ask the researchers in order to be able to write a story for the public later.



Some gold particles in solution and an electron microscope.

Professor F Omer Ilday showed us the laser equipment. Their work is cutting-edge and they culture cell lines in the lab as well as using lasers on the cells, meaning great efficiency because there is much collaboration between different departments - such as biology for the cells and laser scientists. They have a sterile room for culturing cells.


We were told not to put our eyes at table level because there could be a laser on which could damage our eyes.

For lunch I had cshcken and chips and vegetables. I think tomorrow I will try something more adventurous, but I was curious to see whether the cshcken tasted different to cshcken in England. It did taste different, but it did have a sauce on top. There is a wide variety of food to csoose from.
The evening was spent having dinner with some interesting Turkish people who all work for EU projects, and we had a tour of Ankara in the car.


All in all an amazing day.

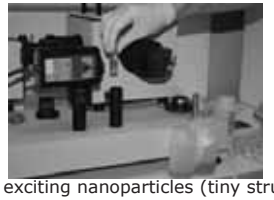
FUN FACT: English turkish delight tastes nothing like the real thing.

Tuesday

16-3-2010

Today I woke up to glorious sunshine.


After breakfast I started off talking to Emre Unal about new sensors the group are working on to monitor the healing of fractures by monitoring the pressure put onto the sensor. This was very interesting to hear about.
Then we spoke to Tuncay Ozel about his work on nanocrystals and spoke about the possibilities that nanotechnology can bring. In future his work could contribute dramatically to the reduction of electricity used for lighting across the world.



This is the demonstration of a laser exciting nanoparticles (tiny structures that are around 1 millionth of a metre wide) - and exciting them means they become colourful.

So how does a nanocrystal produce light? A laser is used as the source of energy. The laser light is shone at the nanocrystal, which causes an electron in the nanocrystal to move to a higher energy level. As the electron moves back to the lower level again a photon – a particle of light – is given off from the crystal. The photons produced from many crystals can collectively be used as a source of light.
For me these were new concepts to learn about, but Tuncay was very good at explaining everything. Tomorrow we are going to make gold with him!



View of Ankara and an interesting sign to warn of the danger of grass fires on campus.

In the evening Urartu Seker and his wife Jada took us out to the old part of city that some say is dangerous at night but others say is not. We ended up doing some very interesting window shopping of ornaments and antiques such as gramophones, then went actual shopping. In a leather shop the owner and tradesmen showed us his workshop and how the leather is shaped and marked. Then there was a shop full of metal objects, and I bought a few gifts in there. Then it was time for some traditional food. This was my favourite meal so far - savoury pancakes with filling. Yum.



Nothing bad happened to us so either some people are wrong or I'm just lucky!

FUN FACT: Turkish people don't eat the skin of a baked potato.

Wednesday

17-3-2010

This morning I sat in on a group meeting which all the members of the lab attend once every two weeks. Eacs member of the team gave a short presentation about the work they are doing, to help them try to communicate their work in a short time. This is called 'elevator speak' and is supposed to help the researchers to learn to explain their research to people who are not familiar with the topic.
Afterwards Tuncay Ozel and his wife Ozge took me to their home for lunch. Tuncay had explained his work yesterday so after lunch Ozge explained what she has worked on.


Tuncay, Ozge, Smitha, me

Then Tuncay took us to make gold.
The process involves mixing gold chloride tihydrate with sodium citrate. But sadly it is not worth making it to sell it as the materials to make it are very expensive. They make the nano-sized gold particles to use in their work.


The first step

It worked (it doesn't look gold as the tiny particles are in liquid, and if tiny particles of a material are made they reflect different colours to larger pieces of the same material)


The contents of the lab fridge

The Turkish supermarket down the road from the university had enticed me every time I had been driven past it, so I ended up spending around 2 hours in there just looking around the shelves and picking things for dinner and also to take home. Tuncay and Ozge were also in the supermarket by chance and advised on what food to buy.
FUN FACT: Turkish people like to wrap vine leaves around rice, meat, vegetables or both and eat it. It's nice.

Thursday

18-3-2010

Today was quite a calm day. Firstly I ate some leftover supermarket food from last night - Turkish bread called Bazlama, with some chocolate spread and cheese.
Emre Sari then showed us the nano-equipment labs more extensively and we went in the bowels of the building and saw how the air is filtered to maintain constant temperatures and minimal dust in the labs.
Then Emre Unal showed us how they carry out the bioimplant testing at Bilkent. They are working on a tiny chip that could one day be put on the metal bar that is screwed onto a fractured bone. The idea is to develop a wireless sensor mechanism to analyse the healing of a patient's bone by measuring the load on the metal - decreased load over time means better healing. The demonstration was a follow-on from his presentation on tuesday.

Emre setting up the equipment and the bending of the wood after the load is applied

They have carried out tests on the wood, as in the picture, but also on real sheep bones covered in flesh. I half-expected there to be a sheep tucked away in the back of the lab but we were just shown wood in the end. Then I attended an electrical engineering lecture by Professor Hilmi Volkan Demir, who welcomed the two people from the UK, (i.e. Smitha and I), and delivered the lecture in English for our benefit. It was useful as it re-visited topics we had already heard about from monday-wednesday.
The evening was spent looking over notes to try and work out the best way to cover the science I have heard about during the week, and writing this.
FUN FACT: Sheep bone is a lot weaker than human bone, and dog bone is a lot stronger than human bone (found this out while asking about the load on the wood)

Friday

19-3-2010

Today was quite a wrapping-up day. We had a chat with Nihan about the week, what we are going to do as a result of the week and keeping contact in future.
I met with Professor F Omer Ilday again as he told me he had a Nature paper coming out on monday about lasers. The interview was very enjoyable and it became clear to me how much the subject of these tiny nanoparticles of the week had actually helped me become a better journalist in a big way. I found myself listening to the Professor talk, thinking about the gaps in what he was saying and then asking the right questions to fill those gaps. I think the week was useful for me as well as the scientists at Bilkent.
It was amazing to be able to visit scientists working in a lab for a prolonged period of time. It would be great if this was done more, as it helps the journalist to immerse themselves in a topic and be able to ask questions. It is sad that in this age of 'churnalism' and immediacy of news that more time cannot be spent doing this sort of thing.
My final night at Ankara was spent having a lovely time with Emre Unal, in an atmospheric Turkish bar with a singer and hot chocolate. I have had an amazing time.

FUN FACT: The men in Turkey must to a year's compulsory military service

Additional info

Link to my website:
www.chalkandcheeseblog.co.uk

BILKENT - Ankara (TURKEY)
//Smitha Mundasad

British
15/12/1981
talktosmitham@gmail.com

About me

Education and training:
MBBS (UCL Medical School) BSc International Health (UCL) MA Science Journalism (City University current)

Sunday

14-3-2010

Thinking small

Born premature and weighing less than 2 pounds, I know that it is the little things that are important in life. I also know it's the little things that don't act as you would expect them too. Nanotechnology then - which in my mind is the study of incredibly little structures that can do massively surprising and sometimes world-chaning things, should come naturally.
But as much as I told myself this, and was incredibly excited about the prospect of spending a week at Bilkent's Nanotechnology Research Centre, I was daunted by the science. Science doesn't usually faze me, but I normally deal with the science of very tangible human beings. A nanometer is one millionth of a metre - how on earth was I going to deal with concepts on the nanoscale?




Then it came to me. As my flight took off, and land fell rapidly from my sight, the city world that I know well became instantaneously smaller and the cloud world that I do not understand, instantaneously bigger; I realised size is relative. It truly depends how you look at it.
With these thoughts in mind I woke up this morning at Bilkent University, Turkey, ready to see the possibilities in a science that is often lost to the human eye.

Monday

15-3-2010

Thinking small

Born premature and weighing less than 2 pounds, I know that it is the little things that are important in life. I also know it's the little things that don't act as you would expect them too. Nanotechnology then - which in my mind is the study of incredibly little structures that can do massively surprising and sometimes world-chaning things, should come naturally.
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Placing antennae into human beings

Said Professor Hilmi Volkan Demir, one of the first people I met in Turkey. In his opening address to us this morning he introduced me to NANOMEDICINE. WOW.
His group has been working on miniscule sensors which can be implanted inside the body and gather information on healing in a way we have never done before. As the professor explained, fractures sometimes heal in an unsatisfactory way. Despite a metal rod being fixed on the bones during surgery, to help them heal in the correct alignment, healing is often imperfect. Devices engineered at Bilkent can sit on these metal fixing rods, and gather vital information on how a bone heals and whether it is healing correctly. Where this research may take the world of medicine, who knows?

Lasering the brain

Another Prof, Dr Omer Ilday, is looking into using laser on the nanoscale, to target tissues with utter precision. If this is possible, then they may be able to be used to cut out brain tumours, for example, without affecting any nearby healthy tissue. This could be revolutionary.
Often, when I read about the latest scientific discovery, the possible applications seem inflated,running away into the realms of science fiction.
This difference about Bilkent is that incredible advancements are happening at an amazing pace. Even more incredible, and something I will not forget - is that there is a truly interdisciplinary approach. This means biologists work closely with physicists and electrical engineers and organic chemists and.. this means that a concept can move more easily from theory, all the way to the application. This atmosphere - of sharing innovation and skills between departments is something I have not seen at an university before. Collaboration between departments is encouraged, partly because national and EU funding facilitates this. But Prof Ilday also pointed to the sharing and forward-thinking culture at Bilkent. As Prof Ilday said, this is a brave and risky thing to do. It means he produces less papers but in the end is working on science that is more likely to get to the point where society can see the difference.
More from the world of nano tomorrow, goodnight.

Tuesday

16-3-2010



A seemingly colourless solution turns green

Green light for nano

A seemingly colourless solution turns green
"The world's problems are to do with energy" said Tuncay Ozel, a 20-something physics Masters student with a clarity of thought and passion that I have never encountered before. Today he took me on a journey into physics that has left me wondering what I may have missed in my life-science focused world.
The humble light bulb is an energy evil
Lighting consumes 19 percent of global energy,and produces a significant proportion of the harmful greenhouse gas, carbon dioxide, according to Bilkent's Professor Demir.
The normal light bulbs most of us have at home - with filaments, contribute to this energy problem because they are pretty inefficient. Most of the energy used by these bulbs is actually given off as invisible heat, with only 10 percent converted into useful light that we can see.
A new nano lighting source?
Surrounded by crystals, lasers and small tubes of many colours, I was introduced to Bilkent's mission to make lighting which is more efficient, cheaper and produces less carbon dioxide.
Tuncay and team have been working with nanocrystals - thousands of atoms arranged in a crystal structure, that are home grown in Bilkent's labs.
These tiny crystals are very tunable - making extremely small changes to the size of the crystals changes the wavelength of the light they produce (and thus the colour we see too).
Tuncay showed me that if you take a solution of nanocrystals and excite it by adding laser - electrons jump up and down and give off light. This is demonstrated in the picture above. A laser beam excites electrons in a seemingly colourless solution of nanocrystals, and energy is given off as photons, which we detect as green light. If a slightly different size of nanocrystal was used in solution, we would see a completely different colour of light. I watched as orange solutions turned green and blue solutions turned orange. Science made me as happy as a kid in a magic show. There, I've said it.

This light emitting property of nanocrystals is at the heart of Bilkent's quest to make more efficient lighting sources. In many ways nanocrystals are more efficient than our filament bulbs - much more energy is given off as light rather than heat.
This is only the beginning of the story. Bilkent's nano researchers have been playing with crystals on the nanoscale - mixing metals with silicon so that their electon clouds get to buzz together, changing the sizes of crystals, coating plastic with layers of crystals, exciting electrons all over the place.. and have found a number of new ways to help with the world's energy problems.
Of course, these aren't perfect yet. As Tuncay put it to me, "I've been showing you the positive side of nano, but nanocrystals aren't stable all the time". The researchers at Bilkent are understandably passionate and proud of their work. They are cautious too. They know that their work starts with understanding the basics and despite the huge advances they have contributed towards in the search for greener energy, they know that a lot of things need to be ironed out before their discoveries can be used in the every day world.
Tuncay promises to show me how to make gold from a red solution tomorrow and to tell me more about the advantages and disadvantages of using nano as the answer to energy waste.

Wednesday

17-3-2010

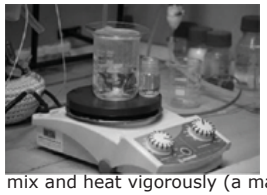
Pink and gold

I made gold today, but I doubt I'll have any problems getting it through Customs. In fact I think if I attempted to declare the 1ml of pink nanogold liquid I have in my pocket, the airport officials would think I'm completely mad.
Nanogold, unlike the yellow jewelry we are used to, is pink. It also has many surprising and useful properties once it hits the nanoscale. Gold at 2-3nm is an excellent catalyst, helping speed up chemical reactions. It is also magnetic and can be highly reactive. Wearing nanogold then, could be a bit of a problem.
The pink colour of nanoglold has been used since ancient times, to stain glass windows. Gold nanoparticles have also been discovered in the traditional Indian Ayurvedic medicine Swarna bhasma. It was not until 1950 though, that Faraday realised that this pink colour was due to the minute size of the gold particles.
In the last few years nanoscientists have been working on many applications that manipulate the unique properties of nanogold. Researchers for example, have used nanogold to treat arthritis in rats. Radioactive nanogold is also being used experimentally to reduce the size of prostate tumours in mice.
For more on nanogold research: http://www.nano.org.uk/news/nov2009/latest2069.htm http://www.gold-bulletin.org/assets/file/goldbulletin/downloads/tiekink_3_40.pdf,

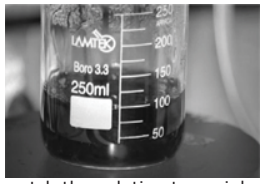
A recipe for gold


de-ionised water


2mg of gold chloride trihydrate

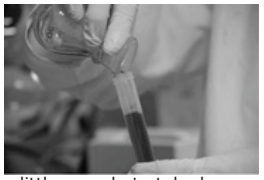

mix and heat vigorously (a magnet's doing the mixing)


add 5mg of sodium citrate



watch the solution turn pink


Tuncay & a new nanoscientist


a little sample to take home

Thursday

18-3-2010

Stitching together an apple and an orange

In order to respect an embargo - I have published this page a few days after writing it.
Bulent Oktem, Prof Ilday and team, have discovered a new type of laser - a femtosecond fibre laser. (A femtosecond is one quadrillionth of a second) What's exciting about this laser is that it has less "noise" performance than conventional lasers - that is, there are less fluctuation in the power of the laser. This makes it very attractive for research and industry alike.
Prof Ilday speculates that this laser can bring greater precision to a wide range of applications - such as optical clocks.
According to the professor, laser physicists across the world have been searching for this laser for some time. He said, "This combination has been sought after by different laser groups for ten years now". The Ilday team stumbled across it almost by accident whilst in persuit of an answer to another problem.
The laser is made by combining the properties to two types of mode-locking lasers (mode locking applies to a technique that is used to make pulses of light that are of ultra short duration, which is an important property for the telecommunications industry for example). These lasers are known as the soliton and similariton lasers.
The new laser is the so called "soliton-similariton" laser. Prof Ilday said, "I make the analogy of taking an apple and orange, cutting them in half and stitching them together. From a laser physics point of view this act of stitching an apple and orange together is very new and very interesting".
This research was published in Nature Photonics on the 21st of March 2010: http://www.nature.com/nphoton/journal/vaop/ncurrent/full/nphoton.2010.33.html doi:10.1038/nphoton.2010.33

Friday

19-3-2010

Reflections

Take someone who has no physics background and put them in a nanotechnology centre for a week. What do you get? In my case, a wide eyed, open (and probably pretty empty) minded girl exploring a world of very exciting possibilities.

I've learnt a lot this week that challenged the way I see the world. I think this is what is so exciting about nanotechnology, and at the same time so terrifying. As something only nanoscientists will see, as something that acts in unpredictable ways and as something that has been flouted as the answer to many of the world's problems, nano brings fear and hope in equal measure.

A lot of the time I had a furrowed brow - desperately trying to understand how things work in the quantum world, grappling with electrons and plasmons that I will never see. But then it would hit me and I would realise the incredible possibilities hidden in the nanosphere.

From that personal journey - I now have to produce something that the general public will understand and will want to read, while sticking true to the science.

This will be challenging, but the researchers at Bilkent were very helpful, answering questions that must have seemed as obvious to them as the two times table.

I learnt more about the tensions between science and media. Much of the work going on at Bilkent at the moment is on-going, the product of years of careful investigation. Wading in and asking for the latest news, I feel, would have been the wrong approach. It would not have allowed to appreciate the beauty of science or the passion that the researchers held for their subjects. By being focused on the end result, rather than the process, there is so much science that the media will never report on and thus the public are unlikely to see.

This appears to mirror the tensions between science and industry. Industry demands final products, but without much of the basic research and concept testing that goes on at universities such as Bilkent, many of the final products we take for granted, would never be made. But bluntly, both the media and industry seem to view science as a means to an end.

Sometimes I think this is a shame - we see a lot of art without questioning how it differs from the last piece or what function it has in society. It is clear to me, from what I saw at Bilkent, scientists have no less passion for thier work than artists. And in the field of nanotechnology, where one needs the imagination to think of new possibities, scientists are often artists.

Is it time to start reporting on science with this in mind?

Additional info

Link to my website:
http://www.out-there-healthcare.org/

LENS - Sesto Fiorentino (ITALY)
//Vicente Balbastre Tio

Spanish
21-12-1983

Monday

15-3-2010

My first experience in Lens has been quite interesting due to the high quality of the professionals who work here: physicist, chemist and physics. I recognize that my first opinion was a bit confused because of the quantity of new scientific words. However, every professional I met today have been very nice, polite and they have had a lot of patient with my questions. I realise that there are a lot of interesting labs and I'd like to find out about the importance of the science and atoms and something like that. Furthermore, the lab I'm interested firstly is how the science analizes the Art and paintings. I'm very surprised about that field, because it's quite interested how they study atoms to improve a damaged picture. On the other hand, I must recognize that it's quite interesting the study of plants, the agriculture and the simple effect of the light, temperature or the atmosphere could change the state of one plant. I understand you can manipulate the conditions to improve the knowledge about this field. Indeed, the introductive Seminar by Roberto Righini was quite interesting and profitable, because I understand the structure of Lens in Florence. I specially pay attention in the agreement between Lens and ESA,European Space Agencies, because one month ago Valencia was chosen to set up a centre belongs to ESA. Finally I think I can learn a lot of things here and my desire is to share with the population.

Tuesday

16-3-2010

Today has been a different day, maybe it was harder for me because I've tried to understand lots of words. The Chiara's Group is very nice and they have a lot of patient…Chiara has been explained us all the projects. I'd like certanely the history of these projects, and the theoretical Bose- Einstein condensation, wich is the clue to understand everything. This theoretical predicction was done in 1924 by Bose and Einstein, but the first realization was 15 years ago by Cornell, Wieman and Ketterle. Due to their studies they won the Nobel Prize in Physics in 2001 for the achievement of Bose- Einstein condensation in dilute gases of alkali atoms, and for early fundamental studies of the properties of the condessates. All information is according to Chiara speech.

Apart from the history, I'd like to find out how this group works every day, where they make a lot of experiments and they take care of everythig is right. For example, the temperature of the atom, the correct distante between them…

On the other hand, I think It has been quite interesting to find out about the steps when the gas is diluted. The first is sun surface, then boiling water, freezing water, liquid nitrogen…

Perhaps the most difficult to understand is when the laser cools the atom. Firstly I've noticed that in 1975 it was shown that slow density gas can be cooled by illuminating it with intense, quasi-monochromic linght confined to the lower-frequency half of a resonance line's Duppler width, so the important thing is the transaltional Kinetic energy can be transfered from de gas to the Scattered light. Due to this experiment S.Chu, Cohen, Tannoudji and Phillips won the Nobel Prize for development of methods to cool and trap atoms with laser light in 1997.

In addition, I consider quite relevant the 3D generalization, what aim is to trap the neutral atoms. Altough I've learnt a lot of new information, I've been able to recognize one Magneto Optical Trap (MOT), whose first realization was in 1987. It has been very exciting, because my partner and me have seen one real experiment with atoms.

Another new achivement for me is the Evaporative cooling, I mean, the atoms are trapped in a conservative trap and then more energetic atoms are removed. In this step is quite important the evaporation and the thermolization.

Finally, I think my conclusion, despite the difficulty of the words, Chiara's group shows me the importance of cooling the atoms. I hope tomorrow I could learn more about this field or others.

Regards

Wednesday

17-3-2010

Today my partner and I have had a meeting with Howard Hudson to understand the aim of Relate project. It has been very important the ethics codes he had told us to write a right article.

On the other hand, we have enjoyed the lunch with Mr Wiersma, where we have spoken about the current situation of the journalism.

In addition, after lunch, I have had an interview with one relevant researcher, whose name is Franco Lucarelli and he is a proffesor at Florence University. Furthermore, he works in LABEC, a building close to Lens and the aim of Labec is to analize the state of the art using the phisics. Lucarelli has shown me his project and he has explained me how Labec works. Indeed, he has told me that Labec sometimes works with Lens, but Lens with atoms and Labec with protons. The idea is to improve the art and the laser is the way.

Tomorrow I think it will be the hardest day!! regards

Thursday

18-3-2010

Two days before coming back to Spain…I think on Thrusday is when I realise I want to write about Lens and then I'd like to explain what Laser of Art Department consists. Furthermore, my interest in Science is increasing because I understand a bit more since I arrived here on Monday.The most important thing this day is that my partner and I have had lunch with scientifics and I realised that their situation is hard, I mean, the science needs the investment from Governments or EU and young people have to study abroad to improve their knowledge about phsicis and this kind of science. I think is the same situation as in Spain However I'd like to have an interview with one important scientific to check my point of view and to develop this information. I trust tomorrow. Best wishes

Friday

19-3-2010

It's a pity, but my adventure finishes in this Lab with this comment!. However I have to collect all my information to start my report. Today I've had a lot of interviews. The first one has been on the morning with one important researcher: Massimo Inguscio, where I could understand the situation of the Science in Italy and in others countries. Furthermore, I have been able to understand the importance of the phisics in our lifes, such as in GPS or Navegation.
The other interview has been with Roberto Righini, the Director and Representative of the LENS staff, and I have found out about the aim of Lens. In addition, we have been spoken about the relation between Lens and Icfo, which is in Barcelona and about the plans of the future of this lab.
Then my partner and I have enjoyed a lunch with other researcher, Mr Wiersma, where we have spoken about the situation in the journalism and about our projects in the future. I'm very glad to having lunch with him because I wanted to tell him that in Lens there is a good atmosphere.
Finally, I have had one interview with Maurizio Becucci, thanks to Chiara. Becucci is one researcher belongs to Laser of Art Department. It has been quite interesting for me because I realised that the science helps the art, for example: in this lab could discover if one painting is fake, thanks to the laser.
Thanks to everyone, I will be able to write my report about science!!!now it starts the second step.

LENS - Sesto Fiorentino (ITALY)
//Anna Korolyuk

Finland

Monday

15-3-2010

So, I arrived. From -5C in my hometown Helsinki, Finland to +15C in Florence, Italy: it seems to be other universe.
LENS Laboratory is situated six kilometers from Firenze, center of province of Florence, in a small town, called Sesto Fiorentino. "Sesto" means "sixth" in Italian, "Fiorentino" means "Florentine", so together it gives good hint where one can find the place.
The idea of LENS arised twenty years ago, when emerged necessity to gather in one place people, working with lasers. It took only two years to make it into reality.
In real science one never can buy ready instruments from the shop: first he has to construct it. Here, technicians, who produce the equipment elements, and researchers, who perform the experiments, work together. Totally around 90 persons. Anyone from outside, who has the idea of scientific test, can appy to Laserlab-Europe, and, if chosen, come to Florence.
So, here physicists, chemists and biologists use lasers for their purposes. Drug designing, studying plants physiology under stress conditions, old paintings recovering - it's only a couple of things are doing here.

Tuesday

16-3-2010

So, what exactly do they do in the lab? If I tell, that they had observed sign of a famous Efimov three-particle state, you will probably not understand much their happiness. So, I will narrate about three things, which everyone can imagine.

A. 3D photography.
With the help of usual videocamera, one can make pictures only from frontside, or from backside, or from lateralside. The same happens when researcher in the lab uses small light intensity, or so called linear regime. But if to use more power (non-linear spectroscopy) one can get image of a spot inside the sample. This is the way of getting beuatiful pictures, for example, of a neuron from human brain.

B. Solar cells.
This is a device, which converts sunlight directly into the electricity. Unfortunately, it is not simultaneously cheap and efficient. Yet. In LENS is researched new type of solar cell: some dye is put onto the surface of titanium dioxide. Blueberry juice can serve as a dye, but, of course, some more scientific substances are used. Both materials are very cheap, but efficiency is a bit lower then other types of solar cell. Yet.

C. Photonic crystal.
People always liked observing natural photonic crystals: mineral opal and butterfly wings have the same reason of their iridescent colours. But only for the last one hundred years scientists started to study them. It was found, that a lot of tiny, micron size particles, composed in a periodical structure, creates the effect. This particles affect the propagation of photons in the same way as semiconductor crystal affects the electron motion. So, circuit, like electrical, can be designed. In LENS, for example, funding from industrial company had been got in order to optimise sunlight collectors using photonic crystals.

Wednesday

17-3-2010

Today we have met representative from RelateProject organisers. During the lunch we were talking with him and our host scientist, about the science journalism. What is it?
One interesting answer came out from our discussion. Why people buy jewelry? - It is only a piece of metal, completely useless. Why do we cook tasty food and even decorate it? - We could survive only with some amount of proteins, lipids and carbohydrates. Why?
Because it is what makes us a humans - the wish to have more feelings. We had invented Hollywood, tourism and brand jeans for serving this purpose. But scientists know, that there is one more powerful source of emotions: understanding surrounding world.
What happens inside the potato, while it is growing? How does the stars have been born and how they will die? What is located ten kilometers down under out foots?
With the help of science we can find these answers and excite our feelings. Scientists do their job - researching and collecting data, and science journalists can mediate these information into common language. So, it is necessary for society.

Thursday

18-3-2010

Two groups had kindly spent their time for hosting us: Diedrik Wiersma's group, who are studying optical properties of man-made materials, and Chiara Fort's group, who are performing experiments in ultracold gases. Today we had the lunch with Chiara.
Actually, exactly at this evening I finally decided about what I'll write. It was not easy - to distuingish one specific subject from all that information. But, at the end, I had to decide, and I chosen to write about application of ultracold gases. Yes, these gases are very interesting for researchers, but what is the interest for other almost 7 milliards people on the Earth?
In the late afternoon I made a plan, with whom I should meet tomorrow (actually it was "whom I have to catch tomorrow"). Truthly, it's always most important things are happening at the last day ;)

Friday

19-3-2010

At the morning I had a list of four people, with whom I wanted to talk. If you think, that's it's very easy - just to say hello and talk, you are a bit mistaken. It's not easy, but also it's not hard - it's complicated.
Before the every interview I had some main questions written. I didn't follow them exactly, but it helped me to keep in my head one single subject during the conversation. Otherwise I would slither into senseless discussion about life in general.
I talked with the leader of the big group, studying ultracold atoms. From him I asked general picture, and also three names of people, who are leading smaller groups studying specific issues. Then I interviewed these three people.
Thus, I have got four points of view. I hope to interview two more people in my hometowm Helsinki, because six points of view is more then four, simple mathematics. Objectivity in journalism is about approaching subject from different sides, I just want to be objective.
So, my trip had finished, but it is only the start of a new trip - being a science journalist. :)

MARMARA - Istanbul (TURKEY)

//Larisa Mihaela Stanciu

Romanian
22.october 1987
larisa_stanciu@yahoo.com

About me

Education and training:
License degree Faculty of Journalism and Mass Communication Sciences, University of Bucharest Master at Faculty of Journalism and Mass Communication Sciences, University of Bucharest

Professional experience:
2007-2008: reporter radio Bucharest FM 2008-2009: reporter Investigation Department Realitatea TV
Awards and personal grants:

Monday

22-3-2010

On Monday I visited the labs and I was impressed about the wonderful landscape we have from hotel. After the tour of the Food Institute, I spent my time with the other participants from this project. Since I´m for the first time in a muslim country, I heard the calling of the imam for pray. Even if I didn´t understand a word, I can realize that for the muslims it is very a important aspect of their religion.

Tuesday

23-3-2010

On the second day we went to the Energy Institute. The first researcher talked to us about the challenge we´re facing in the actual societies because the global demands grows by more than half over the quarter of a century. So, even if the oil is the most polluting, the demand of this resource increases especially from developing countries with economic growth. As far the costs, I found out that they include not only the oil itself, but also the infrastructure and pollution. Then, we had a tour and the researchers talked to us about: - gasification/ combustion - fuel cell technologies - development of hydrogen production - vehicle technologies group. As far the free time, I listened again the imam calling and I found out that "baclava" actually refers to the triangular form of this Turkish cake :).

Wednesday

24-3-2010

Our first hanging out as a group… in Gebze not Istanbul unfortunately. We went to a nice place close to the sea where we drank wine and beer and listened the waves. Again we ate some Turkish traditional dessert(I forgot its name). During the day I talked to researchers from Energy Institute. It was very interesting because one of them made an experiment in front of me. Than, in the afternoon I went to Environment Institute and I found out more about water projects. Tomorrow I go back there to see some experiments. I can´t wait!!!

Thursday

25-3-2010

It was indeed very interesting because I went to Environment Institute with Tiffany. We talked to some researchers about air pollution and how they take samples from different areas. What was strange to me is that everywhere people focus too much on their own areas and territory. Air doesn't have borders so, why don't the scientists create a network to work together against air pollution? The researcher gave us good news: air pollution goes down even if the number of the car rises. In the afternoon I talked to another researcher about water, an essential resource that we don't use properly in my opinion. He explained me how we can reuse water by cleaning it through different methods.Nevertheless, fresh water is cheaper than recycled.As for agriculture and irrigation, I found out that is better for the plants and also more economical to use the "dropping" system, not the "rainy" system. I didn't know that before.

Friday

26-3-2010

It was the best! In the morning we had some workshops. It was invited a teacher from a Turkish university who talked to us about the difficulty of reporting about the scientific topics because they don't respect the rule of "3S": Simple, Sensational and Sexy. He pointed out the importance of a communication between the scientists and the journalists. After his speech, each scientist said few words about the projects and about us, the participants. Than, we did the same. When everything was over, we went to the buses and went to Istanbul, Taxim station. Unfortunately, we had to split because we went to our hostels or to meet our friends. I went with Aurore to our hostel. After the taxi driver tricked us :(, we were kind of angry.Finally, everything was ok after we started walking in Istanbul. It's an amazing city. I will come back to visit it.

MARMARA - Istanbul (TURKEY)
//Maurizio Molinari

Italian
06/Jul/1979

About me

Education and training:
Master degree in conference interpreting (University of Bologna - Italy), school of journalism (Urbino – Italy)

Monday

22-3-2010

Today was the day of questioning: we visited some of the labs and listened to researchers presenting their projects. I tried to fill the gap I have, not perceiving the images and the surrounding setting, by asking as many questions as I could. I got the sensation that the relation with the researchers will be fundamental to determine our work quality: it's a kind of challenge getting to understand them and trying to push them to explain very complicated things in "human" ways. Apart from that, Turkish food is amazing and the Turkish guys are really very kind and helpful. The only issue is how we will be able to survive five days here, in the middle of nowhere, with nothing to do at night. I feel a bit like in the Big Brother's house, but I'm sure we all can cope with it. I'm only sorry that we are not experiencing the real Turky, being in a research campus far from every other conglomerate of human beings. But still a couple of interesting hints: the name of desserts are often related to women's parts of the body (a nice lady or woman's lips) and so is the glass where they drink their tea, which is called thin belly. The head of the National Institute for Research is a woman, and apparently she's a good acquaintance of Prime Minister Herdogan, that in Western Europe we define as a moderate muslim. At the end of the day, I guess I can barter the beers I will not drink this week for a research that, if I have to judge from the first day, seems promising and interesting. Plus I am sure that, with the other guys and girls of the group, we will share the pain of isolation and, on the contrary of what they generally say, a pain shared is in this case a pain halved.

Tuesday

23-3-2010

Energy revolution will be started by children. Colyn Ward, an anarchist writer, thinker and social historian, recently past away, was right: children's opinions and the organisation of a town are fundamental for revolutions. And a 8-year-old child, so a researcher told us today, had this idea to increase his home's energy efficiency: "I should put a transparent door on my fridge – he said to the researcher during a lesson in a primary school - so that I can look into it and don't have to open it to count how many pieces of chocolate there are". It's not a bad idea, isn't it? I don't know how much energy we would save if all fridges have transparent doors and we should open it only when we have spotted what we really want, but I guess it's not necessarily a negligible amount. Or am I just too enthusiastic about children and revolutions? Other than that, if yesterday was the time of questioning, today is the day of epifanies: I'm focussing more and more on what my article should deal with, I'm getting to know slightly better my comrades (or should I say colleagues? No, better comrades, hope nobody gets offended by this word) and resignation has pervaded me about the desert and ghost town where we are living. Howard Hudson, our coordinator, has left today to spend a day in Istanbul, lucky him! We had a very interesting presentation and discussion on the energetic situation of Turkey and the possible future scenarios and a visit to different labs in the energy institute. Tomorrow we'll seriously start working. Finally a quick note: there is a contrast between the projects Tubitac would like us to cover and the ones we think might be of real interest for the media. Gülnihal and Ender, Our Turkish coordinators, together with our contacts at Tubitac, are doing their best to make it possible for us to report on other projects besides the ones identified by the direction of the Institute, but it's not always easy and I think, in more general terms, that we are facing a prototypical situation that should be taken into account in organising the future Relate round. In my opinion, the crucial point is that scientists often don't know what can be relevant for journalists, exactly as journalists don't often understand the importance of a particular project for researchers. These, as we all well know, are two World that have problems to communicate to each other and that's exactly the aim of the Relate Project to ease this communication. Therefore, it is fundamental that the projects to be covered are authorized by the heads of the different institutes involved in Relate, but also that these projects are relevant from a journalistic point of view. Of course for a project to become relevant our effort, as journalist, is necessary, but we still don't have the rabbit cylinder.

Wednesday

24-3-2010

This has been the day that contains many days, as the Zapatistas would put it: the day of decisions on the project/projects I'm gonna report on, I even almost find two titles for the two articles I wanna write. But also the day of my first Turkish tea (so far I ran with coffees), without sugar, hot and drunk with a shy local researcher who kindly answered my questions in his 15 minutes break. It has been the day of a tour on an electric Fiat Doblò car, but above all the day where I start to feel really connected to the other guys and girls of the group, the day where I learnt that I will miss them when we will get back to our everyday lives, a feeling of loss which I'm so used to going around and meeting so many people and still, you've never get used to it enough not to feel sorry for that.

But it's still not time for sadness, we had a very nice post-dinner at a Turkish restaurant by the sea-side, tasted some cheese dessert that reminded me of Palestine and played a little bit on the swings and with a cute big dog who was tied there. I was even about to get a swim, but then I was the only one so I gave up. I have the impression that Monta would have kept me company, but I didn't want to insist because it was cold and the water was meant to be polluted. I must say I'm positive about publishing at least one of the two or three articles I want to write, hope I'm not building up too many expectations. So, as I was saying at the beginning, today was a day that contained many days, so I'm really tired and in some 15 minutes I hope to be lying in my bed, reading a good book before falling asleep. Sweet dreams to everyone.

Thursday

25-3-2010

Today was the day of uncertainties, weariness and laughter. Uncertainties because I don't know if I have enough information for the two and a half articles that I want to produce. My idea would be to try and pitch a whole thematic page in a newspaper, but let's see if I'm lucky. Tomorrow I hope to get the first couple of interviews and then I'll start seriously to work on the row material I have. Weariness without any particular reason, I'm used to sleeping very little and still today in the afternoon I have fallen asleep in the newsroom after listening to some very inspiring Rumanian hip hop (for further information ask Larisa). Maybe I'm really getting older. Laughter with the other guys and girls, with Xavi who was almost dying from laughing and Monta that is always up for joining in this nice activities which, so scientists say, is very healthy. As for the shadowing activities, we talked with the depute director of the Energy Institute and with a guy who described us the Formula G races, competitions whose participants are driving cars which run on hydrogen fuel cells or photovoltaic panels. Tomorrow it's our last day at Tubitak, in the evening we'll be leaving to Istanbul. There's some melancholy while I'm writing, maybe because it's very very late at night, maybe because even in the middle of nowhere you can have fun if you are with nice people, maybe just because I'm a hell of a sentimental boy.

Friday

26-3-2010

Today was the last day: after two interviews to researchers in the morning, in the afternoon we attended a workshop on science and communication. An expert from the Istanbul university gave a speech with lots of hints at aspects worth reflecting upon. Then researchers and journalists (namely us) expressed their impressions and thoughts on the week and on the project, issuing some recommendations and identifying strengths and weaknesses of the initiative. I'm sorry that I'm not very explicit on that, but the atmosphere of this last day was really strange and I concentrated more on my feelings than on the content itself. After hugging and kissing everyone and making promises to see each other again (hoping that we will be able to keep them), we finally left the middle of nowhere and headed towards Istanbul, the European New York, the city that never sleeps. A final thanks to everybody: Gülnihal, Ender, Howard, Larisa, Aurore, Tiffany, Monta, Greg, Xavi, Gülnihaz, all the researchers and the people who made it possible for us to participate in this wonderful experience. And thanks to the Turkish people who proved to have one of the strongest sense of hospitality I have ever encountered during my journeys. Now let's work on our material and hope that all of us will get his/her pieces published.

MARMARA - Istanbul (TURKEY)
//Aurore Peignois

About me

Education and training:
Master in journalism (IHECS - Brussels) Specialization: european affairs
Professional experience:
EuroparlTV, RTBF, CanalZoom, Le Vif l'Express, JEF, Tribal, Sudpresse

Monday

22-3-2010

! Hi there !
As you know, I'm the Belgian participant of the RELATE project.
This project, founded by the European Commission is addressed to 80 young journalists coming from European Institutes and willing to experience a week of visits in top research centres across Europe and then publish their findings. In other terms, I'm going to work as a science journalist: attending press conferences, interviewing researchers or taking pictures of lab work. At the end of this experience, I have to write an article and find a way to publish it.
So… Here we go for the 1st day of discoveries.

Welcome in Tübitak (The Scientific and Technological Research Council of Turkey)! It's 9 a.m. and we are about to visit Turkish laboratories.

Us? Larisa Mihaela Stanciu (Romania) Maurizio Molinari (Italy) Xavier Sorinas Sellés (Spain) Monta Neinberga (Latvia) Tiffany Stecker (UK) Gregory Dash (UK)

Before giving you a description of the laboratories we have visited, a small explanation about Tübitak: It is the leading agency for management, funding and conduct of research in Turkey. It was established in 1963 with a mission to advance science and technology, conduct research and support Turkish researchers. The Council is an autonomous institution and is governed by a Scientific Board. Tübitak is responsible for promoting, developing, organizing, conducting and coordinating research and development in line with national targets and priorities. More than 1,500 researchers work in 15 different research institutes.
Well, It's still 9 a.m. and we are leaving our hotel, destination the entry point to all of institutes.
First step: the presentation of the project by the EJC editor: Howard Hudson. For the students, it will probably be the first experience in science writing. And for the researchers, a way to learn how to deal with the media (sharing data, explaining finding…).
We are not here to write press releases, as journalists we are here to help with a better understanding of Science. The main article will therefore not be available before 2 or 3 weeks, so I propose to follow the progress of my work on this blog. So, you'll find all the information regarding this week of training. What I have to do, how do I feel about it, what I've seen…
The second activities of the day was a big tour around a lot of laboratories.

The first one is the International Laboratory for High Technologies (ILHT). The primary area of activities that ILHT are involved as follows are (according to the official publication):
- Micro and millimeter-wave technologies with application to environmental and ecological problems, and non-destructive material and process testing:
- Remote sensing and related technologies with application to ecological, environmental and medical problems;
- Development of security system devices;
- Development of satellite technologies;
- Information technologies
- Marine science technologies
- Applied physics, radio physics, electronics and related technologies.
In a short presentation, we discover a very efficient radar able to feel people through walls. Very helpful after earthquakes to find people still alive because it detects the breathing.

After this interesting visit, we have discovered the Environment Institute. We discussed a lot with one researcher about "water re-use issue".

He presented us several projects. One of them called "Low-cost Treatment Technologies for Turkey and a full scale application for Marmara Region" aims to implement practicable pilot scale and full scale treatment systems for small communities. The scope of this project is to combine anaerobic treatment [Breakdown of organic material without the presence of oxygen, a treatment which permanently removes the unpleasant odor of many organic wastes so that they can be used on agricultural land. (Source: PHC)] and constructed wetland system in order to reduce land requirement, and to remove both organic matter and nutrients.
After a traditional brunch, we had the opportunity to taste the traditional Turkish coffee. A nice way to stay pro-active during the next visits.
Next stop: food laboratories. We met again many researchers. We spoke about residus analysis (pesticide, toxins…) but also about environmentally friendly biodegradable plastics and microbial effect packaging.

This last laboratory is studying chemicals which can migrate to the food,and therefore be dangerous for the health. However they can also trigger other chemicals reactions which have to be controlled. One of us asked the scientist why researchers are still working on plastic packaging, as more efficient or "natural" materials exist nowadays that would be less harmful. As you know, plastics takes a lot of time to disintegrate and never really disappear from the earth. The answer of the specialist told us: "you can always create something better but you're always creating another problem. There is not enough raw materials It's the same issue than oil".

Sustainable development seems to be far away in packaging department…

4 p.m. : end of the day. We went back to the hotel, enjoying the last hours of sunny weather and discussing with each other.

See you tomorrow!

Aurore

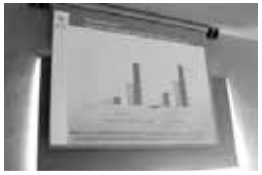
Tuesday

23-3-2010

Day 2
First day in Tübitak: the sun is shining through my window. I think it's the best way to wake up smoothly. As usual, breakfast at 8. It's easy to reach some habits here. Traditional breakfast, composed by bread, jam, cheese and olives, seems to just yell at me "please, eat me!"
Everybody looks tired, but also excited by this new day. Program of the day: introduction of the energy laboratory and first workshop.

At the energy lab, we first have a very very interesting presentation about energy and sustainable development by Namik Ünlü, chemical engineer at Tübitak's Institute.

This ad has been shown during his presentation. According to him, we have to consider what we have done in the past. Over the last 100 years, the world has changed dramatically. We aren't stopping consuming the natural resources. But what about the future? "We have the great chance to create a better world right now. Our policy and our behaviors really have to change", says Namik Ünlü.



Some shocking conclusions, according to the Energy Labs presentation: - Incomes in the OECD are still four times higher than in the rest of the world in 2030. - Oil remains the most important fuel, but its share in the global energy mix drops while those of gas, coal and modern renewable rise. - The first area of oil demand is "transport"; the second is "industry". - Most of the increase in oil demands comes from developing countries, where economic growth – the main driver of oil demand – is most rapid.
Scientists are now working on biofuels like ethanol, but it's made with food resources. The problem is that food resources disappear faster than natural resources.

According to the scientist, we have 3 options on transport: 1° hydro-energy: the cleanest solution but also the most dangerous (very explosive) 2° biofuels: but food issue food prices are growing because there are less and less crops due to their use for chemical industries. 3° Nuclear Power/Water power energy storage Or… 4° walk … actually, it was a joke from the scientist. But anyway, what can we really do? According to Namik Ünlü, everything depends on our comfort rate. Do you really need your personal car? Are you ready to share your journey? Why are you not using your bicycle? In China, there are 10 cars for 1000 people. In the USA, it's 800… So we actually cannot work on the same level and ask for the same efforts everywhere.
"If we have a consensus of all over the world, renewable energy will replace the oil energy", said the engineer. We can consume less. It's the starting point.
And the final point of this presentation. After a short presentation of the current projects at the Energy Institute, we left the building. Time for lunch!

Always traditional Turkish food which is really amazing. I'm totally surprised and in love with it. But I'll probably gain a few pounds before the end of the training week… :-s
After the brunch, Gulnihal tries to find our destiny in Turkish coffee. Mine is so daaark. (I felt on the way to find my destiny… Well I'll try again tomorrow :D)

2 p.m.: Time for workshop. I'm following researchers from the food institute. They are working about green tea. The aim: how to raise its quality and develop new products. It's a governmental project with economic and healthy issues. We took part of some analysis. Discover the pictures

I still have no new idea for the article I have to write. Firstly, I wanted to speak about GMO, but here it's a big issue and I can't have the authorizations (researchers are too busy and you know it's a private and sensitive issue, someone told me…) … Funny! The aim of this program is to reduce the gap between science and society by journalistic work… If I can't have informations, how can I communicate on this hot issue

Wednesday

24-3-2010

Third day (already !)
Time is really running so fast! Well, a lot of work to do, today.
I spend my morning in the food labs, just like yesterday, with Mona and Xavier. We needed more information about the green tea project.
We also have made some experiences with cheese! Funny to work as a true researcher!

After that, each of us interviewed several scientists who are working on this project. For my part, I'm not writing about the tea issue. I'm more interested in "Boza". Boza is a popular fermented beverage in Turkey. It is a malt drink, made from maize (corn) and fermented wheat. The researchers have found a way to transform it in powder and it will probably be commercialized in Europe in one or two years. It is also a healthy, natural and traditional alternative for milk or soja-milk.

The evening, we went to the sea of Marmara. We taste a new traditional Turkish dessert with wine and beers. A very nice evening far from our (and after 4 security-checkpoints).gold prison



See you!
Aurore

Thursday

25-3-2010

Last day at the food labs…
This morning we went to the molecular technology laboratories. There, the researchers are analyzing a lot of samples to find the mechanism of carcinogenic cells. They also are analyzed genetic modified food. And THIS, is a very hot topic in the news, in Turkey and in this lab. After few minutes of free discussions with one of the scientists, he asks us to turn the debate "off-the-record".
Because I can't say anything about this issue, I really advise you to watch this documentary:
The world according to Monsanto: http://freedocumentaries.org/int.php?filmID=300
Recently, the Turkish Parliament has approved proposals for a national biosafety law to regulate the production, sale and import of most products containing or derived from genetically modified organisms. So the things are really moving in Turkey but not in the way that big companies such as BASF or Monsanto would like.
The answer given on-the-record at the question "Are GMO dangerous for health?" can be used as conclusion: "It's not well known, because it depends on your model. Anyway, scientists don't really know their effects".
Well, run away!

Friday

26-3-2010

The last day in Gebze… Oh my god! Time is really really running sooo fast ! I already miss all those friends.

Slowly morning working on my article and packing my stuff. Not really interesting. After the lunch, we went to the energy institute to have a debriefing about this training. We have listening each other about our feelings during the project and our point of view about the gap between science and society. It was really interesting. Especially the speech with the teacher of communication, who was especially here for us.


At 4.30, it's time to leave… We are going to visit Istanbul. It was a really interesting project


We keep in touch!

MARMARA - Istanbul (TURKEY)
//Xavier Sorinas Sellés

About me

Education and training:
Journalism Degree in Universitat Pompeu Fabra (Barcelona)
Locution Postgrade in Universitat Autònoma de Barcelona - Corporació Catalana de Mitjans Àudiovisuals

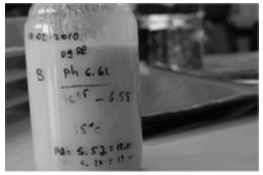
Professional experience:
ADN Newspaper, Radio Onda Cero, Barcelona TV, Ràdio UPF

Monday

22-3-2010

First day in RELATE, first impressions. "We're here to discover and also to earn money". It's just a sincere statement of one of the 800 investigators who work in Tübitak, my future workplace during this week in Turkey. Air pollution, water cleaning or new food packaging. They're just some of the lines being investigated in this huge turkish R+D center.
It's funny to see how differently scientists react when a team of seven journalists equipped with their cameras, microphones and questions invade their working spaces. Some of them have done it before, while others look quite virgin.

I like: Boza Powder in Spanish supermarkets? Although I haven't tried it yet, this typical Turkish drink -with bacteria, cereal-based and low in fat- could be commercialized abroad, marked as a milk alternative.
I don't like: Food Lab participants, in which I am included, won't have access to any results. (However, I can understand the pressure of companies, who have invested millions of TL).



Tuesday

23-3-2010

Neither created nor eliminated. The topic of the second day has been Energy, all the process from the initial idea to the final market entry. There's been a discussion about the secondary effects such us pollution and health problems, which must be included in the total cost of an energy, and the pressure from big gas and coal companies to block new projects such as hydrogen, biofuels or batteries. Always surrounded by teas, coffees and typical Turkish cakes. By the way, I had no idea that there are no nuclear power stations in Turkey

After lunch, it's time to know in detail the projects in the Food institute. Investigators told us they're working on improving the qualities of Turkish green tea (Government has paid more than 1 million TL!) and the creation of a National Food Composition Database. I think I'm going to write about the first one.

I like: Turkish people eat olives for breakfast (that's the Mediterranean influence!). Their seeds, as well as hazelnut shells, can be burned/gasified so as to obtain energy for the country. Tübitak is working on it.
I don't like: The gap between investigators and journalists. There are several specific terms (such as gasification, catechin) we've never used in our leads, and I honestly think I haven't come to Turkey to check it in Wikipedia.

Wednesday

24-3-2010

Time and temperature. These two seem to be the key to get the best Turkish green tea, and what's more, the healthiest one! Have it in mind: 3 minutes, 80ºC. Ok, but how can you reach this temperature in your IKEA kitchen? Easy, when water boils, you have to wait one minute before you introduce the tea bag. By the way, if you add sugar it loses some proprieties.
So as to contrast the information, we had a quick chat with a doctor and a food engineer, both of them from the Tübitak Institute. Some of the researchers confessed us they can work 7 days a week when they're next to a deadline. Rings you a bell?

I like: Food Institute researchers have asked us to give them some tips to improve a huge poster they use to present the project abroad. Nice symbiosis!
I don't like: After four days in Turkey, I haven't visited Istanbul yet. We'll have to wait until Friday.

Thursday

25-3-2010

- The third one is awful.
- Yes, I'm taking the first one.

They're not talking about men, cars or cakes. They're just taking part in a green tea sensory panel. I know, sounds weird, but it exists. Once a month, 10 researchers from Tübitak come together to analyze different samples of green tea. Today's panel, in which I've participated, we looked into the appearance of the dry tea leaves, the color of the filtrate, its taste and even its aroma (grassy smell!).

Besides the panel, we've been discussing about a hot topic: GMO (Genetically Modified Organism). The Turkish Government has recently approved a new regulation about this practice, so all the food sold in turkish supermarkets is now strictly controlled, and Tübitak is one of the institutes who regulate it.
I like: I'm already packing. Tomorrow we're going to Istanbul, where my wife is waiting for me.
I don't like: If only had I brought a camera! Written article sounds good, but a TV report would sound even better!

Friday

26-3-2010

Time to go, to pack, to exchange mobile numbers, to chat about hot issues (even when having breakfast), to exchange photos and so on. There we are. Greg, Xavi, Aurore, Tiffany, Gülnhial, Larisa, Monta and Maurizio.

If only we met again in Brussels. It's been a pleasure. I just hope we can publish our articles!
Fins ben aviat (see you soon).

MARMARA - Istanbul (TURKEY)
//Monta Neimberga

About me

Education and training:
University of Latvia, Faculty of Social Sciences; Danish School of Media and Journalism

Professional experience:
Latvian Radio 5/University of Latvia Radio "Naba" Latvian Radio 1, Amnesty International Support group in Latvia

Monday

22-3-2010

Günaydın (good morning), Turkey!

The first day in Gebze starts lovely after long, refreshing sleep in a comfortable single room. First look out of the wide window, and I am amazed about the landscape. Grabbed the camera, so you also could take a look:




After fast breakfast (the time
slips away when you are with interesting people) we pick up our gear and take a bus ride to the research centre. Nicely greeted by our Food and Energy laboratory project coordinators, we start off with presentations on RELATE, TÜBİTAK (our host and the leading research management and funding agency in Turkey) and tips for successful reporting.
Then the visits to various research centres and laboratories begin. The science is really concentrated in the Marmara Research Centre (MAM), a unit of TÜBİTAK. In MAM's breathtaking large closed site there are 7 research institutes. In short yet intensive visits we learn about the up-to-date projects and current state-of-art in National Metrology Institute and several laboratories, including water and environmental related studies.
In the International Laboratory for High Technologies, professor A. Verti introduced us to MM wave tomography that allows identification of armed persons from 8 metre distance.
When the meal time comes, we get to experience the rush hour at MAM's Dining hall. More than hundred scientists are cheerfully chatting while standing in two fast moving queues. After consulting with our Turkish project leaders the menu choice is made, and we soon sit down shoulder to shoulder in a large Dining hall. The food looks different, hides surprising tastes and smells nice. Enjoying the nice company, we continue the Dinner break with a taste of the national hot drink - Turkish coffee. I try the extreme - Turkish cappuccino, A.K.A. turkaccino, and notice that the considerable number of cats strutting around is very friendly and opened towards photographers with an interest in interpersonal communication.
After the Dinner break, we head back in the walls of institute and go on with our excursion to the campus. Visiting the Food Institute is particularly interesting. The current research is focused on standardizing boza (Turkish fermented beverage) production, green tea flavonoids (antioxidant activity) and cutting-edge food packaging.
After a speedy Food Institute presentation we return to the Tusside Hotel and have a lovely afternoon tea on a terrace.
Sinking deep in conversations about life, biological lifestyle and customs of different nations, we enjoy the free time. Returning to my room for a daily exercise I go downstairs for supper. The time flies, and after an hour and a half upstairs to finally connect to the internet.
The first day of science-meet-journalism has passed, and there are tons of impressions and observations to think over. The food has been awesome, so I am looking forwards to getting in the Food Institute. If they serve such tasty meals in a dining hall for plebeians, the aristocratic science must be jolly good. Let's see what the visit to Energy Institute will bring us tomorrow.

Tuesday

23-3-2010

Let's get down to food

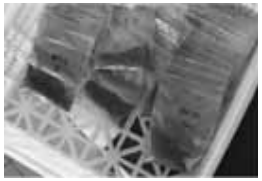
So here comes Tuesday, when I finally get to meet the Food Institute. After lovely breakfast in a sun lit Dining hall, we say farewell to Howard and get on the bus for visiting the Energy Institute. There the specialists are already waiting for us, so we pour ourselves a cup of coffee, tea or beverage and sit down for two-hour-long express course in energy.

After a break with a pocket of fresh air the presentations continue, and we get to meet the senior researchers of the various projects at food institute. They scope of daily work spreads from gasification, fuel cell technologies, power electronics and gas to vehicle technologies. Did you know they are working on underwater vehicle tests? Neither did I.

Dinner at the beehive Dining hall sums up in Turkish fortune telling in coffee grounds by Gulnihal. You should try that, sometimes it really works in most unbelievable ways.

After another chilled walk me, Xavier and Aurore arrive at the Food Institute and meet its food engineer Dr. Sena Saklar Ayyildiz and researcher-dietician Birdem Amoutzoloulos. They introduce us to the projects we are going to shadow: green tea and food measurements system. After a short briefing (and we did receive exhaustive answers to all of our curious questions), three white smocks are waiting for us. We are entering the magic world of food where it's possible not only see it in close-up, but also find out the chemical components, nutritional value and dietetic composition of the substance. The senior researcher Gul Biringen Loker introduces us to the disintegration process of green tea.

This is how the tea examples look like:



Pulverized plant has to go through five phases and advanced technical machines to achieve a clean research sample.

Pretty mind blowing, and I still need a walking dictionary to understand what the researchers are doing and how can they understand the graphs, curves and reactions. Exhausted yet intrigued I leave the Food Institute for getting some soul food: the landscape in MAM is breathtaking, and Mother Google says it's much closer to the seaside than we are warned. I am considering a mission to meet the Marmara sea.
It's so nice to walk through the corridors of our accomodation building - there are plants everywhere, and some of them are blossoming in Turkish spring.

The result of a hard day's work: a ton of background information and a stack of business cards. The food is tasty as expected, I am hungry for more tomorrow.

Wednesday

24-3-2010

In Food Institute

The morning is foggy and grey, but that doesn't stop RELATE from happening: the communication between journalists and scientists is going on in full speed. I am shadowing the Food Institute scholars from 0900, visiting different labs and getting hands on preparing food samples. We had to chop three different types of Turkish cheese and mix them them with special dry sand, then place in vacuum oven in order to burn the material to dust. Analysing the ash, scholars get to know the presence of hard metals in different examples. If the metal concentration is higher than normal, the food is dangerous for nutrition and could cause loss of oxygen in blood (hear this, I am slowly taking up the science speech).

The chemicals and reagents in laboratories can cause headache and dizziness, so I was glad to spend an half an hour in fresh air, summarizing the new information and fumbling about the angle of final production. Could it be aimed towards general food safety and green tea's role in healthy lifestyle, mentioning Marmara Research Centre as a case study?
After Dinner break we head back in the laboratory and spend the following two hours in in-depth interviewing with experts from the green tea project. I am really getting into this, and a visit to the research centre's doctor develops into an interview about green tea's effects on the human body. There is never too much, so as the conclusion of our day in the Food Institute we have a cup of tea with its researchers. And another one, 'cause Çaykur Çay (that's the Turkish governmental organization which proposed the green tea research project) is very nice.
At night we jumped in taxis and got down to the Marmara sea for having a dessert in a beach restaurant.

The result of a hard day's work: a ton of background information and a stack of business cards. The food is tasty as expected, I am hungry for more tomorrow.

Thursday

25-3-2010

Shadowing full time

Thursday morning is late breakfast - everybody is sleeping those 15 minutes longer after last night's dessert in a seaside restaurant.
The third day at the MAM Food Institute gives us different insights in the researchers' everyday. We start off with a discussion about genetically modified food, role of researchers in shaping of future food industry. In Turkey it is allowed to sell and buy genetically modified organisms (GMOs) in shops, but prohibited to plant and grow, so the state takes a sample from every seed that's imported in country and send it to one of five biotechnology laboratories. If it arrives to MAM, after two days the results are known and the state then lets the owner of exported seeds if he/she is allowed to keep them. A control system investigates about 200 examples a year, finding out undesired GMOs in the DNA of studied cases.

The scientists are also working on discovering the patterns how cancer takes over a healthy organ. A microscope shows us a sample of human kidney cells. Looking at unbelievably tiny particles, I wonder how it's possible that dollop changes in those tiny human body cells accelerate to debilitation of the whole organism.
The most exciting experience of today was taking part in green tea multiple comparison test. We were given three tea examples, a special work place and asked to determine whether there is a difference between their appearance, colour, taste and aroma. A surprise was that the most valuable taste of green tea is bitterish and astringent. That's right, flavourings and sweeteners people add to loose the taste of natural green tea actually hide its true value - a puckering sensation in the mouth and a dry, chalking feeling.

During our dinner break we went to an outdoor coffee for having a cup of real Turkish coffee. I also received a future prediction - guess what awaits me? Travelling, a secret adorer and lots of harmonic moments. Isn't that lovely?

After doing a little PR job on the Food composition database project (we edited a poster and proposed communicative solutions) the work is done. I am sitting on our hotel's rooftop and enjoying a cup of afternoon tea together with Greg. Green tea, of course - we never quit!

Friday

26-3-2010

Farewell, Gebze!
The last day of RELATE project comes with last interviews, visits to Food Institute laboratories and tasty green tea.
As I am packing my luggage, some ideas about the project come in my mind.
Pros
+ An insight in up-to-date scientific researches and meeting experienced scientists, we were allowed to take photos, record and capture the state of research.
+ Open communication with the scholars. I could ask hundreds of questions, hear in-depth answers and finally clear the fog of understanding that I had had before;
+ An opportunity to meet other young journalists from all over Europe and learn from each other;
+ The responsiveness of our project coordinators and leaders. Every single of my specific questions was answered, we had extra events and could experience more than originally planned;
Cons
- The project lacked seminar in science journalism and a possibility to work more in journalism, choosing our angles and following them, not eating every bite from the menu;
- Since the journalists are a bridge between science and general public, for me a part of the project was finding my balance between numbers, graphs, theories and personal, human interest stories;
- Journalists are hard to reach by scientists and scientists are hard to understand by journalists. The golden rule I keep repeating for myself: keep it stupid simple!
- It took some time to get into a subject and understand the scientific research without scientific background. There are some projects I never understood.
- Balanced reporting would be easier if we had time and opportunity for interviewing other voices apart from scientists. What do experts, doctors, people on street, in private companies or government think about green tea development in Turkey? Giving the research a social aspect was my angle.

Job of a journalist is focused on the reader, job of a scientist is focused on the research. Once they both realize it and understand the aim of their collaboration, a successful communication can start.
The intensive shadowing, interviewing and participating is done, but the hardest part only ahead. My mission is rehearing five hour long low quality recordings in order to break the news down to 5-10 minutes. Result coming up in 15 days time.
RELATE is ending, but I am taking the chance to visit Istanbul together with Greg, Maurizio and Tiffany. So excited about finally getting introduced to Turkey - staying in a closed research institute territory isn't what a country smells and tastes like. Cool cats of Istanbul, here I come!

MARMARA - Istanbul (TURKEY)
//Tiffany Stecker

About me

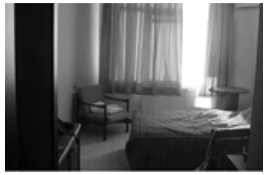
Education and training:
City University London, MA Science Journalism

Professional experience:
3 years in business/community journalism, 1 year freelance
Awards and personal grants:

Sunday

21-3-2010

In one of the few punctual moments of my life, I arrived at Istanbul's Ataturk airport early. I was pumped: ready to write some science, meet new people and see Turkey. Good thing, as the route to Tubitak was not quite over. I met Xavi, my Catalan counterpart and taxi companion who arrived shortly after me. We head to the tourist information desk to ask about the cab ride to Gebze.
TI desk person: You want to go where?
Us: Gebze? Gabzo? Gubzu?
TIDP: Let's see on the map… ohh, that's far. It will be expensive by taxi. 200 Turkish lira. Why do you want to go there anyway?
After a taxi offered us the same price, we decide to play it cheap and take the bus. Make that two buses and a taxi. Finally, we arrived to the warm welcome of the coordinators, Howard and Gulnihal.
It's no surprise the tourist information lady questioned us on our motivations to stay in Gebze. It's a town of industry, a work site by day, and supposed ghost town at night. No matter whom you ask, the answer remains the same:
"There's nothing to do in Gebze."
Great. Just what a group of young people want to hear on a first-time visit to Turkey.
(By the way, I don't believe this. I have decided that, along with publishing a story on the research of Tubitak, my goal for this week is to discover the secret nightlife of Gebze).
I met Maurizio from Italy (via Brussels) and Larisa from Romania.
We are staying in Tusside, the site of the hotel for Tubitak. I don't think I've ever had a hotel room this big to myself.



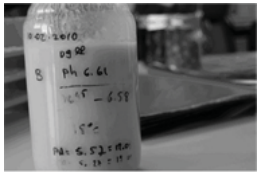
Or one that provided such stylish slippers

Monday

22-3-2010

Woke to bright sunlight from my window. I have a view of the hills and a small pond. Sweet!

Gebze is situated on the Sea of Marmara, glittering in the sun today. The sea divides the country between the Western (European) part and the Eastern (Asian) part. Our location is symbolic of a country straddling the line of two continents, its culture strongly rooted in the traditions of the East, but with the desire to integrate the West, politically and intellectually. I observe the research here with this in mind, whilst on a programme organised by the European Union. Gulnihal speaks openly on life in Turkey and the Turkish–from their interpretation of Islam, to its history and contemporary politics.
We arrive at Tubitak Marmara Institute at around 9:00. After a short introduction to the RELATE project and the specific institutes within Tubitak, we took a tour of the facilities: The Turkish Ukrainian Joint Research Laboratory for High Technologies, The Environment Institute (where we discussed waste water treatment), the Metrology Institute (the science of measurement– one of the research projects involves finding the right level of radiation to treat cancer), and finally, the Food Institute, where we learned about the probiotic wonders of Boza, a fermented cereal drink that, at one point, was banned by the Ottoman sultan Murat IV for its light alcohol content.



After visiting a few more projects in the Food Institute and learning about bacteria-made polymers, rosemary-infused plastic packaging and green tea flavonoids, we came back to Tusside to soak up the last few hours of sunlight on the terrace

Tuesday

23-3-2010

ENERGY!!!!!

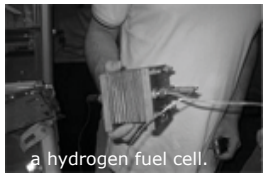
Awake yet? It got me out of bed just before 6. I was initially invited to participate in the Food programme, but switched to Energy when one participant was unable to attend.
After a power breakfast and Catalan cartoons (in Turkish) with Xavi and Larisa, I was ready to go.

The morning began with an overview of energy issues in Turkey, followed by descriptions of the projects. While the researchers were not exactly… errr… media-savvy, it was quite refreshing not to hear about research from a PR perspective.

After lunch, we stopped for some Turkish coffee and tea, and received a lesson in Turkish coffee fortunes Once one finishes his/her coffee, he or she must turn it over the saucer and wait until the cup cools. Then, the grounds are read for insight into the future.

Gulnihal said I had an inner struggle within me. Hmmm…

The afternoon was spent visiting the energy projects to shadow.



a hydrogen fuel cell.

These are hazelnut shells. Turkey is one of the top producers of the nut, and researchers at Tubitak are investigating how the waste of this industry can be used for biomass, mixed with pulverised coal. Coal is the largest source of energy for total primary energy supply in Turkey. It is also available within the country, making it a self-sustainable energy source.
Hazelnut biomass could replace up to 30 per cent of pulverised coal in this energy mixture.
We also visited the other Hyde Park, or HyDe Park (Hydrogen Technologies Demonstration Park)

and checked out some hybrid vehicles

Wednesday

24-3-2010

You thought being a shadow could be so exhausting? Today was out first full day of shadowing researchers at the Energy and Environent Institutes.
I started at the combustion and gasification lab with Greg, where we received a lesson in the basics of mechanical engineering by Hakan Karatas.

Hakan works on the TyGRE project, a FP7 project to research the best way to derive energy from used tyres. The Energy institute collaborates with research centres in Italy, France, Belgium, Hungary, Germany and Denmark.
While I'm sure Hakan enjoys his work at the Energy Institute, I think he was even more excited to tell us what we should do in Istanbul– a conversation that may have take up half of the time we had with him!

More hazelnut shells, ground this time.

A photo of a fluidised bed gasification system:

We also visited labs in the Environment Institute, where researchers work on air pollution monitoring around factories, as well as waste water treatment.

Dr. Ebru Mehmetli took the time to speak to us on her project in both the composting and anaerobic digestion (for energy) of animal manure in the town of Amasya.
Upon my arrival back at TUSSIDE, I crashed into my bed and took a nice long nap. That evening after dinner, we took a little trip down to the seaside for wine and dessert. (note to self: take more photos of Turkish desserts)

Thursday

25-3-2010

Man, I really wish I could borrow a fuel cell battery, or maybe a photovoltaic panel from the Energy Institute to hook up to my body. Even some gasified coal will do. I need another energy source! Although this kind is much tastier:

my breakfast this morning: the Turkish version of a sesame bagel, cucumber, olives and a hard-boiled egg.

I completed most of my recording for a possible audio project today. Press conferences, shadows and more plant visits. I also recorded some video of Gulnihal telling us our coffee fortunes.
At this point, the ideas for a final RELATE project are becoming clearer.

Friday

26-3-2010

Friday morning was set aside for journalistic housekeeping: getting names, recording audio and clarifying the science one last time before the close of the program. I was able to interview the director of the TyGRE project and visit the project's SO2 reduction lab.



After lunch, we sat together with the researchers to discuss the week and what we have learned, the aims of both scientists and journalists and finding a common ground.
I heard some interesting anecdotes on the barrier of communication– for example, the need to use Wikipedia in order for one researcher to explain what exactly he or she was doing in the lab. Overall, this new programme ran exceptionally smoothly. The organisers (Gulnihal and Gulniyaz with the Energy Institute) and researchers were incredibly accommodating, taking time out of work to speak on projects and making an effort to explain the details clearly.
At 5 pm, we took Tusside's employee shuttle bus to Istanbul. Finally!
Many thanks for a great week, let's hope for a RELATE-Tubitak reunion soon!

Additional info

Link to my website: Water blog: http://www.thewlog.net Personal blog: http://anotheryesterday.posterous.com

My profile is also available here: http://www.elements-science.co.uk/author/steckarrr/
Twitter: @tiffanystecker

MARMARA - Istanbul (TURKEY)
//Gregory Dash

British
23/02/1988
gregdash@live.com

About me

Education and training:
BSc Marine Biology
currently studying: MSc Science, Media and Communication at Cardiff University

Professional experience:
Student publications, Nation Radio

Monday

22-3-2010

videoblog: http://tinypic.com/r/2yullp2/5
I'm currently unable to upload to Youtube, but I'll fix it in the morning.

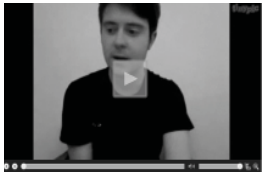
Tuesday

23-3-2010

day 2: http://tinypic.com/r/z3bxt/5
still no youtube. may fix the editing tomorrow if there's time.

Wednesday

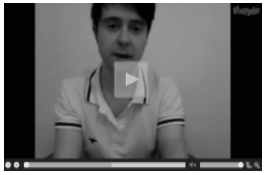
24-3-2010



day 3: http://tinypic.com/r/11vh8b6/5

Thursday

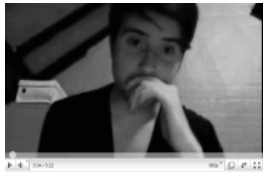
25-3-2010



http://tinypic.com/r/14kvd3t/5

Friday

26-3-2010



day 5 http://www.youtube.com/watch?v=PTpFqN1ZDNE
EverythingisalsonowavailableonYoutubeat:http://www.youtube.com/user/GregRelate2010?feature=mhw5

Additional info

My profile is also available here:
http://www.facebook.com/profile.php?ref=profile&id=708265071

EPFL - Lausanne (SWITZERLAND)
//Janna Witt

About me

Education and training:
MSc Science Communication (University of the West of England)
BSc Virology and Immunology (University of Bristol)
Professional experience:
Writing for 'The Western Eye' at UWE as a Science Correspondent

Monday

22-3-2010

First day in Switzerland and first day at EPFL!

Today was all about introductions, and I am sure that I will need another couple of days to remember all those names, not to mention the three different research groups and various research projects!

After arriving yesterday and a good night's sleep, we were off to EPFL in the morning to meet the researchers. A short intro into RELATE and EPFL in general, was soon followed by a meeting with Professor Ijspeert and his group in the biorobotics lab. He gave us a presentation, which was really good and gave us a great overview of all the projects they were working on (even though at the time it was a lot of information to take in). At this point it dawned on me that deciding my angle was not going to be easy.
After meeting the biorobotics researchers, it was straight on to the next group led by Professor Floreano based on intelligent systems. Here we attended their weekly lab meeting and listened in on the researchers' progress (understanding approximately half of what was said), followed by a short intro into each of the projects they were working on (understanding a bit more at this point). It was during this presentation that I felt it was all coming together. I noticed that many of the researchers working on different projects had mentioned the Haiti earthquake and the potential use of robotic systems in search and rescue. Now, this was a good point. It was a link that connected several independent research projects and therefore would enable me to write about more than one. Considering the wide choice of projects I could cover, I felt that this was a great angle.
After lunch we met up with Mondada, another lead scientist who is head of the group working on mobile robotics. I discovered that he was actually working on another part of one of the potential search and rescue robots I had decided to write on earlier (yay!). It was all coming together and I spent the final two hours of the day at EPFL researching papers in the area, so I could prepare for the Q&A sessions tomorrow.
Finally we left the centre and walked along Lake Geneva back to the hostel. The sun had come out and seeing that we would be terribly busy for most of the week, this was a nice little walk. We headed out into town to find dinner and were rewarded with a lovely Mexican meal at the end of a long day.

TOP THREE OF MY DAY:
1. Finding my angle!
2. Watching a video of moving robot-glasses
3. Walking along Lake Geneva in the sunshine

Tuesday

23-3-2010

It's all about the right question

Today was all about questions, including three Q&A sessions with the researchers, somewhere in the region of one hundred questions (and answers!) and one full digital recorder (it actually filled up before the last session was finished, very disappointing)!

Sunshine and blue skies in the morning meant everyone (especially me it seemed) was in a particularly good mood and so we all decided to walk to EPFL for our ten o'clock meeting. (All except Nathan that is, as he had to buy socks!). After an hour in the newsroom we were off to meet Professor Floreano again, this time to ask lots of questions in a press-conference style meeting! It was a very rewarding session, and I think I got most of the answers I wanted. Seeing that it was my first ever press-conference, I think the experience was rewarding and definitely very interesting!
Following the first session, we headed to a posh restaurant to have (free!) lunch, whilst meeting members of EPFL's science communication team. A bit more time with them would have been nice, as they were full of interesting little anecdotes about PR life, but we had to get to our next meeting, this time with Professor Ijspeert. More questions more answers. Finally, I was starting to get my head around (most of) the research going on in the EPFL robotics lab, at least around the basics!

After the session with Ijspeert we met up with Mondada, to talk about his projects. Until this point everyone had been very positive about search and rescue robotics (my chosen angle as mentioned yesterday), giving me the impression it was all quite feasible, but listening to Mondada, it suddenly sounded like a very abstract idea. I guess it depends on the researcher, his/her views and (this is probably the biggest point) the part of the robot he/she works on (something to keep in mind for later). This last session went on until 5:30, as one of Mondada's colleagues spontaneously agreed to see us and talk about her research as well. With a head full of information (still spinning), we went to find the metro and bus to get to a local supermarket, not knowing how long they are open until. (For future reference, supermarkets in Switzerland open until seven o'clock in the evening on weekdays). Then it was off to the hostel, to eat, do some work and sleep!

TOP THREE OF MY DAY:
1. Attend my first 'press-conference' (not really, but close enough)!
2. Collecting lots of usable citations
3. Saving a little (fat) mouse trapped in a rubbish bin on campus

Wednesday

24-3-2010

Picture perfect
Today was all about getting that brilliant picture. Not just of robots, but also of Lake Geneva and surroundings. A day dedicated to my camera.

The day started picture perfect. Sunshine and blue skies and this time the mountains were not completely covered in fog (as opposed to yesterday when it seemed as if we had imagined them being there, as they were not visible at all). It seemed like the perfect day to take pictures.
First we attended Professor Ijspeert's group lab meeting, before joining the biorobotics researchers for lunch. Nothing much happened in the morning, so I think I won't go into detail. The afternoon began with a pleasant surprise: Jasmin and I were allowed to go out with two of Professor Floreano's researchers to field-test their flying robots. On a brilliant day like today, nothing could have been more fun! We tested the robots on a field in the middle of nowhere, twenty minutes drive from Geneva. Having replaced the batteries in my camera whilst driving to the site, I was expecting an incident-free photo-session. Far from it (as was to be expected really – knowing my luck) my camera decided it was out of battery half way through the flying robots adventure! (For future reference: always bring plenty of spare batteries). I managed to take some decent pictures anyways, so not all is lost (thank god!).
After returning to EPFL, we joined our group, which was visiting Professor Ijspeert's lab, to listen to phds and post-docs introducing their research. Most gave us power point presentations with lots of videos, but at the end we were allowed to watch the amazing salamander robot swim! This was brilliant! Even though the robot 'drowned' half way through the demonstration (i.e. water got into the system and the robot could not move properly anymore), it was an impressive sight! Plus a wonderful picture opportunity (undoubtedly one of the best pictures I took – a shame I may not be able to use it in my article).
We returned home walking along the lake, taking more wonderful pictures of Lake Geneva and the mountains in the evening sunshine. As usual the day had been full of new impression and once back at the hostel, I was glad to strip off my shoes and relax!

TOP THREE OF MY DAY:
1. See the salamander robot swim (it was awesome, really!)
2. Watch the flying robots (they were awesome too and came in a close second!)
3. Taking wonderful pictures of Lake Geneva

Thursday

25-3-2010

Cool Demos, Lots more Pics and Sunshine

Today was all about Mondad's lab, handbots, footbots, magnets and little white robots with three types of 'moods' :)

Even though the weather was supposed to get worse today (according to the ever-reliable forecast), the sun did come out this morning, which meant that we could once again stroll along the lake towards EPFL. First it was just Nathan and I, who went to Professor Floreano's lab to see some robots in action. We then met up with Jasmin and Mary and went to see the Russian film crew, expected at Ispeert's lab this morning. However, they were late, which meant that we could not meet them unfortunately, as we had to be on our way to Mondada's lab for a demonstration of the educational robots.
And educational they were! I think Jasmin, Nathan and I got more excited than the 8-12 year old schoolchildren they were aimed at. The robots had three 'moods', "green", which meant 'friendly', "orange", which means 'curious' and "red", which means 'shy'. In the green mode, they follow a person's finger, in the orange mode, they will go and explore and in the red mode, they will run away from your finger. I want one!
After the educational robots, we went for lunch and coffee with Mondada's lab, who were all really lovely people.

Afterwards we joined them again for some more demonstrations of robots, first the hand- and foot-bots (of particular interest to me, as I will include them in my article), then a whole group of Mars-bots in an arena that made them change colour. The bots can communicate their own colour to others via cameras and will copy whichever colour(s) they can see around them. The arena had a 'red corner' and a 'blue corner' (quite like a boxing ring!) and robots in the red corner would display red (resulting in many other robots in the vicinity displaying some shade of red) and robots in the blue corner…. well, I think you can guess. This was very cool.
Finally we also went to see some inspection robots and a robot workshop that produces all kinds of parts for robot-building. Jasmin, Nathan and I went back to the newsroom afterwards and stayed until six, trying to get some work done (more or less successfully). Then it was off home for a funny little dinner, watching the BBC World News talk about "predator priests" (a term suitable for any self-respecting tabloid!). What's happened to the BBC's quality reporting?

TOP THREE OF MY DAY:
1. The educational bots following my finger! Very cool!
2. Coloured Mars-bots communicating with each other and… (wait for it) changing colour!
3. Taking nice pictures of hand- and foot-bots

Friday

26-3-2010

The very last day at EPFL!

Today was all about 'lasts': Last Q&A sessions, last time at EPFL and (according to that ever-reliable weather forecast mentioned yesterday) the last day of sunshine.

The day actually started with rain, and quite a lot of it, so we decided to take the bus and metro to get to EPFL. We met up with Ijspeert and his lab in the morning for a final Q&A session combined with feedback. It was interesting to hear what they had thought of us 'invading'. Then we met up with Floreano's lab for a similar session – Floreano was out of town however, so it was just his lab. There was free pizza and a big turnout (I guess free food is the way to attract PhDs and Post-docs alike). It was nice to see everyone again and say good bye, and also to listen in on what they had thought of us.
After lunch we went to the newsroom to have our very own feedback session, which will inform the next Relate exchange in November. Even though not everyone agreed on all points, I think we all had a good time and learned so much! About robotics, about science in general and about journalism too! Plus we got to see the beautiful Lake Geneva and meet wonderful people along the way!
Finally we met up with Mondada for the very last time, to discuss (as mentioned before…) any final questions and get some feedback on the week. Unfortunately, none of his students were there for us to thank them, because I wanted to tell them personally that I had a great time yesterday. This last session ended at three and we had plenty of time to say goodbye to Mary and decide on what to do with the rest of the day. The sun had come out and we decided to use the nice weather and go to "Ouchy" (a part of Lausanne we had not seen), to take some pictures and do some touristy things. Jasmin, Nathan and I went for dinner in a pub (yes, I know… our last night in Switzerland and we go to a PUB! Kind of silly, isn't it?). Then we went back to the hostel and simply felt way to tired to go out again, even though some of our group were planning to go. We had some wine and a laugh and went to bed after an exciting, interesting and exhausting week!
TOP THREE OF MY DAY:
1. Having Pizza with Floreano's lab
2. Walking from EPFL to the hostel in the sunshine one last time!
3. Seeing Ouchy in the Sunshine – a nice last evening!

EPFL - Lausanne (SWITZERLAND)
//Jamin Fox Kelly

About me

Education and training:
Currently studying for a Masters degree in Science, Media and Communication at Cardiff University

Sunday

21-3-2010

After having left a bright and sunny Cardiff on Sunday morning, we arrived to an overcast and misty Geneva Sunday afternoon. Me and Jana were excited about seeing the Alps, but unfortunately it wasn't to be. Relying on basic French, we navigated our way around the swiss transport system and found our way to Lausanne. It was a strangely deserted empty city on Sunday afternoon, and we were surprised to find that the trams have no drivers - they are completely automatic. It's quite futuristic, but it's a retro kind of futuristic; the streets look like the European streets you would see in a Tintin comic. After being helped along by a kindly bus driver, who actually stopped the bus and got out with us to point us in the right direction, we found ourselves at the Lausanne youth hostel. We had time to literally put down our bags, before we were to join Mary and Hinano for dinner at 7. There, I opened my luggage to find that my laptop screen was completely smashed. I had stupidly checked it into the plane, apparently this is a big no no, a piece of received wisdom that I have missed out on until now. After dinner we returned to the hostel and I fell asleep immediately.

Monday

22-3-2010

Monday morning we all piled onto a suddenly full train to the EPFL campus. The campus is massive and we all followed Mary around like little ducklings, with no idea where we were going and with the knowledge that we were inevitably going to get lost. We were taken to our newsroom for the week, a room in the abandoned library, and briefed about what we would be doing during the week. We will be reporting only on the projects that have already been published, any new projects are under embargo so that they will be published first in journals, and then reported on. We are also told that we may have to submit our articles to the researchers first before we can publish them. This makes me feel slightly uneasy, as shouldn't journalism be independent? However I understand that they want the articles to be accurate etc. Anyway we are told to avoid controversy, however we are also told we are not here to write one sided science-cheerleader-like press releases. We are to write balanced thought provoking pieces. It will be interesting to find the right balance and tone with my article, if I am to meet these conflicting demands.
We went along to meet Professor Ijspeert and his lab. They are doing really exciting research including making a robot salamander which can switch between two different patterns of movements: walking and swimming. They have used the real biology of these animals to inspire their work, and think that these robots could be used in search and rescue situations, getting into small spaces etc. The group are also making a rehabilitation robot, that can help people with spinal injuries or strokes to regain control of their muscles. They also have a humanoid robot that they have programmed to crawl and beat drums. They also have a project called roombots, the idea of which is that in the future we will have intelligent furniture that self assembles changes, say from a chair to a table. It's pretty exciting stuff.
After that we went to meet Professor Floreano and his lab who are working on lots of exciting projects, for example flying robots that we may get to see later on in the week. They are also working on an eye-bot, a flying robot that can attach to the ceiling and take photos of the ground below. Along with the foot-bot and hand-bot this could be used for search and rescue missions.
Next we go to Mondada's lab, he is a pretty funny guy who shows us a hilarious video of some glass robots that he made. These robots all communicate with one another, and when one is filled with wine, the others all rush over to be filled too. Brilliant party trick - I want I want!
We go and see the new rolex library building, the people here are obviously very proud of it, it is full of vast open spaces and bean bags with a curving spaceous floor. The philosophy of the building is that it is supposed to encourage collaboration of work between departments. This is the philosophy of EPFL in fact.
On the way back walk along lake Geneva and can just see the mountains over the hazy water. Take many photos of the same thing from different angles - typical tourist. We then go for dinner to a mexican restuarant and as soon as I get in I fall unconscious.
rescued bird

Tuesday

23-3-2010

Today we had detailed Q & A sessions with each of the three professors of the different labs. This was really good practice at honing good journalism skills, as asking the right questions in order to get good quotes that we can use was very challenging. The more they talked about what they were doing, the more fascinated I became. It is clear though that disseminating all this information and coming up with my story is going to be very difficult. I have so many ideas that I can't put them all in one article, I may write several. I have so much information running through my head that I am exhausted and may go to sleep soon. I am conflicted because I really want to focus my article on the applications of all this research, because that is what readers of articles want to know about. However it is clear that to do this would be disingenuous, as I can tell that the pursuit of knowledge is what drives a lot of these scientists, a lot of their work will never reach the market. I don't want to perpetuate the misrepresentation of science in the media, and yet to write a good article I can't just talk about theoretical algorithms.
We were treated to a very posh lunch where I talked further with the people from the Universities PR Communications department. They were full of interesting stories and advice on how to manage PR. Including crisis management, for example when a suspected terrorist was found to be a research scientist at EPFL, how they dealt with answering the media's questions. Always be consistent, always tell the truth. And in general when trying to get scientists to give quotes about their work, always make them simplify as much as possible.
Animal rescue moment of the day-
rescued an obese mouse from a dustbin

Wednesday

24-3-2010

Today we trailed the research members of the three labs, getting as many photos and videos as possible. Me and Jana went out to see the flying robots in practice, hoping against hope that we could get decent photos and videos. I'm not sure how successful that was, but I enjoyed the afternoon as it was sunny and hot and we could see Mont Blanc in the distance.

Thursday

25-3-2010

Getting videos of footbots and hand bots, do it yourself robots for children, seeing Floreano again (swoon). Missed Russian film crew. Ate in Nathan's room and made up P headlines.

Friday

26-3-2010

This was a sad day of goodbyes, we said thankyou to all the labs for being so generous with their time, and ate free pizza which was yum. We discussed how they could make the project better in the future, perhaps giving us more autonomy and spending more time in individual labs, like spending one entire day in each lab so as not to overwhelm the researchers.
In the evenining we went to Ouchy and had a lovely pub meal and took even more photos of lake Geneva (from different angles). There were also some lovely cute bunny rabbits in a shop window

EPFL - Lausanne (SWITZERLAND)

//Cecilia Valenza de Souza Pereira

Brasil / Spain
24/07/1982
ceciliavalenza@gmail.com

About me

Education and training:
journalist, master in Science, Medicial and Enviroment Communications at Pompeu Fabra University, Barcelona, Spain

Professional experience:
reporter at Gazeta do Povo (www.gazetadopovo.com.br), writting about medicine, health.

Monday

22-3-2010

First day was all about exploring. We arrived at EPLF around 8 o´clock. That´s a huge campus. Walking around without a guide seems to be a challenge. We meet Mary and she takes us to the newsroom. There we have some more information about the program. What we should do during the week and also what we should not. Everyone is excited about figuring out what to write about and we leave to the first visit. The biorobotics lab, coordinated by professor Ijspeert. He introduces his team and explains a little about the researches that are being conduced in his lab. The big star is the robotic salamandra. This research gave the lab it´s glourious days, when it was published. He also talks about the rehabilitation robots and the robotic furniture. Some researches sounds like science fiction movies. But hour journey through the complex robotic world was only begging. From there we go to professor Floreano´s lab and we get to know the intelligent sistems. We have a brief of the diferent projects that are being developed by his team. The flying robots inspired in real insects, the rescue sistems and also robots studied as a way to understand evolution. Subjects go getting even more complicated and we finally have a break for lunch. Some researches join us and we go to one of the many restaurants and cafeterias aroud the campus. With brand new minds again, we go back to the labs. Now it´s time to know professor Mondada´s work. He coordinates the mobile robots group. They give support to the other labs by constructing the robots. He show us very curious experiments with cockroaches and chics that investigate society behaviors and also talks about some inteligent glasses that are able to go by theirselfes to be filled. With so many information on our minds we finish the first day at the newsroom, trying to choose one topic to our stories.

Tuesday

23-3-2010

Beautiful sunny day in Lausanne. We decide to go to the university walking by de lake. When we get there we spend some time at the newsroom, preparing questions for the interviews. Mary asks us if we already have our stories and we all talk about our angles. At 11h we go to professor´s Floreano lab. There we have one hour of questions about the flying robots. I´m not writting about them. As I was looking for a subject that had something to do with health and medicine, I diceded to focus my work on rehabilitation robotics. Anyway, it was interesting hearing about his projects. After that we go lunch with the guys from EPFL´s press department. At 14h it´s time to make questions to professor Ijspeert. His lab has the project I´m writting about. After one hour of questions I can have a better idea of what it´s all about. We have a little break, and at 16h we meet professor Mondada. He answer our questions and also invite a girl from the project about surgery robots to talk to us. The talking with the teachers were helpfull for us to understend a little more about the robotic projects, but I guess that tomorrow during the shadowing we´re gonna see better how it works.

Wednesday

24-3-2010

The first activitie of the day is at professor Ijspeert´s lab. We meet there ate 10h30 to watch a reunion of his team. We actually feel a little lost because they talk about their agenda, future events and feed backs from each member about what they are working at. As we don´t know much about the lab´s routine, it´s hard to understand what it´s all about. After the reunion we have lunch with the researches and at 13h we go to professor Floreano´s lab, for the shadowing. I´m not writting about Floreano´s projects, so during the shadowing I decide just to join Nathan in one of his interviews. Somehow our group feel a little desapointed, because when we were told about the labs, we had imagined rooms full of computer pieces, parts of robots everywhere, with some scientists making experiments. But actually, many of the researches just seem to spend a long time of the day in front of computers. Walking around their offices, sometimes we can see some prototipe of a robot, but our expetation to see the real robots "a live", the ones we saw on the lab´s web, playing drums or crawling, was frustrated. This robots are now in others institutions that work as partners with EPFL. Well, that´s science, it´s not always something touchable. As we could learn in this few days walking around the labs, in order to create a robot or a new tecnology, a big part of the work is done at computers programs. Anyway, after the shadowing at Floreano´s lab, que we go to professor Ijspeert lab´s again. One of his students present some more information about the rehabilitation program, wicth I´m interested in. Finally we have the opportunity to see the salamandra. She´s quite bigger than I imagined. The students make us a demonstration, but unfortunatelly the robot drawns. She can get into water, but for some reason the researches can´t make her to get out. Yeah, Murphy never fails. They explain that it was the water into the robot that maked her stop working. We just hope that they could fix it before tomorrow, for the russian TV crew interview.

Thursday

25-3-2010

Today we achieved our expetations. We finally saw a lab as our child minds had imagined. We went for shadowing at professor Mondada´s lab. He actually wasn´t there, but his students presented us where they work and some of the projects they´re working at. We get into the lab and I can see something really close from what I had created in my mind about a robotics lab. A messy place, with weird criations, boxes with materials all over the room, many objects on the tables, several of those green pieces that we see inside computers, notes on a blackboard that are just impossible to understand, and of course: robots!!! The footbots, many of them, and also the handbot. They patiently answer our questions and than take us to a special room where we can see the robots in action. They show us an experiment where the robots comunicate to each other by changing their light collors. We had seen it already on videos, but it´s much more fun to see it a live. It´s really interesting to see how it works.

Friday

26-3-2010

Last day! The week has passed so fast!! We did so many thing and got so much information that even after 5 days it´s still not easy to assimilate it at all. Today we had the chance to meet the professors again, take any doubt or questions we still had and also get a feedback from them about our "invasion". It seemed to be a good experience for boths sides. We had meetings with the three groups again, and couriously the one at professor Floreano´s lab was the most assisted. Yeah, that´s the power of free food! The students asked pizzas and of course, the whole group was there. In the three labs the comments about the project experience were positive. The researches didn´t seem to fell unconfortable with our presence during the week. I guess that once we had spent our time within the three labs, neither us or them felt that the visit was too invasive. For us, I´m sure it was an amazing opportunity to get in touch with a subject (at least in my case) that we didn´t have much knowledge about. As journalists, we learn that sometimes, until some new tecnology gets available, there´s a long way that includes years of research. We learn that results and applications come slowly, but that each day of work is a challenge for those who make science.

EPFL - Lausanne (SWITZERLAND)
//Anna Demme

Hungarian
21. 06. 1986
sheepink@vipmail.hu

About me

Education and training:
Eötvös Loránd University (Budapest, Hungary), Faculty of Humanities - Departments: German Language and Literature, Media Studies

Professional experience:
Internship at "Magyar Hírlap" (Hungarian national newspaper), from February until May 2007

Monday

22-3-2010

Today, I met the other RELATE participants for the first time, because yesterday I arrived too late in Lausanne and could not go with them for dinner. It was also the first time at the labs – more exactly, at the EPFL, since we didn't go to any of the labs, we were just staying at the campus and met the RELATE staff and the associate professors of the labs that we would shadow during the following days. Even going to the EPFL was an interesting experience for me, because before I got here, I couldn't really imagine how an institution like that works; now I saw that it is rather like a university campus, where the different labs have more or less the same status as different departments at our university, for example. However, it was quite strange that we could hardly see any people during the day, I was even thinking about if there was some kind of holiday (which was, of course, a nonsense). The only time when we could see a lot of students was during lunchtime, when all cafeterias and benches outside were full with them, and then for the afternoon they disappeared again. The campus itself reminded me on a small city in the middle of another city with huge, modern buildings that are situated like a labyrinth (at least for the first glance); with several cafeterias and restaurants; there is even a small shop and a marketplace with fruits and vegetables.
Then we met Mary Parlange, the students' (and communications) responsible of EPFL who gave us some information about the institute as well as some tips for writing our article. Later, we moved to the labs (or rather to the conference rooms of the departments) where the leading researchers, Prof. Ijspeert, Prof. Floreano, Prof. Mondada and other PhD students gave us an overview about their ongoing research. Although I've already checked out their websites before I came here and I had an idea about what they were dealing with, it was really impressive to get to know to their inspirations, results and visions, as well as to see some small robots live. I really liked the fact that neither the professors, nor the PhD students seemed to be crazy scientists who are only interested in their specific field; of course, they looked really enthusiastic about their own projects, but they were also very nice and made a big effort to explain us everything in a commonly understandable language. At the end of the day, despite of the overload of information in my head, I managed to select my topic that I would like to cover during the next few days, namely: evolution of communication in animal and robotic "societies".
After the information sessions, we visited the new library and working space of the university. The futuristic building, which was created as one huge space, with a wave-like ground instead of walls, was really amazing, I'd really like to study in an environment like that (although I would be afraid of falling asleep on one of the bean bags instead of working…). In the evening, we took a look at the Leman lake, I was really impressed by the mountains which are I guess bigger than the tallest one in Hungary, then we went out for dinner in the town centre. Although I couldn't see much of the town during that short time, I really liked it for the first glance and hope to have the opportunity to visit it also by daylight.

Tuesday

23-3-2010

Today, I finally managed to sleep enough because the day began only at 10 AM. Instead of taking metro and bus, we were walking together to the campus along the lake that was even more beautiful in the sunshine than yesterday. Most of the day we spent with interviewing the researchers based on the information we had received the day before. They were very nice again and answered all of our questions quite understandable, I also managed to arrange interviews with two PhD students who are working on projects related to my topic. I was surprised to hear that there is also a professor in Budapest who does some research on the evolution of communication, I hope to be able to contact him later. Maybe that's the reason why Floreano could even speak some Hungarian; when he told "nagyon jó" after I had asked my question, I thought I heard something wrong but then I realized that it was not the case. Actually, I'm always wondering about how much easier it is to make a good impression in people of other nationalities when you know at least some basic expressions of their own language.
Anyway, this day we got also a lot of new information, although for me it seemed to be easier to "digest" them than yesterday, maybe we're slowly getting used to the topics and to the special language. I particularly liked Mondada's approach who talked in everyday terms about robotics and was quite realistic about the current possibilities of this field of research; it was also really edifying to learn, in how many areas of everyday life robotics is currently used, even if we're not always aware of it.

In the evening we went to the town centre again; this time, I could see a bit more (for example the cathedral and the amazing view from there) and I like it more and more, but it's somehow strange that there are hardly any people on the streets during the evening (although the restaurants and bars are almost all full), it seems to me so calm compared to Budapest. Nevertheless, I really enjoy this evening walks and chats with the other journalism students from my RELATE group, when we can exchange our experiences about various fields of life.

Wednesday

24-3-2010

Today we began at Prof. Ijspeert's lab meeting, where the lab members informed each other about the current status of their research project, and discussed their experiences, results, expectations, eventually difficulties. It was interesting to see how they communicated with each other, I wouldn't have expected such an informal and relaxed atmosphere at a lab meeting. I have to admit that for me personally, who is not involved into any of the project, 90 minutes of it was a bit too long, but of course I understand that we couldn't walk in and/or walk out in the middle of the session. Anyway, at least in the end we've managed to arrange with the lab members what we would like to see during this afternoon's shadowing.
In the afternoon, first we went to Prof. Floreano's lab to interview researchers who were working on the projects of our concern. Two people of our group went out with some lab members on the field to test a flying robot; it must have been really amazing to see it live, but I thought it would be better for me to stay in the lab and talk a bit about the evolution of communication project with two lab members: Kuniyaki, who is there in charge of the Sony company and Steffen, a post-doc researcher. I found both projects really interesting, especially because they have some overlaps with linguistics, a field that is really close to me partly because of my German studies, partly because of my interest in all aspect of human languages (evolution, structure, grammar, language acquiring and pedagogy etc.) in general.
So I was just fascinated by the idea that eventually not only human language could be considered as a language, but also the dance of honey bees or the communication between some apes etc., and that these natural phenomena can also be mapped into a computed environment and implemented in the field of robotics in order to evolve communication between robots without human intervention, a main goal of Kuniyaki's research. Steffen's project is more biologically oriented, his goal is to find out how the communication pattern of a related population changes when it has to share the same geographical area with another population and they compete with each other. The idea, that also certain primitive forms of human communication and behavior can be explained with such models (of course not the complex whole) is also worth mentioning. Anyway, both researchers were really nice and helpful, I've really appreciated their effort to make their concepts and experiments understandable for me.
The day ended at Ijspeert's lab again, with some presentations and videos about the ongoing projects, and in the end we finally could see the salamander robot live – I found it very funny and impressive and I could also get an idea about how many details have to be designed perfectly in order to put a complex robot like that to work (for example, here they had some problems with the water getting into the robot's body). In the evening, nothing special happened, somehow I missed the metro station where I should have changed for the bus, so I suddenly found myself in the town centre, it was quite annoying to get back from there to the hostel with my heavy baggage, but oh well, at least now I know that I have to take a map everywhere with me!

Thursday

25-3-2010

Today we had a quite calm morning, so I could arrange a bit my previously gathered material and work on the plan of my article as well as on the blog entries. Afterwards we were taking a walk in the town centre, I was really happy to visit it by daylight, the historical centre is so amazing with these old buildings and small streets leading through hills and slopes. It was also nice to finally see people on the streets, because during the evening the town always appeared so empty to me. In the end, we stumbled upon a flea market near the metro station, I'm always wondering what kind of people buy those old and used articles and what are they using it for.
Then our day continued at EPFL where we could finally enter some real labs and see real experiments on real robots! I found it really funny how enthusiastic we became while watching the robots moving and blinking, it's really something that awakes the childish playfulness in people. First we "met" the footbot and the handbot, than we could see an experiments with footbots in the framework of the perplexus project, it was amazing to watch how the researchers could control these creatures remote from a computer and how autonomously they (I mean, the robots) acted to find the required target, and we could also face the problems that often occur during these experiments (batteries are low, communication is lost etc.) Finally, we could see some robots designed for inspection of industrial machines, mostly using magnets in order to be attached to the surface, so we also got an idea about how these robots can be implemented for practical purposes.
After that I made an interview with Sara, a PhD researcher in Floreano's lab who was dealing with a project concerning the evolution of communication, so I got some new information about her research topic and also learned that these models of communication and cooperation in the nature can be also used for medical purposes, e.g. disturbing the biofilm by weakening the cooperation among bacteria can increase the effect of antibiotics. Then we stayed in the new learning center for a couple of minutes (I like it more and more, as well as the idea that it's a public space where everyone can go in and use the equipment) before going back to town. In the evening, we were sitting for a while on the lake shore, it was very calm and relaxing after a busy day like that, it reminded me on Balaton, the biggest lake in Hungary where I used to spend some very pleasant moments.

Friday

26-3-2010

Today we had rather a short, but intensive day: final Q&A sessions and feedback with all three professors (although Floreano was absent, but we could discuss with his lab members while having a pizza together), feedback with Mary and then good-bye. As usual, all the researchers were very nice and informal today (even answered questions concerning their age – but OK, the professors are all male, so for them it's not a taboo topic…), they really seemed interested in our experiences and impressions during this week; I was especially surprised by Mondada who had even read our blog entries. I also had the impression that they were quite contented with our visits since we didn't disturb them too much with their job because we spent just a relatively short time in each of the labs; from the other hand, it must have been also a new and edifying experience for them to talk to young and inexperienced journalist students about their research because this kind of communication needs an other vocabulary and argumentation as they are used to. They also seemed to be impressed by our interest in their research topics as well as our capability to understand their explanation despite of the lack of deeper knowledge about biorobotics; of course, their willingness and efforts to communicate with us contributed largely to this outcome.
To sum up, this week was a really interesting and new experience for me and I'm very glad that I've applied for this program, because I had the opportunity to discover a new field of science from such a close perspective that just a few people have approach to. The exploration of the ongoing research in the labs has not only contributed to the widening of my world knowledge in general, but I'm sure that it will be useful in terms of developing new journalistic skills, although the big task of writing the final article is still standing before me. During this week I could also learn that the "everyday" of robotics is quite far from the hype that the expectations of the public have generated around this discipline, including the creation of omniscient humanoid robots. Instead, the research is progressing quite slowly and there is a hard work behind every little step, from theoretical funding over computed simulation to the building of prototypes and eventual further improvements. Apart from the scientific issues, it was also interesting to see the "human side" to the research, to talk with the scientists and to see how enthusiastic they are and to find out more about their personal motivations. A very important and pleasant point of this week was further the fact that I could work and spend free time together with journalist students from all Europe; I really hope to be able to keep in touch with at least some of them.

EPFL - Lausanne (SWITZERLAND)
//Gintare Miceviciute

Lithuanian
3rd September 1985
gintare.mc@gmail.com

About me

Education and training:
I graduated Journalism in 2008 and now I am seeking for Master's degree in the same field of studies.

Professional experience:
I work as the correspondent of local current affairs in a newpaper. I had an internship in TV news department.

Monday

22-3-2010

Overload

Overloaded. This is how I feel today. To get such an amount of information about biorobotics, that I got today, and observe it quickly at the moment seems impossible for me. However, I believe that everything will be in the right order after some days.
There are so many different projects and researches in EPFL… I would like to write separate articles about all of them. But I guess I would need to stay here for a year to cover everything each professor and student is working on. Humanoids seem interesting to me, as well as swarmanoids. Don't forget roombots and those three ones – footbot, handbot and eyebot. It will be really hard to choose one topic.
I'm still thinking what is better – to reflect one project and go really deep in to it, or try to find something in common and to connect few of them? Ok, it's my first day in EPFL, I should not worry so much. More information I get, more clearly I can answer to myself, what angle interests me most.
By the way, Lausanne is a nice city. We can see lake Geneva from the campus. What is more, a bit of hills can also be seen. Walking along the lake shore from EPFL to the hostel was great! And when you get fresh air, your brain becomes fresh as well. Yes, now it's easier to come to the point of the biorobotics.

Tuesday

23-3-2010

Relatioship between scientists and journalists

Luckily, scientists speak quite understandably. Still, while talking with scientists I mostly begin my sentences with: „If I understood you correctly…". I thought that scientists and researchers are not used to talk in such way, that everybody could catch their ideas. I broke this stereotype.
As I understood, professors in EPFL are used to communicating with journalists. That is why they try to avoid complicated structures in their speach and explain everything as clearly as possible. Of course, journalists might have already taught scientists to speak understandably by asking plenty of stupid questions.
For me it was interesting to hear, that various journalists come to laboratories every three or four months. Even this week, during our visit to EPFL, TV crew from Russia is coming to see „Salamandra" project.
What is more, some professors and PhD students are willing for their work to be enlightened by journalists. As one of the professors said, more they are seen in media, more money they get for the researches. They understand the rules of this game and they are playing it.
Although in my oppinion, scientists should have funding, no matter if journalists are interested in their work or not. It's not scientists fault, if journalists do not have time or opportunities to visit them and publish the material about their work. Even more, it's not scientists fault, if journalists don't understand the aim of their work and are too lazy to go deep in to it, so they don't even try to cover such issues.
Scientists should get appropriate money for their job. And the amount of media attention should not impact this. Of course, scientists and journalists should cooperate – people must know what's new and what is happening in the world.

Wednesday

24-3-2010

Purposes
I noticed that the majority of EPFL scientists, who we communicate with, are working to create something that could be used by disabled poeple or rescuing people after catastrophes, for example earthquakes. Even though in the video we saw a humanoid playing tennis and playing drumms, the invention is more about understanding the locomotion and could be used to construct a robot that helps people with movement disabilities to get well after serious injuries.
Flying robots remind me toys. Little boys like playing with different planes, trains, cars and they are interested in constructing them. In the labs we saw big boys as enthusiastic about flying robots as kids about their toys. Similar example – happy people, who are working on Salamandra robot, able both – to swim and to walk.
However, scientists create flying, walking and swiming robots not because of fun. These machines might be used rescuing people in dangerous situations. Robots are supposed to get in where it is too dangerous for people to go.

As one professor said, if the area is dangerous, it's better to risk and lose a robot, worth thousands euros, than a human being.
No matter that scientists take care of their robots and try not to brake them, the human factor is important for them. You can't evaluate the price of human's life. And you even don't need to do that. There are humans, who create robots, not vice versa.

Thursday

25-3-2010

Asia VS Europe, Europe VS USA

As I imagined, scienists all over the world are the same and if they meet in one place, they talk the same scientific language. Actually that's true, researchers from Europe collaborate with researchers from USA or Japan. But I found it funny, that scientists from Europe have some criticism toward their collegues from other continents.
Questions about humanoids often made professors from EPFL smile. „It's more Japanese business" – that was their answer. As I understood, European scientists are quite skeptical about humanoids future. However, Japanese imagine that in some decades we might have human robots, that can serve us, help at home and maybe even replace relatives or friends. „I don't want a robot to assist me when I am old", – I heard professors from EPFL talking. That is why they are creating different kind of robots, which can help us in everyday life, but won't replace human beings.
Moreover, scientists from USA were described mostly as the ones, who are interested in war robotics. According to Europeans, Americans are constructing machines, that are able not only to move, but aslo to shoot.
Of course, Europeans gave good words about their collegues from different parts of the world as well. I suppose, a view of Japanese, playing tennis with a robot and a view of American, contructing a robot with a gun, is only a stereotype or a joke.
Still, it's interesting and funny to hear such kind of comparisons about scientists of different nationalities. As it's always funny to hear jokes about british humour. Scientists are creative people, so it's nice that they find ways how to entertain themselfs and laugh form each other and be ironic about themselves.

Friday

26-3-2010

If science is not boring, why scientific articles should be like that?

At the moment only one task is left – to write a scientific article. It is not so hard as I expected it to be on Monday, but not so easy as I thought, before begining to write it. At least, I have my angle.
What I understood is – a good scientific article should have these parts:
1)ANGLE, that would be interesting not only for the sociaty of scientists, me or my colleagues. The main point should be somehow close to the majority of the sociaty. For example, while writing about swarmanoids, I must point, that these biorobots might be used in rescuing people after an earthquake etc. I think, reminding of Haiti tragedy wuold work in this case. Health is always a subject which attracts readers attention.
2)FUN ELEMENTS. Every article must be attractive and not boring. The same is when writing a scientific article. This week I understood that science and scientists are not boring at all. Why should I only state the facts and make my article boring then? No way. I will put some of my impressions about the labs, some details from professors personal life, nice quotations. I believe I will manage to make my article both – useful and lively.
3)CONCLUSION. To state why are you writing THIS article is a must. As well as to admit why the information, which is read by the audience, might be useful for their prospective live.
In my opinion, scientific article doesn't have so many differences from the any other kind of article. Maybe one – you have to spear no effort till you understand what are you writing about.

EPFL - Lausanne (SWITZERLAND)
//Serda Demerci

Turkish
08/07/1984
serdasemerci@yahoo.com

About me

Education and training:
Graduate school of Marmara Univ. Communication Sciences Dep.

Professional experience:
Editor in Tudem publishing house and writer cinema critics in AGos newspaper in İstanbul

Monday

22-3-2010

We started the day very early in the morning. At 8,30 we met with our supervisor Mrs Mary Purlange at Epfl. Then we went to news room to get informed and get a presentation about this programme, fonction of relate studies, the role of Epfl university. We learnt the all details of this week. We had our squagels and we saw that the whole busy week is expecting us! Then according to Mrs. Purlange coordinations we did our first visit to the labs.step by step. We had to be so careful because we had to decide that what main topic we will study on our article…so, the first lab. Was of Prof. Ijispeert. We wmet with his working group who they are all Phd. Students at robotic science. They are all seperated to the groups. Every group has about 2-3 member and they are all focus on their special project. We saw that there are mainly six projects. Their goal (totally) improve the intelligence of the robotics. And they challenge the different technics to make that within the using the all benefits of technology and engineering sciences. I was really surprised to see "humanoid robotics" and "flying insects". I felt like they are all real! We watched a few videos and we saw, we touched to prototype of robotics. It was really excited. I decided to focus on communicative and humanoid robotics. Because I think I can collect a lot of information about how they imitate human behaviour and communication skills to fix them to the robotics. İt has a sociological and cultural sides too, I guess my first question will be "what kind of future is waiting us, There will be robotics all over there, our children will have robotic friends at school!?" ecc.

Tuesday

23-3-2010

We started today at 10:00 o'clock. First we discussed about our topic that we decided to write our article on it. So I choosed Humanoid robotics of prof. Ijspeert lab. The first meeting was at 11:00 with Prof. Floreano. He clearified the flying robots theme for us. We learnt that this tech. is used especially to resque people so they created a lot of situation scenario to reach the people. He talked us about difficulties of flying these robots; because most of them unfortunately get lost on the mountain ecc. so he pointed that they need improve step by step of the intelligence of these robots (robots which are influenced by insects). We all asked our questions about this topic so it went so efficant. Then we had launch with Jerome Gross (Head of media relations dep. of epfl) He was really nice, we had an opportunity to discuss how they manage communication, public relation workings and how they pretend when they come face to face within a critical case…
In afternoon we had another meeting with prof. Ijspeert. Through his lab. we had chance to get informed about humanoid robots, roombot, ibots ecc. it was really nice to know about controlling system that they use on humanoid's movements. I asked that "how many different type of movement you modified to these robots?" and he answered me as "We modified severals..especially they can flow, walk, rise up and even there is a new tech in Japan that they can jump the robots, too." Prof Mondada meeting was the last one. I found him the most funful and realistic researcher. He didn't hesitate to explain us about resqueing matter by using robots. He said that they have to improve much more this tech.to use it more useful. And we learnt a new project that they have just started to work on it. It is Da Vinci robots…They are used for explore human bodies. They are too tiny and they are modified to the patient body to explore and verify the disease and then give the symptoms of it to the researchers. This new nano-tech project will be improve within the collaboration of many European and American university's labs. too…Finally Prof. Mondada showed us some examples of commercial robots, common used robots…and we asked that how the robots will enter in our daily life? How we will can accept them to our routine? Are we ready to come face to face with robots, so how it will work this process in 10 or 20 years? We are really enlightened at get use to robots in our daily life as an ordinary person. Beyond the scientific researchs, we discussed practical side of this tech…

Wednesday

24-3-2010

Today was the shadowingday. In the morning, we had a meeting with the lab. of prof. Ijsbeert. They did their routine meeting and we listened, followed carefully it. They discussed on their recent workings. They have planned their events in the next future and they shared their points (where they are at their projects). After the lunch, we went to prof. Floreano lab. It was really efficant for me. Because I will work on evolution of communication on robots at my article. So ı had chance to ask questions at their labs. on their working to the researchers. Especially Mr. Yukuyano is immbedded by his job "Sony" to EPFL) and Mr. Stefano were helped me to get informed about the details of this project.
Mr. Yukuyano works on evolution of communicative robots. He showed us (I and Anna from Hungary) his basic written works.

So we could clerify to mainly on what aspect they are working; and what are the benefits to create more intelligent and communicative robots to improve the intelligence of new generations…Mr. Stefano as a biologist, he clearified morphologic and anatomich part of the project. So now I have deeper knowledge mutations between robots, for what and how they are working, what is the future of these projects, what they expect and to where they will rise/develope their projects…
The last shadowing was with prof. Ijsbeert lab. again. Now we have been brified part of part on their specific projects. Roombots,, humaoid robots and celemendar robots. We visited the celemander robot's lab. where they modelize and do their experiments. We took a lot of photos while they were trying to move the celemander rob. On the ground and even in the water, through tthe a ramp statue whis is statued in the middle of their lab. After this the day was over. I think tomorrow we will have more chance to explore lausanne, because we will start at 13.00. So let's become a little bit «lausanettes»!!:)

Thursday

25-3-2010

We walked around the street today. İt was really lovely, then we got to the epfl and we met with Prof. Mondada labs. They showed us footbots and it was really interesting to see them so closely. Then we went down to the ateliers where we could have chance to see the much more footbots which they tested here. More than ten footbots are tested to connect each other through electrical and metalic system. The lab. Memeber said they have already finished this project and they move on to improve this in their next projects. The magnetic electrical part of this project was the most interesting one. Because I understood that they use actually manuel and basic engine system but it is used to move or control much more technological robots. So I got that the scientific technologie maybe is not so far from our daily life as we imagine…
So tomorrow will be our last day at Epfl. We will have our last cahnce to ask to heads of all these labs. And we will see their feedbacks. I am really excited and curious about this.

Friday

26-3-2010

That's the last one. It's a little bit sad to leave Lausanne, Epfl and our project group. The day has begun at 10:00. We were at prof. Ischbeert lab and we asked him our last questions. He answered us really sincerely. It was not so much technical but it was full about his career, and main goals about robot tech. Then we shared our feedbacks and experiences about whole week. Then we had great lunch with Prof. Floreano lab. They kindly offered us a delicious meal and we had one more chance to touch with them. Finally last Q&A was with prof. Mondada…I was surprised to hear that he was at Epfl since his undergraduate degree… It should be so much thankful and safety feel to be in the same place first as a student than a researcher and finally as a Prof. He said that he is related and interested in robots since his childhood because his parents were also engineer professors. So he has been following all process of the robot techologie nearly and deeply for a long time! and he says that his main hope and goal is to see the improvement of his team's projects, (lab.) that they working on hardly and patiently…
and the last night in Lausanne…is still calm and silent, bu it's O.k!! Finally thanks Relate Project members and who ever has a role to arrange this week. Now I feel like much more into my career and writing my article at my main topic…

EPFL - Lausanne (SWITZERLAND)
//Nathan Robert Gray

About me

Education and training:
I am currently enrolled on a part time master's degree at the University of Lincoln in Science and Environmental Journalism. Through my MA degree, work experience, and projects like RELATE, I hope to develop the key skills necessary to a career in science communication and journalism.
Previous to my work at masters level in science journalism and communication, I completed a BSc Human Bioscience at the University of Plymouth.

Professional experience:
ChemistryFM - Production of a series of short radio programmes about forensic chemistry.
Plymouth Herald - 1 week work experience
Lincolnshire Echo - Work Experience
New Science Journal - Freelance Contributor
National Union of Journalists – Student Member
Association of British Science Writers – Student Member

Awards and personal grants:
Awarded bursary as part of the Chemistry.FM project.

Monday

22-3-2010

The group met early this morning and made our way over to EPFL. We spent a short time early in the day in our newsroom being briefed about the project and its aims, before we left to meet people from the first lab (BIORob lab). Our group are very lucky to have been given the opportunity to work with not one, but three different labs on campus; The BIORob Lab, the Laboratory of Intelligent Systems, and the Laboratory de Systèmes Robotiques. This means that the 'pool' of topics to talk about and people to talk to are much bigger than in other groups. Although it gives us all a lot of options in terms of planning for our articles, it does mean that we are very busy moving between labs, and have much less time in each lab to talk with researchers about the specifics of their projects.
I feel like I've had so much information thrown at me already, and that was just in the introductions!
In terms of the actual types of robots we saw, there were too many to mention! Flying robots that work in disaster areas, or work as a a communication booster when telecoms have been knocked out, or modular robots that change shape to make different types of furniture.
From the short introductions to robotics I've now had, I've begun to plan out some ideas for a final article…. though that's something that seems a long way off yet!
My main idea is to work within a medical/healthcare framework, looking at the the projects at EPFL that involve robots that could one day be involved, for example in helping people to walk again after sever injuries of paralysis. - I think it should make a good article. Also I like the idea of doing something about swarm intelligence, so I'll have a think about that!
On a side note, the weather got much better as the day went on and so we all decided to walk back to the hotel along the side of the lake. It was spectacular, and the photo's should be great!

Tuesday

23-3-2010

Wow, where to begin! It's been another busy day meeting people at EPFL. We met the Professors from all three robotics labs for a question and answer session, where we could begin to delve a bit deeper into the topics we want to work on for our articles.
Personally, I found the sessions, being an hour each, to not be quite long enough for all of the group to ask everything they wanted to. For example, the first session at LIS was very busy as a lot of the group wanted to know about the flying robot projects. The questions on these topic were interesting t had no use to me for my article, and lasted a long time which left very little opportunity for me to ask questions relating to other projects that do tie into my article. Though I have arranged to meet with him and the students involved with these projects over the next few days, but it was a shame that we could not discuss it more in the session. Especially since I found out in a very brief conversation that one of the projects that I was interested in but had believed to be finished is actually in development for a second phase. - Hopefully this could make an excellent additional article!
In terms of developing my article, I have found that some of the areas that I had previously planned to write about are not as interesting, or have already have a lot of press coverage recently etc.
As my ideas develop, I am still keen to write about new technologies that may have a medical twist, but I'm trying to keep the ideas and technologies as 'new' and current as possible.

Wednesday

24-3-2010

Today was better in terms of what were able to do during the day because we started our shadowing of people in the labs, which gave us all chance to split up a bit and allow for us to work more independently. We were able to talk just to the people involved in projects that we are interested in, rather than having to sit through questions about projects that other people are writing about but have no relevance to my work. Don't get me wrong, its all interesting, but there is only so long you can sit listening to people answer questions about something you don't need to know, when you could be speaking to other people about things more relevant to you. Which gave us a bit more freedom, and independence to make decisions about who and when we talked to people, which I really enjoyed.
So today I was able to spend longer in certain areas and labs than in others due to the added flexibility of the shadowing sessions. I spent a long time at LIS speaking with Michal Dobrznski, and Dr Ramon Perocet-Camara about the CURVACE project, that involves producing artificial compound eyes based on those of insects. The amount of time I spent with them means that I've now hopefully got a really good understanding of compound eyes, optic flow detectors etc, and now I can begin to use this to piece together my article.
I had also planned to try to talk with Prof. Dario Floreano about another project involving 'artificial' tissues, call POETIC, but he was out for a long time, so I have arranged to meet with him tomorrow.
I stayed behind a while today to check emails, and take some notes etc. Then I enjoyed a leisurely stroll back along the like-side as the sun set. -
I don't really know what else to say, so I probably wont….

Thursday

25-3-2010

So … Today we had some 'free' time this morning. Both Jana & I decided to use this to come into EPFL early as I had arranged to meet with Michal from LIS for a demonstration of a robot using prototype compound eyes. After the demo at LIS, we headed to the BIORob lab, where we we met up with Jasmin and Mary, to go and meet a Russian film crew on campus. Unfortunately the film crew were running late so we didn't manage to meet with them … but did get to see the Lamprey robot in action swimming.
After a brief time at BIORob, we went over to LSRO to meet with Fanny, a Phd student involved in outreach educational activities. We saw some awesome educational robots that were able to change 'personality', and depending on the 'personalty' the robbots would either follow you (friendly), explore (curious), or run away from you (Shy).
After our brief time at LSRO in the morning we headed to lunch with members of the lab there. (or as I like to call is, Risotto fest…). During lunch I had the opportunity to chat with members of the lab from LSRO, which was good. As it gave me a bit of an insight into their work before the shaddowing session later that afternoon.
During the 'shadowing' session the group spoke to lots of researchers about different projects, including the swarmanoid (arm/foot/eye-bot) project, magnetic exploratory robots, and the Mars-Bot project. - Most of the talks included some form of demo, which was good. The demo of the Mars-bots in the area was brilliant!
The final part of the day was taken up by something that I'd been really looking forward to… I had a personal meeting with Prof. Floreano, (although it wasn't so personal in the end as Jasmin insisted on attending too). In the meeting I was able to ask him some questions about the POETic project, which involved the development of 'cellular' circuits, with the long term goal of developing an artificial/robotic organism….
Which is at least seven types of awesome, (unlike Jasmin who is only three), and should make for an awesome article.
So I finally have ideas AND information, about a couple of subject areas that I want to write articles about … CURVACE, and POETIC, both of which are part of the LIS lab…. Awesome.

Friday

26-3-2010

Got up this morning and the weather was terrible, which ruined the plans for a final walk by the lake over to EPFL. When we got to EPFL today it was really all about tying things up with final Q&A feedback sessions, etc. There was an opportunity for us to speak with every lab again, with a few Q&A's but mainly some feedback. - Its been a time for reflection mainly, both feedback to us from the labs, and from us to the labs, and to Mary - who will feed our thoughts back into the Relate project and the European Comission. The feedback session at LIS was encorperated into lunch, with free pizza for everyone attending the session (strangely enough everyone at the LIS lab turned up for this session, compared to very few researchers at the other sessions that did not offer free food)

JORGE CHAM ©THE STANFORD DAILY

After our short(er) final day at EPFL, we said our goodbyes to Mary, and went back to the Hostel for a while before heading down to the marina at Ouchy for some photo opps and pub grub (yes we really did eat pub food on our final night in Switzerland! - but it was tasty!).
In the evening, we had wine…
In Summary:
I think that from the projects I have chosen to focus on, (CURVACE and POETIC/NEUBOTS) I have pretty much all the inromation anyone could ever want or need to write an article. I've spend some good time with everyone involved in the projects, possibly to the point of annoyance for some of the research scientists involved - but hopefully not. I would have loved some more time to discuss POETIC with Prof Floreano yesterday, but he's obviously a very busy man, and the information I have from the meeting is fantastic.
Looking back at the week, its been hectic and pretty intense, though a fantastic and enjoyable experience. As the week has progressed things seemed to become much more relaxed and informal, and I think that helped a lot; Its perhaps just the fact that we know each other now, and can find our way around campus etc, but looking back to Monday/Tuesday, now seem very akward and 'structred' etc. Its been quite a steep learning curve, the whole week has been challenging. But I have have thouroghly enjoyed it all.

Additional info

Read My RELATE BLOG!

3rd Session

November 2010

relate

REsearch LAbs for TEaching journalists

BILKENT - Ankara (TURKEY)
//Marie - Laurance Fleitour

French
1986,july 29th
ml.fleitour@gmail.com

About me

Education and training:
2009-2012 : EJT, Toulouse School of Journalism, post-graduate training in journalism. TV, radio, photo, press. Post-grad degree recognized by the profession2009 : B.A Law at the University of Paris X
2004 : High school diploma in sciences

Professional experience:
July-august 2010 LE MAINE LIBRE (french regional daily press), Le Mans (72) : Two months paid intership Copy editor
February 2010 SUD-OUEST (french regional daily press), Villeneuve sur Lot (47) : One-week internship
2008/2009 CONTREPOINT.INFO (student social multimedia newspaper), Paris : editor in chief, internet magazine department. Establishment of a short partnership with the weekly newspaper "VENDREDI" (articles on the week's web headlines)
FRANCE INFO : participation in the programme « L'amphi de France Info »
RADIO CAMPUS PARIS : casual columnist. Radio editing initiation with Cool edit pro
2008 FRANCE SOIR (National daily newspaper), Paris : 3 months internship in the society section. Interviews, reports, vox pop, daily publication of articles 2007/2008 CONTREPOINT.INFO : editor for the internet magazine department, and paper version. Articles about student lifestyle, social problems. Interviews, press conferences2007 Paris X University Television club : video editing initiation with Final Cut pro. Learning camera, shooting (3 months)

We are here for the Relate project : during a week, we are going to meet scientists, visit labs, make some interviews, choose a topic, and write an article about it. The aim of the project : bridge the gap between science and public. In Ankara, we're six young journalists from Spain, Italy, Romania, Belgium, and France. But there are also students from all over Europe at this moment, in Swizerland and in Germany. 80 young journalists trained in the year.

Sunday

31-10-2010

I arrived from France in the morning. My fist time in Turkey. At the airport, few people spoke English. So difficult to find the change office. I even arrived in a kind of Mosque, in a corner of the Ankara airport.
I finally arrived at the Bilkent campus, at 10 a.m. The biggest campus I've ever seen.
I will sleep all the week in a beautiful mini-appartement ! A big double bed, sofa, table and chairs, kitchen, and even a hairdryer in the bathroom, with slippers ! I'd love to live in such an appartement…
To have lunch, I went to a local supermarket. I was lost. I could recognise only "danette", and "nesquick". A turquish girl helped me. There are people everywhere in the supermarket, proposing you to taste their product. You have to go there if you are hungry. I bought everything they proposed !

The story of the day : I found a piano in the afternoon ! At the reception, in our building. A beautiful Yamaha with a perfect sound It helped me meet other people. One musician, working for the Bilkent orchester, stopped. One of his friend, a girl working in the department of Chemistry, stopped too. They took us for dinner in a restaurant near the campus, where I ate my first turkish meal. And that's was very good !

Monday

1-11-2010

We had this morning an appointment in the sciences bulding. There are two main departments : chemistry, and genitics. I'll be in the second one.
Ms. Hinano Spreafico, the Relate coordinator, made the presentation of the project, of the researchers. We also had a campus tour, which was not unuseful, in order not to get lost…
visited the labs, and the researchers began to explain us their project. It was not so easy, because it was very technical, but we did it.
A researcher told us : "People never understand when I speak about my job". That's exactly why we are here. To understand what is going on in the labs. And explain it, with very simple words, in an article.
I will specifically work in the lab of Tayfun Özçelik, professor of Human Genetics.
The PhD students, Emre Onat, and Cigdem Aydyn Mustafa, explained me one of their research projects : the relationship between skewed X-chromosome inactivation and autoimmunity. What is X-chromosome inactivation ?
Each person has 46 chromosomes. One gene come from the father, the other from the mother. Two of them are the sex chromosomes. XY for a male, XX for a female.
The X content is double in female, single in male. That's why there is a dosage compensation in females : one of the X chromosome is inactivated in the female. It is called the X-chromosome inactivation.

"All the women have the X-chromosome in activation, in order to survive, but people don't know. The X-chromosome in activation can rescue you, during the embryonic developpement. "It helps you to live. It's a survival mechanism" (Cigdem)
Just a part of the X chromosome is inactivated.
The number genes in female and male have to be the same. There are around 1600 in a X chromosome. Around 300 genes in the Y chromosome. Between 15 % and 25 % of the genes of the inactivated X chromosomes are homologue to those of the genes of the Y.
Between 15 % and 25 % of the genes of the inactivated X chromosomes escapes from this inactivation. They stay active.
By this inactivation, male and female have exactly the same number of genes. The X-chromosome inactivation re equilized the dose of genes in female and in male.
Random inactivation
This inactivation is only for the women, because they have 2 X chromosomes. One X of the two, either maternal or paternal, is chosen by random, and then inactivated.
In general, 50 % of the maternal X chromosome and 50 % of the paternal X chromosome are inactivated. It is called mosaicism.
But sometimes, the proportion can change and cause autoimmune disease.

Story of the morning : The campus is so big, that we took the bus to go to the science building… and it was not the good one ! It is so easy to get lost here !

Tuesday

2-11-2010

I was all the morning with Emre Onat, and Cigdem Aydyn Mustafa, two PhD students, and they explained me a lot of things about X chromosome inactivation.
It's very difficult to write something about science. We really have to communicate a lot, because it's so technical.
They both explained me very kindly their project. They have finished their research and are writing their thesis.
Emre is writing about a patient who should not have lived, because of his genome. But he survived, tranks to the X chromosome inactivation. Emre told me he thought he will have finished his thesis in 3 months, maybe six. I may write an article about his subject, when he will have finished.
So I had to find an other subject for my final article. Thre are so many interesting things in the genetic deparment !
I met in the lift, a student of 24 years old, Gizem Ölmezer. She is doing some research about the effets of nicotine and estrogens on breast cancer.
I followed her for a couple of hours, and she explained me what she was doing. She is studying the relationship between nicotine and estrogen in breast cancer formation. So far, we already know that nicotine has a bad effect on tumor already in the body. And that the increase of estrogens cause breast cancer. In their project, scientists in Bilkent examine breast cancer cells, treated with estrogens, and they see the effect of nicotine.

The story of the afternoon : I learned with Gizem that beast cancer cells are immortal. They never stop growing. The cells Gizem was working with have been isolated from a woman…….. 70 years ago !
In the evening, we took the bus to the city center. We didn't have time to visit it yet. We visited all the city with a turkish girl, Gülnihal Ergen, a Relate project's partner. Ankara is a very recent city, and I had never seen so many holes in the pavement. But some wards were very charming, with their light, shops, restaurants, new smells, different clothes, half prize for everything, comparing to France.

Wednesday

3-11-2010

I began the day with a tea break with people of my lab. Emre presented me to Fuat Yagci, a PhD student who is working in the Biotherapeutic ODM laboratory. He works about immunology. Human have an immune system, it is like an army of our body. They can recognize our cells, from the bacteria and virus, and then they kill them. If the immune system is too active, it's called autoimmunity. If it's not active enough, it's an immune deficiency.
The project of Fuat is to make the immune system more active, in case of immune deficiency, or less active if there is autoimmunity. I will work with him on thursday to see how is going his research.
I met Gizem in the afternoon, who is working on breast cancer.
I will have several appointment on thurday on the lab, to learn a little bit more about this research. An other group of scientists, of Taïwan, have already published something about the relationship between nicotine and estrogene in breast cancer formation.
It is interesting to see that there is a real competition between the labs in the world, and also a sort of stimulation. "This is how science goes", said Gizem.

Story of the lunch : We had lunch with Gizem and Chiara, an other Relate project student. I ate something very strange. With the chicken, instead of finding rice, pasta, or potatoes, I found bread, in little pieces, cooked in a frying pan. It made like a puree, with an odd taste. I think they may do some experiments in the kitchen !

Thursday

4-11-2010

I decided myself at last. I will cover 2 subjects. The first one about X-chromosome inactivation. The second one about the immune system.
I finished to speak about the first subject with Emre, and we made some corrections to my notes. It's so easy to make a mistake with such a subject !
A journalist from Sabah, a Turkish daily newspaper came to interview us.

Friday

5-11-2010

Our last day in the labs. We collected the last information that we needed, with the scientists, and took some pictures. We went to say goodbye to Sefik Suzer, professor in the department of Chemistry.
This experience in Ankara was very interesting. The Relate project gave us the opportunity to discover scientific journalism, to meet scientists. To learn

BILKENT - Ankara (TURKEY)

//Laura Batalla Adam

Spanish
19/02/1985
laura.batalla@gmail.com

About me

Education and training

- September 2009 - June 2010: Master of Arts (MA) in European Political and Administrative Studies.College of Europe, Bruges Campus, Belgium.
- September 2007 – April 2010: Bachelor of Arts (BA) in Journalism. Universitat Pompeu Fabra, Barcelona.
- September 2003 – September 2007: Bachelor of Arts (BA) in Political Science and Public Administration. Universitat Pompeu Fabra, Barcelona.

Work experience

- 1st October 2010 - present: Trainee at the Delegation of the Catalan Government before the European Union in Brussels.
- 18th April – 5th July 2009: ENG reporter at TV3 (unpaid internship).
- 1st April – 10th July 2009: Web editor (paid internship). Member of the City of Barcelona Strategic Tourism Plan work team.
- 29th September – 19th December 2008: Broadcast journalist (paid internship) at Bloomberg TV in London.
- 7th July – 23rd September 2008: Junior consultant at Tinkle Consultants.
- April 29th – 23rd September 2008: Magazine editor (paid internship) at Asociación Española de Codificación Comercial (AECOC).

Awards and personal grants

- REsearch LAbs for TEaching journalists project fellowship in Ankara.
- Eurostages 2010-2011 awarded by the Presidency Department of the Government of Catalonia.
- Scholarship for International Studies 2009-2010 awarded by the Patronat Catalunya Món.

Monday

1-11-2010

Our last day in the labs. We collected the last information that we needed, with the scientists, and took some pictures. We went to say goodbye to Sefik Suzer, professor in the department of Chemistry.
This experience in Ankara was very interesting. The Relate project gave us the opportunity to discover scientific journalism, to meet scientists. To learn

Mr. Bengü showing us one of the equipments they use at the chemistry labs.

In the afternoon, the other two journalists assigned to the chemistry department, Esperanza and Kim, and I held a meeting with Mr. Sefik Süzer, the chair of the chemistry department, to discuss our preferred field of research. After having chosen it, we met the teams that we are going to "shadow" for a week and we started to familiarize ourselves with the kind of work they do.
Before coming to Ankara, I was a bit worried about what was I going to write about in my final article. It's been years since I didn't have to deal with scientific issues. However, after having met all these enthusiastic scientists and having had a brief introduction about what they do, I came up with a couple of ideas on what I should focus my article. Moreover, this experience has encouraged me to continue learning new things about chemistry and science in general.

Tuesday

2-11-2010

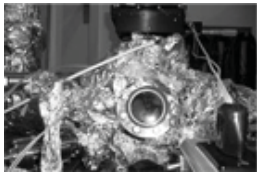
We started our second day having a coffee with Esperanza and Kim while exchanging our first impressions about the RELATE experience. After that, each of us meet with their respective research teams. I spent the morning with Dr. Margarita Milanova, who has been recently posted to the chemistry department of Bilkent University in order to perform her post-doctoral research studies. Ms. Milanova has patiently explained to me what a catalyst is and what they are used for. One of the major applications of catalysts is the control of the environmental pollution. The Materials for Catalysts' team is currently working on the catalytic reduction of nitrogen oxides (NOx) by hidrocarbons. Nitrogen oxides are specially emitted into the atmosphere as air pollution by the engines of the cars, consequently damaging the human health. In this respect, they are trying to prepare better gold catalysts in order to contribute to the reduction of these harmful gases.
After lunch, I met Ms. Margarita Kantcheva, Head Professor of the Materials for Catalyts' team, in order to know more about the project that she monitors.

While she accompanied all her explanations with never-ending chemical formulas, I tried to translate them into an understandable language. After a brief meeting, she recommended me to read some scientific articles on the topic and invited me to attend one of her lectures. As we previously agreed the day before, we decided to visit Ankara after our respective shadowings in the Labs. At 4:30pm we took a bus to the city center. We first visited Tubitak, the Scientific and Technological Research Council of Turkey, where Ms. Gulnihal Ergen, Assistant Expert of the Science and Society Department of Tubitak, was waiting for us in order to guide us through the streets of Ankara.

Wednesday

3-11-2010

On our third day the sun has continued to shine brightly. It seems as if it is not yet November in Ankara. During my short lunch break (less than half an hour because I had to attend Ms. Kantcheva's lecture at 12:40pm) I enjoyed eating a sandwich while seating under the sun.
During the morning I visited Mr. Özensoy laboratory, which also works on catalysts but using a different method than the one used in Ms. Kantcheva's team. They focus on NOx storage catalysts using different kinds of support materials (i.e. titania, alumina, etc.). I also had the opportunity to see an X-ray photoelectron spectroscopy (XPS) machine used in surface science investigation to measure the elemental composition, empirical formula, chemical state and electronic state of the elements that exist within a material.



After my visit I had a quick bite and attended Ms. Kantcheva's lecture on "Recent Advances in Catalysis. Novel catalysis by gold nanoparticles: A modern alchemy". Although the lecture was addressed to first-year chemistry students, it was difficult for me to follow Kantcheva's explanations.

Ms. Kantcheva during a lecture at Bilkent.

Right after, Selma Kasap, a Turkish journalist from Anatolian news agency, was waiting to interview us. She has asked us about our job as journalist and what are our impressions about the RELATE project. So we can say that we are going to be the central characters of a news story!

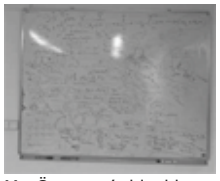
Thursday

4-11-2010

Even if we still have one more day to make the most of this experience, I have already started to miss Ankara (or I should maybe say Bilkent University, given that we didn't have much time to visit the city). Today a journalist from Sabah, a Turkish daily newspaper with a circulation of around 350.000 copies, interviewed us. She asked us about our general opinion on the research that is being conducted at the Chemistry and Genetics departments of Bilkent University and our impressions on the Turkish media, among other things. I specially appreciated the visit of those two journalists because it allowed us to interact with Turkish media professionals. I can't wait to read the articles they are going to publish about us! After lunch, I came back to the labs just in time to witness how to test a sample of gold catalyst in an X-Ray Diffraction machine (XRD). This machine is used to check the structure and the phase analysis of a given chemical material. While we waited for the results, I met with Sedar Mametsheripov, a 23-year-old master student from Turkemenistan in chemistry at Bilkent, in order to know its work at the laboratory.

In the first picture, Ms. Milanova prepares a sample of gold catalyst. Its colour changes according to the size of the particles. The smaller they are, the darker the sample gets. In the second one, you can see the menu bottons of the XRD terminal. In the last one, Milanova and Mametsheripov start the XRD machine.

At 4:30pm, Emrah Özensoy, Assistant Professor in Physical Chemistry at Bilkent, was waiting for us at his office in order to explain us a bit more about his research group on Surface Science & Catalysis. As it is the case of many other Turkish researchers, Özensoy carried out his Ph.D. in the United States. Afterwards, he worked two years at the Pacific Northwest National Laboratory in Washington DC. However, since 2003, the Turkish budget for research and development has been tripled. According to Özensoy, this has enabled a brakthrough in scientific activity in Turkey, leading to a significant return of Turkish researchers. In this sense, Özensoy feels that the state of scientific research in Turkey is comparable nowadays to the one carried out in the United States and Europe. Among other things, Özensoy has designed and built with his own hands some of the technological equipment that it is currently used at the chemistry lab. We talked with him for nearly two hours about environmental chemistry.



Mr. Özensoy's blackboard.

Friday

5-11-2010

Unwittingly the last day came. In the morning we met with Mr. Süzer, the chair of the chemistry department, in order to share with him our views on his department and to thank him for his availability and support. Immediately after we visited our respective laboratories for the last time to complete our journalistic investigation and to say goodbye to the other members of Bilkent's chemistry department.

From left to right: Marie-Laurance Fleitour, Chiara Veronesi, Laura Batalla Adam, Şefik Süzer, Kim van de Perre and Esperanza García Molina.

Especially Margarita Kantcheva, Associate Professor in Inorganic Chemistry and leader of the Bilkent's NanoCat team, and Margarita Milanova, post-doctoral researcher at Kantcheva's research group.

From left to right: Maragarita Milanova, Margarita Kantcheva and Laura Batalla Adam.

In the afternoon we visited Atatürks' mausoleum, founder of the Repubic of Turkey and the first Turlish President. Before dark we also visited the Anatolian Civilizations Museum as well as the Ankara Castle and the surrounding areas.

At dinner we met with Gülnihal and some of her colleagues at Tübitak. After tasting all kinds of traditional Turkish food and wine, we took a taxi to Bilkent because most of us had to catch a very early flight the next morning.
RELATE project has given me the opportunity to become familiar with a field I barely knew before, awaking up mi curiosity for science and in particular for the environmental chemistry. I look forward to leveraging this experience in the future working on similar journalistic research.

I would like to take this opportunity to thank the whole RELATE team, particularly its coordinator, Hinano Spreafico and Gülnihal Ergen, from Tübitak's department of Science and Society, for organizing and having given us the opportunity to take part in this fantastic experience. It is always a pleasure for me to go back to Turkey.
Görüşmek üzere!

BILKENT - Ankara (TURKEY)

//Kim Van de Perre

Belgian
10th of May, 1989
kim.a.vandeperre@gmail.com

About me

Education:
• September 2010 - June 2011 (expected): MA linguistics, Catholic University Leuven.
• September 2009 - January 2010: Erasmus exchange: English linguistics. Eötvös Loránd University, Budapest.
• September 2007 - June 2010: BA linguistics and literature, Catholic University Leuven.

Media training:
• 1-5 November: REsearch LAbs for TEaching journalists project, Ankara, Turkey.
• 12-14 October 2010: Workshop for Young Journalists: "The journalists: an endangered species?" (Workshop leader printed media), European Parliament, Brussels, Belgium.
• 3-9 July 2010: Assembly of Youth Media Organisations in Europe: "The role of media in the fight with youth unemployment issues", organised by the Youth Media Network Association Bulgaria, Varna, Bulgaria.
• 13-18 June 2010: Media In Conflicts Seminar 2010, Interdisciplinary Centre (IDC) Herzliya, Israel.
• 14-17 April 2010: European Youth Media Convention, Berlin, Germany.
• 15-17 October 2008: European Youth Media Days, European Parliament, Brussels, Belgium.

Professional experience:
• October 2008 - present: Editor + International Management Team at Indigo, a multilingual European Lifestyle Magazine.
• November 2007 - present: Reporter for CJP Belgium.
• October 2008 - June 2009: Final Editor at CJP Belgium.
• November 2008 - July 2009: Journalist for The Voice, international student newspaper of Leuven.

Monday

1-11-2010

Even though the real task hasn't even begun yet, I'm tired. I believe it's going to be a tough week. Yes, I am aware this may give a negative impression, readers, but for those fit for the challenge to read on after this statement: I did have a rather interesting day and I'm looking forward to all the experiences the rest of the week might have in store for me. All I'm saying is that chemistry, or rather science in general, is so much more than playing with some petri dishes, a Bunsen burner or fancy-looking large metal/steel equipment. This 'playing' has a purpose. It serves humankind on a quest for solutions to those lifepreserving as well as everyday obstacles all of us encounter, be it now or later. Chemo? A science invention. Sunscreen? Science invention. Washing powder? Dito. I could go on and on with this list, but then again, that would be something without a real purpose, so let's just leave this aside for now. To continue my story, science is something we all are aware of that it exists, but that only few of us seem to realise its full impact on human life. I won't deny its complexity – here you have the reason for my being tired –, but that shouldn't be a reason blindly to take it for granted. Some aspects could be interesting for all of us to make sense of, whether being a carpenter or an English language teacher. This is going to be my goal for this week: trying to investigate some particular subject of chemistry, step by step learning about its use and impact, and afterwards share what I've learnt.
Enough with the reflections, back to today. For a start, me and my fellow journalists were introduced to the science faculty building of the Bilkent University in Ankara.

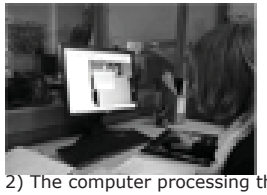
After going on a campus tour for the morning (you'd be surprised to know how big this university's campus is: my feet are still throbbing!), we were ready to splunge into some real science and had a short meeting with the chemistry department faculty members. Being introduced to the department's main research topics, I believe my eyes grew bigger with every passing minute. Luckily, Asst. Prof. Dr. Erman Bengü was so kind to take us on a tour through the labs, explaining for every lab shortly its conducted research and purposes. I must say he did a great job, I even felt like I started understanding what chemistry can do. Take for example carbon nanotubes. Sounds like an empty term, or at least, so it did at first to me, but research into this subject might develop ways to distinguish between different types of a particular form of cancer in a much earlier stage, by doing only one or a few tests. This means treatment could be started much earlier too! Or another example: what if you would be able only to take one pill every 12 days, whereas you have to take one every 4 hours right now? Anyway, chemistry can be interesting, really. After discussing with Prof. Dr. Şefik Süzer, chair of the department, me and the others got a topic to focus on for the rest of the week. Looks like I, amongst other things, will get to know a bit more about XPS, or fully written, X-ray photoelectron spectroscopy… Don't ask what that is supposed to mean, because frankly, I don't really know. But I hope I'll be able to tell you by the end of the week…
Some more pictures of the sneak peak in the labs:

Tuesday

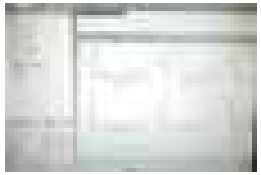
2-11-2010

After a first night's sleep, having all the travel trouble gotten out of my body, I felt a bit rested and ready for the first real day in the wondrous, but complicated world of chemistry. Needless to say that I left to the labs while feeling a bit afraid: imagine those scientists trying to explain their research the best they can, and you don't understand a word… Luckily, I wasn't rushed into anything, and though most of the researchers in my lab didn't have much time today, a PhD student from Bulgaria, Iva, tried to help me out a bit. She told me she didn't have much experience explaining things to someone without much of a background (as I think is probably the truth of most, if not all, researchers around here), but she was going to try her best to help me.
"What do you want to know?" was Iva's first question. As I did not really have a clue yet what they do in this lab, I could hardly say. In the end we managed to get on talking, and she told me more about XPS, being X-ray Photoelectron Spectroscopy, which is a method of surface science. Surface science is a general branch of science, which may include chemistry as well as physics, and consists of the study of phenomena occurring at the surface of samples. These samples can be anything, any kind of material you want to know more about. With XPS, an impressive, huge piece of metal (sometimes I had the feeling I could just have well be in some kind of space ship, with all those weird-looking machines around me), is used to give information about the composition of the material its surface: which elements can be found there, how much of them, etc. As far as my dear old brains stand me by, this is how I have understood the process works until now: First, an X-ray beam is projected upon the sample, after which the atoms on the surface lose electrons. Then the binding energy of these extracted electrons is determined, which results in a spectrum, a kind of diagram, with peaks. Every peak in this spectrum is characteristic to one of the periodical elements, so with this spectrum you can gain information about which elements are to be found on the surface of the sample. I know this may sound like Chinese, so please, reader, tell me you understand me when I say that while listening to this explanation and quickly trying to make notes, I felt like I was listening to a language that hasn't even been discovered yet… However, I managed to grasp something of this XPS 'thing', so I guess it's a start!

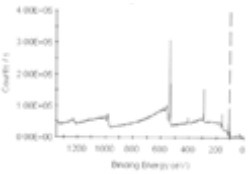
In the afternoon, I had a short interview with Prof. Dr. Süzer, who is responsible for the research in my lab. He was able to shed a bit more light on the XPS riddle, though he (seriously!) also managed to complicate the subject even more… He talked about XPS in general and its place in surface science, and really, up till a certain point, I felt like I could perfectly follow his reasoning. I think it was when he started to talk about bees, butterflies, flowers and fish that I less or more lost track of what he was actually saying. (Ok, to be honest, I do get the fish, but the flowers and insects…) Prof. Dr. Süzer also gave me a PowerPoint presentation he gave in his class 2 weeks ago, about XPS and its use, but I can't really make much sense of it… Yet? Anyway, I reached some point of understanding, so I'm getting somewhere…. Let's hope the next days will bring more clarity! After all the science, me and the others decided to go to the city centre of Ankara, though it was already dark when we arrived. For those planning to visit Ankara someday: please watch out, as I wouldn't want for you to fall in one of the many wells that seem to be scattered all over Ankara's footpaths…
Pictures: 1) Iva determining which specific part of the sample will be focused at during the XPS



2) The computer processing the information the XPS is sending through



3) The spectrum as a result from the XPS



Wednesday

3-11-2010

Today, I left for the Chemistry Department building, determined to expand my knowledge about XPS up to such a degree I would really understand the main process. To be honest, this was a bit of wishful thinking. I think I still have a long way to go until Friday. (In the assumption that Friday will bring clarity!) However, I did manage to get to explore the subject a bit more: first I decided to look up some things on the internet, with what I've already learnt stored in the back of my head. At least then I would be able to go through the information I found on my own pace, giving my brains the time slowly to process this world-strange form of chemistry (though the longer I am here, the more I feel like this is more of physics than chemistry), of which the terms otherwise would be catapulted at me with a frequency of 247 terms/minute, barely giving me the time to even make notes.
After I was able to get my knowledge of XPS a bit more ordered in my head, and had the chance to formulate some questions based upon what I already found out, I went to have a small chat with Dr. Prof. Süzer again. Believe it or not, where the man had a hand in confusing me quite well yesterday, he pulled it off to bring me a little bit more clarity today! As I explained yesterday already, with XPS, an X-ray beam is projected upon a sample, after which electrons are extracted of the atoms on the surface of this sample, of which the binding energy is measured and displayed in a spectrum with several peaks, of which each characteristic to a certain periodical element. Now, after the spectrum has been given, there are several questions that it can answer. Which elements can we find? In what state are these elements? In what composition/concentration are they? And so go on. I'm still a bit figuring out what exactly these questions might mean, but I'll come around soon enough. Furthermore, I learnt that one of the reasons XPS is used to gain this information, and not other tools/machines, is that XPS is one of the few (if not the only) ways to analyse surface so specific: XPS is very surface sensitive, whereas most of the other tools focus (also) on other things.
Anyway, I realise I've been talking a lot about XPS, the way it works and so on, but what can it be actually be useful for, I hear you already thinking? Well, thanks to XPS, a better understanding of the surface of materials can be established, which can have many contributions to further development in the scientific world.

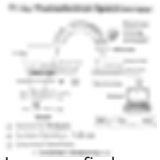
For example, the Bilkent University Chemistry department specialises mainly in electro properties, trying to find a way to combine electrical and chemical properties together. The purpose of this is to understand these properties better, how they are composed and structured, after which can be tried to make better and cheaper materials for daily life. These materials could be sensors, microphones, solar panels, and even clothes!
In the afternoon, I was invited to attend the group meeting of all people working in my lab, including Dr. Prof. Süzer, where everyone presented their most recent findings and data in a power point presentation. I'm sure you can hear it coming: I was sitting there from the beginning to the end, without understanding too much… Except of course for the fact that spectrums seem to be an important part in this kind of research, them being almost the only things, next to numbers and formulaes, to be shown on the screen.
After this group meeting, I could finally meet with Merve, a master's student working in my lab, who was quite busy the past days, but could spare a bit of her time now. She tried her best to explain me the research she is conducting for her master's thesis and how nanoparticles and XPS come in handy there, but since there was not enough time to get deeper into some things, we decided to go over it again tomorrow, and prepare some nanoparticles together!!

Thursday

4-11-2010

I woke up and couldn't believe the penultimate day of this experience had already approached… Science can thus be more interesting than you'd think, though sometimes a clear understanding seems to be rather far than close. Anyway, I wouldn't be fair if I didn't mention the other RELATE participants in this context, I get along with them really well, so they're definitely also one of the reason time seems to fly here. And probably the weather can be counted too. Although we're stuck in the labs most of the day, the blue sky and soft sun sure are a nice feeling when taking a break in between all the work!
Normally, I was planning to meet with Merve this morning, for the preparation of nanoparticles, but Gulnihal, the Turkish woman who takes care of the program's schedule here, has asked us to meet at 10.30 for a journalist who wants to interview us for a Turkish newspaper. I was hoping to get back to the labs soon, so that I could still do something with Merve before she had to go back to class, but… You hear it coming, reader. 11. no one. The journalist let us know she'll be late, due to "an emergency", and she'll be arriving by 11.30. We decide to go for a coffee and come back later. 11.30. 12.10. Finally, she arrives. Then she tells us she'd rather go interview the head of the department of Chemistry, Dr. Prof. Süzer, first. Fine, she comes back in 30 minutes, it being already close to 13! A whole morning lost, where I could have been preparing nanoparticles with Merve… Anyhow, after the interview (which took place in Turkish by the way, with Gulnihal translating), we went for lunch, after which it was already close to 15, so I couldn't do much anymore, and Merve had to go to class.
Luckily, Hikmet, a PhD student who also works in my lab, was prepared to answer a few questions and show me some things about the XPS machines. Though his explanations were very technical, extensively scientific, and thus hard to understand, he was very helpful, and also got me some copies with basic information about XPS from his Master's thesis.

On the picture below, you see a schematic overview of how XPS works.

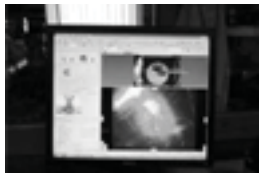


Here you find some pictures of the XPS machine and its controlling computer, used with different kind of lasers (you can see it by the colours, also on the computer screen).

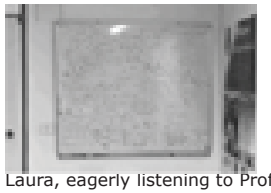




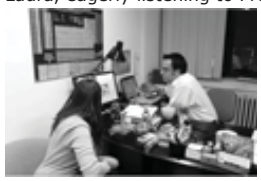


Later, around 17, me and Laura meet with Prof. Emrah Özensoy, specialised in nanotechnology and catalysts. He was very nice, and has an amazing talent for explaining complicated things in a very easy way! Catalysts are actually Laura's topic of research, but I decided to stay in the meeting, because he could explain everything so incredibly well, and I found his story really interesting. He talked about the use of catalysts for environmental purposes, such as to decraise air pollution from cars, trying to clean the air. We also talked about gold in the frame of chemical research: chemists have always thought that gold does not react to anything at all: no other element could have any influence on it. Now, it appears that it is possible after all to provoke a reaction from gold, in very specific circumstances: you really have to know how to treat gold. This is a very important discovery, as it may be very useful for several scientific applications, such as catalysts. Another interesting fact about gold is that if you divide it into nanoparticles (one nanoparticle = less or more 100.000 times smaller than one human hair's diameter), gold loses its properties and is no more really 'gold', but rather resembles plastic…
Prof. Özensoy's blackboard in his office, full with chemical formulaes and descriptions…



Laura, eagerly listening to Prof. Özensoy's presentation:



The professor's explanations were really fascinating, and we kept talking and talking, it was already a quarter to 19 when Laura and I left his office! He ended his 'presentation' with a nice talk about paintings, Picasso and Salvador Dalì… Yes, yes, there is more to science then just science… (This man is so motivated about his interests and research, and he knows so much about so many things, he really impressed me!) Finally, Laura and I walked back to the residency, which was quite a long way, but catching some fresh air is never a bad thing!
To end for today: some more pictures of my lab, and its utensils.(I know, I know, I've already got loads of pictures, but I guess too much text is not fun anymore, right? Let the pictures speak…)





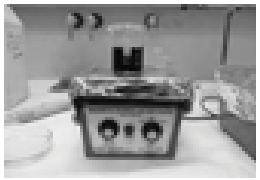

Friday

5-11-2010

The last day has approached. The final day, the day, D-day, the day that should bring clarity to the mystery of chemistry. Upon arrival at the labs, me and the other journalists first held a short meeting with Dr. Prof. Şefik Süzer, the head of the chemistry department, to go over our experience during the week. He offered us his views on our work and told us we could always contact him whenever we need more pictures, information, etc. After a final goodbye and a photo of the group with Dr. Prof Süzer, we all went back to our labs to finish our research and find answers to our last questions.

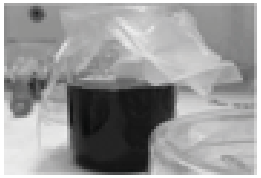
From left to right: Marie-Laurence Fleitour, Chiara Veronesi, Laura Batalla Adam, Dr. Prof. Şefik Süzer, Kim Van de Perre and Esperanza García Molina.

I finally had the possibility to set about preparing nanoparticles with Merve. Honestly, when I thought about 'nanoparticles' before, it always appeared to me that these would be very very very tiny pieces of one or another solid substance. It didn't occur to me for nanoparticles to be resolved in some kind of fluid. Well, apparently that's the case. However, there's not much to the preparation of nanoparticles, it sounds a lot more spectacular than it is. The only thing that looked quite fancy was the 'swirling pill'. To mix a couple of fluids to become the right concentration, the jar with the substance was put on a magnetic stirrer. Then Merve put something that looked like a big white pill in the jar, which due to the magnetic effects with the stirrer, started swirling around in the jar, mixing the fluid. After adding all concentrations needed with a pipette to the jar, we let it stir for a while, after which we let another machine analyze the substance. This machine sends the information needed to the computer, and here we are… Nanoparticles prepared!







Now I finished everything I had to do in this lab, and if I reflect on what I've learnt during the week, I find that chemistry, as expected, can be quite complicated… I will not claim that by now, I know everything there is to know to XPS nor that I fully understand everything explained to me about the process during this week. However, I do feel that I managed to grasp the core aspects of this research topic, so I will try my best to write an understandable article about it…

In the afternoon, we decided to go all together to the city centre of Ankara, and visit the mausoleum of Atatürk, which was very impressive. Afterwards we went to see the old part of the city, also very nice to see, and had dinner with the group to close what has been a very nice week…

As a conclusion to the project, I would like to add that RELATE is really a very nice initiative, and probably very successful in its goals too: I do feel closer to science as a journalist than before, and if I would have a chance on working in science journalism in the future, I really think I might take this chance, whereas in the past, I might've been a bit 'afraid' of taking this challenge as a person with only few background knowledge on science issues. So I am really happy to have gotten this chance, for which I'd like to thank the organisers via this blog!!

So far, so good! Let's set about the article now;)

BILKENT - Ankara (TURKEY)

//Chiara Veronesi

Italian
03/01/1977
chiaraveronesi@hotmail.com

About me

Education and training:
Specialized Degree in Art History and Conservation of Artistic Heritages, obtained at the Università Ca' Foscari, Venice, October 2005.
Degree in Conservation of Cultural Heritages, obtained at the Università Ca' Foscari, Venice, November, 2002.
Degree from Liceo Scientifico Galileo Galilei, obtained in Trento, July, 1996.
Internship in the Press Department of the Galleria Civica di Arte Contemporanea of Trento, Italy, 2006
Attended course organized by the European Social Trust: Manager in Museum Marketing. 2005.

Professional experience:
Press Assistant for Museo Tridentino di Scienze Naturali, december 2008 - now
Production Assistant for Manifesta 7 - Art Biennial, 2008
Press Assistant for Upload festival, 2008
Press Assistant for Transart festival, 2008
Press Assistant for the 57 Trentofilmfestival. Mountain, exploration, adventure, 2008
Press Director at the Galleria Civica di Arte Contemporanea of Trento. January 2006 – December 2007 .
Assistant Registrar for the 50th Venice Biennale. June – November 2003.

I had a very very long travel during the night, with a 5 hours transfer at Istanbul Airport and baggage lost … and fortunately found in one hour. But at least I arrived. Campus is really big and full of facilitations but a little bit ghostly on Sunday, when students probably aren't in. I went out alone for a walk and at least I found a coffe shop and an open market. Dinner out with some other participants and a couple of very helpfull Turkish students we met in our dormitory.

Monday

1-11-2010

A very restorative long sleep helps all of us (the group is composed by 6 girls) to be fit for our first day in Bilkent.
First of all, we had some introduction to the project by our coordinator Hinano, that will follow us on the first day in Bilkent, then a Campus tour with a third year student, and a lunch in the cafeteria.
Bilkend campus is really beautiful and it has almost everything you want inside(restaurants, cafè, markets, sports halls, a radio, computer rooms and so on). Imagine that the campus is so big (more than 500 hectares) that a shuttle service is connecting all day long the east and west parts with the main one and its library contains more than 400,000 books. Well, another thing that really touched me is that all lessons here are given in english, so everyone here can speak a very good language, and that also gives the chance to have teachers coming from all over the world. It seems futuristic to me because in Italy, as I know, we don't have any multi-language University and classes are only given in italian…for the reasons why I have more than one idea.

In the afternoon we met the head of our Department, Miss.Rengul Cetin-Atalay that introduced us to the three main topics of their researches: Human health and genetic diseases, Anti cancer drug discovery and Stem cells. Everything seemed very interesting but we needed to chose only one subject, so we asked for more informations, and we passed the next three hours hearing details of the three researches. At the end, really tried by all this informations, we went home for a deep reflection on our subjects and choiches.

Tuesday

2-11-2010

Second day at Bilkent University started with a little bit of difficulty because we were alone and in the hands of our researchers for the first time and we didn't know exactly what to do. Going in depth with my subject (Stem cell researches) isn't easy, due to the fact that I don't have the minimal experience or scientific background, but the researchers seems to be really kind and helpful, so it doesn't matter. I spoke for some minutes with the main researcher professor, DR. Kamil Can, who tried to clear some misconceptions I had in my mind about their studies.

Then I entered the laboratories for the first time. there,you can enter the rooms only with a special card and you have to be very quick because otherwise an alarm could start ringing very loud, scaring everyone. Then, another thing to consider and remember is that you mustn't touch anything. I mean…really nothing! While I was speaking I touched for a while the desk where some stuff were leant, and I had immediatly to wash my hand. Why? Someone explained me that there could have been some proteins on it that could attack my DNA!Now I am watching my fingers with a little bit of alarm.

Well, in the laboratory Fatma,a PHD student, was working on proteins identification through a method called Western blot. The procedure was really complicated and difficult to understand but we both tried to do our best, she explainig and me understanding. To be sure to understand properly everything I recorded her voice and took a lot of pictures.

The day ended with a walking tour on Ankara city guided by our Turkish coordinator, Gulnihal: crowded streets, lot of big shops, everything as in a big European metropole. Unfortunatly we coudn't see the old city because, she told us, it could be dangerous after sunset and it is better to be with some male. That sounds really strange to me, but if she told so, it should be right.

Wednesday

3-11-2010

Killing and dissecting the body of a poor innocent rat isn't really a pleasure (even more if you are going to do that after lunch) but it could be useful and interesting as well, if you don't suffer blood . That's what I have done today, during my third afternoon at Bilkent. All the procedure was necessary to take stam cells from the rat's leg, and then use them for some researches. Why isn't it possible to do it without killing the animal? Well, of course that was my first question, and the answer is that those specific kind of cells are only present in the marrow of tiny bones that coudn't be treated in a different way. So, no other chanches. The entire procedure consists in the drawing of blood cells from bones, treat them with different drugs, isolating the stem cells and growing them up in an incubator. After 14 days of staying into the incubator stam cells will appear into the test tube. Once forgotten the pity for the sacrificed animal (this is the technical word used), I must admit that shadowing the researchers in their job today has been really a challenge and a real opportunity. I am also beginning to understand better the subject I chose, and some idea of articles (even if still vague) is emerging into my mind.

Researchers are extracting the blood cells from a tiny rat - bones

Here you can see Merve trying to count the exact number of blood cells extracted

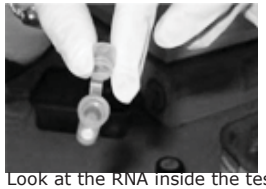
And these are the blood cells (through microscope)

And now… let's go into the incubator in order to grow up

Thursday

4-11-2010

I am happy because I already have five fingers for hand and no protein seems have been attacking me! Even if we are supposed to be the interviewer here, two journalists of the Turkish press came to meet us and ask some questions about us, about the relate project and about the idea we have of Turkey and Bilkent after some days of staying. One was the Anatolian News Agency (http://www.aa.com.tr/en/ingilizce-haberler/) and the other one the Sabah (http://english.sabah.com.tr/). We are all waiting to see the articles published!
During the afternoon I shadowed for some times Fatma, who was extracting some RNA from the cells treated with or without oestrogenes. The procedure consists in putting the cells (coming from female rats with or without ovaries) in a drug that can "break" them, isolate Rna from the rest of the substances, add an other drug to prevent contaminations, centrifuge, wash, and in the end, use an enzyme called DNAse to separate Dna from Rna. And this is the result at the end of the process: Fatma could visualize the RNA concentration on the computer, using a kind of molecular scanner.



Look at the RNA inside the test tube

and here is the concentration line

Then, I had an appointment with Dr. Kamil Can, that tried to clarify some misunderstanding I had with researchers I had spoken with, Ece and Fatma. Then I discovered a really funny thing, next month there will be a meeting in Istanbul, called "Turkish-Italian workshop on nanomaterial". The aim of the workshop is to stimulate meetings between Turkish and Italian scientists working in the field of nanomaterials, aiming at enabling collaborations and partnerships. Dr. Kamil Can will take part and present there a project about the use of carbon nanotubes as a scaffold to growing up cells developed by the department of Molecolar Biology and the Chemistry department.

What is really funny is that one of the italian research centres involved is the University of Trento, my city. Well, I don't know if I can use this information to write something, maybe for the local newspaper, but maybe it can be useful.. So, I immediately went to ask Verda, a PHD researcher, more details about the carbon nanotube project.

Friday

5-11-2010

Sun is shining in our last day in Ankara also. After a brief meeting wit Mr. Prof. Şefik Süzer, Chair of the Department Physical Chemistry, to say goodbye and thank him, we went to shadow the researchers for the last time. I pop into the chemistry department to see Gökce, a young girl that is involved in the project of testing carbon nanotubes with stam cells.

She explained me something about these attempt to grow up the cells on a nanotube surface and we spoke for a while about possible future application, the most promising one is the idea of using this surfaces for implantation. The project is still at the beginning but it seems really interesting.

here you can see the machine used to produce carbon nanotubes

Then, I went to goodbye and thank the researchers of my department: Fatma, Ece, Merve and Verda. They are all young girls, clever and nice and even if we didn't have the time to know each other much, I hope we can stay in touch. Unfortunately I didn't have the opportunity to thanks and say goodbye to Miss Rengul personally because she wasn't in her office, so I left her a message. In the afternoon we went for a tour in old city Ankara. I am very happy because I really wouldn't like to come back home without having the opportunity of see the city and the life of its inhabitants.

A jump into Turkish life: First stop at the Mausoleum of Kemal Atatürk. Atatürk was the founder and first president of Turkey, and his mausoleum consists in a monumental tomb complex between two square kiosks. It is really impressive and the annexed Museum holds personal effects and memorabilia of Atatürk (even his preferred dog, stuffed). Every 20 minutes, more or less, a ceremony take place with some scholars offering flowers and playing the trumpet to show him respect. Childrens are everywhere in the mausoleum, dressing shirts with his face or waving the Turkish flag. I know that Turkish people really love him and for them Atatürk is like an hero… but his face in the city is everywhere (in the houses, hanging to skyscrapers…) and to be honest all this enthusiasm seems to me a little bit too much, such a kid of fanaticism.

After a quick visit at the Museum of Anatolian Civilisations (Anadolu Medeniyetleri Müzesi), in an historic caravanserai, we went to the Akara's Castel. This is the most interesting part of the city, with old buildings, narrow path and children everywhere, playing football, joking with us and running everywhere.

At evening we met Gulnihal, Emre (a researcher involved in a study about x chromosome inactivation) and some friends and we had wonderful dinner together. Also a nice opportunity to talk about Turkish lifestyle, religion and way of life that is, at least in the big cities, really closed to the European one. For example, during my staying at Bilkent I didn't see more than 3 or 4 girls wearing the veil. This is probably a pointless matter, a kind of obsession that interest European people only, but I want to clarify some common misconceptions that in Italy are already working: Turkish people, in the big cities, are really open minded and most of them think for examples that wearing the veil is only a personal choice. BUT, they also believe that this choice can make a lot of pressure on people that doesn't want to express their faith with such a symbol. So, most of them choose not to use the veil at all. Turkish girls in Ankara are beautiful, made up, dressed as me, and workers. Of course they have different traditions, but it doesn't mean that they are less free than us.

Conclusions

Taking part in Relate project has been a very big chance and an interesting experience. The idea of putting in touch researchers and journlists in order to increase their communications skills and knowledges is great and I think that could have been useful for both. I want to thanks the Relate project staff, all the people involved in the project and, of course, the researchers in the Genetic department. Bye bye!

BILKENT - Ankara (TURKEY)

//Esperanza Garcia Molina

Spanish
18/09/1976
pampa76@gmail.com

About me

Education and training:

2006. Masters in Science, Technology and Environment Journalism. Universidad Carlos III de Madrid. 2001. Bachelors degree in Theoretical Physics. Universidad Complutense de Madrid.

Professional experience:

After a brief period into Physics research, I began to work as science editor for a publishing company specialised in textbooks. Then I studied journalism and I began to write about science, technology, health and environment in several media. After my three year tenure as Editor of Spain's most read magazine, Muy Interesante, which is dedicated to the popularisation of science, today I work as a freelancer science journalist for several media in Spain. Yo can see the details in this link: http://es.linkedin.com/in/esperanzagarciamolina

Awards and personal grants:

2010 Prize of Journalism Accenture 2010 on Economy, Innovation and Technology for the article Bienvenidos a la ciberescuela (Welcome to the ciberschool) at Muy Interesante.

2006 Prize for excellence in the Masters in Science, Technology and Environment Journalism. Universidad Carlos III de Madrid (UC3M).

Monday

1-11-2010

A little Harvard in Ankara

Yesterday night, when I arrived to Bilkent University after having travelled for ten hours from Madrid to Ankara –in a trip which included a taxi, two planes, a bus and finally, another taxi–, I just wanted to get into my wonderful room, read my emails and lye down. I couldn't imagine that I was in the campus of one of the best universities in Europe, with faculty members from Cambridge, Berkeley, Harvard and the MIT. Only one day later I have also realised that this is a very nice place for student's life: here they have several restaurants and bars, supermarkets, a bookstore, an sport center and a bus that goes to the city center in 30 minutes. I supposed it had to be terribly expensive and later I confirmed it: 10.000 a year for an undergraduated, but there are also scholarships for students.

I have also enjoyed talking with my Relate Project colleagues from Italy, France, Belgium, Romania and Spain. It's strange, we all are women!

But the most important thing is that I have met the researchers of the Bilkent Chemistry Department and I have already chosen the group I will work with: carbon nanotubes. These are tubular structures made of carbon, with a particularity: they are so thin that we would need to put 50.000 nanotubes together to get the diameter of a human hair, but they are very long, up to 18 centimeters. The can be considered unidimensional.

The indian postdoctoral researcher Kuldeep Rana shows me the structure of a nanotube (a billion times bigger than a real one).

To discover more things about these tiny tubes, I will work with the research group of Professor Erman Bengü, who has kindly shown us the labs. I love visiting labs with all those huge machines which seem to have big secrets inside (like this ones).

I like the subject: nanotube's are pure chemistry, their structures are really beautiful and they have a lot of interesting applications –in medicine, biology, electronics, energy, RAM memories– which are boosting fast changes in many fields of science and technology. Now I should read a little bit about them if I want to understand the researchers. So good night.
I forgot to say that tomorrow we will go to visit Ankara. I'm wishing to walk around the streets!

Tuesday

2-11-2010

Beril in the Nanotubes Forest

This is not the name of a psychotropic band or a fantastic film. It's the story of my first day with Beril Baykal, a young turkish graduate in Chemistry who is finishing her Masters Degree in Bilkent.

Beril Baykal in her lab.

She investigates carbon nanotubes, also called buckytubes in chemist's slung. With only 23 years old, Beril is already the first author of two papers which have been published in high level scientific reviews. Furthermore, she is really good in explaying what she is working on, and I'm sure that there are two reasons for her hability: the first one is that she really knows what she is talking about and the second one is that she loves it. Beril speaks passionately about carbon nanotubes. She has prepared a presentation for me with a huge amount of interesting information and I cannot stop listening to her and asking more and more questions. After a couple of hours, I am a fan of this discipline.
With her I discovered that carbon nanotubes where first observed in 1952 by a russian scientific called Radushkevich, but as he published his results in russian, nobody else in the world read it and the fact dind't get any relevance in that time. It was the Japanese physicist Iijima who in 1991 discovered nanotubes officially. Since that moment, researchers haven't stopped working on this subject to find more and more aplications of these surprising structures.
For example, if you make carbon nanotubes grow vertically aligned on an special surface, you can create a collection of very thin tubes that stay on foot like in a tiny forest. Many people, like Beril, work with these nanoforests to produce super hydrophobic surfaces, where a drop of liquid doesn't spread in the material because of the behaviour of the nanotubes. By controlling the growth process of the forest you can even create nanoart works, like these Obama's portraits of Jonh Hart, Professor of the University of Michigan.

It's amazing, specially if you consider that they are composed by tubes whose diameters are a million times smaller than a milimetre. Of course, this is not the best application of buckytubes. I reserve the next part of the story for tomorrow.

Wednesday

3-11-2010

The best in carbon's class

At this point, I suppose I don't have to say that I feel really lucky to have chosen this subject, not only for the natotubes, but also because people in the lab is incredibly helpful and they are very interested in explaining to me all their results, experiments and also the most fundamental scientific concepts that lye behind them.
Nanotubes are very long tubes composed by many carbon atoms disposed in cylindrical chains. There are many different ways to put carbons together in chains and depending on with one of them we choose we can obtain coal, graphite, diamond, fullerens (or bucckyballs) and also carbon nanotubes. The most curious thing is that the properties of each one, like hardness, strenght, heat conduction and electricity conduction are dramatically different. And nanotubes are the best in class in all the fields among all the carbon allotropes.

That's why the are so valuable: you can play with their properties to get almost anything you imagine. And, as human imagination has no limit, researchers have fantastic plans for these slim tubes. They can be used to help neurons to grow in laboratory, to create supersensitive sensors, to store hydrogen for fuel cells and lithium ions to get longer lived batteries; to build new microscopes with more resolution, to develope more efficient solar cells, and even to create flat and foldable screen televisions. Best drugs that attack only the tumoral cells in pacients with cancer will be also produced with nanotubes. So they are really useful. There are even people who propose to build a spacial elevator with cables made of buckytubes, because they are enough strong and thin at the same time to face the challenge, but that's still science fiction.
These are the applications, but first somebody has to create the nanotubes. There are three methods, and the best one is called Catalytic Vapor Phase (CVD), wich takes place in this big machine at huges temperatures (left). In the photo on the right, you can see the black sheet where the nanotubes have grown.

Of course, you (and me) trust the researchers when they say that there are nanotubes in that black little square. They know it because the have seen it with electron microscopes like this one in the picture (left). On the right, the image of the carbon nanotubes of one of the experiments that Beril has done.

She explained to me that only a few universities, like Bilkent, let masters students use this kind of microscope. A technician uses to do this part of the work but, as she said, "it's important being there when you want to visualize your samples because yo can control exactly what angle yo use to see them". Chemists need to experiment everything. That's their job!

Thursday

4-11-2010

Working, eating, laughing

A hard day of work and a great night of turkish food, that is the best summary of my thursday in Istambul. But of course, I will say a little bit more about this day.
In the morning, me and the other five participants in Relate Project had a meeting with two journalists of the Turkish news agency.

These kind of problems remind to me the situation of the science in Spain, where the budget for R+D has fallen down in the last year because of the economical crisis and the politics of the government. Although the percentage devoted to science is higher in Spain (1,45% of the PIB) than in Turkey (0,73%), many good researchers from both countries decide to stay abroad, where they can work with best conditions. In spite of the bad situation, he was really satisfied with his research group, formed by young people with talent and energy.
After lunch, Laura, Kim and me had another interview with Emrah Özensoy, from the group of surface science and catalysis. He has also worked in USA and his opinion was completely different to the one of Bengü, which resulted very interesting to have a wider perspective. He considered Turkey is a great place to develop a career because, as he said, "in USA you are a little fish in a big ocean. Here we have much less resources, but you will be able to bite a big piece". With a lot of enthusiasm he explained to us the main lines of his research on the use of nanotechnology for the engines of diesel cars so as to make them less polluting.

And finally, time for fun. The young researchers had organized a great dinner at Gokce's home and they invited me to go with them. All the boys and girls had prepared a typical dish, and I could taste the best flavours of Turkish food, which is really delicious, and also of Indian food because Kuldeep Rana cooked a chicken tikka masala which was much better than anyone I have eaten in my life.

Thanks to all the people of the lab. The best in this travel has been meeting them and sharing nice moments like this night.

Friday

5-11-2010

Our last day in Ankara. Time for saying goodbye, taking many pictures with my new friends, giving and taking emails and new facebook contacts, of course.

We left Bilkent with a strange nostalgic feeling. After visiting that huge Mausoleum of Ataturk, we went to the archaeological museum and walked around the old city. In the night we met Gülnihal Ergen, from Tubitak, and Emre Onat, researcher in the genetics lab, to have dinner and some red Turkish wine with a crazy conversation about every kind of things and many laughs. At 10, a taxi took us to our rooms. We should wake up early next day to fly back to our real lives in Spain, Belgium, Romania, France and Italy.

BILKENT - Ankara (TURKEY)
//Luciana Grosu

About me

Education and training:
BA degree Journalism and Communication Sciences;
BA degree Psychology and Education Sciences
Certificate Basic Consultant of Positive Psychotherapy
PEARL World Youth News Reporter Certificate of Achievement

Professional experience:
Young Journalist Delegate at the 5th World Youth Congress, organized by Peace Child International, Istanbul, Turkey, 31 July-13 August 2010
Invited at M100 Youth Media Workshop in Potsdam, Germany, September 3 - 7, 2009
Invited at international Forum of Intercultural Dialogue organized by IEMED and Anna Lindh Foundation, 9-13 July 2008,Barcelona

Awards and personal grants:
Nominated Online Media category Anna Lindh Foundation Journalist Award 2010
Winner International Short Story Competition "A sea of words", European Institute of the Mediterranean, 2008
FIRST PRIZE International Contest „ESSAY CONTEST FOR YOUNG PEOPLE 2006" organised by GOI Peace Foundation

Sunday

31-10-2010

Sunday, 31 October.
Bucharest-Istanbul-Ankara. After 1 metro, 2 buses, 1 dolmus, 2 planes and 1 taxi , I arrived safely at Bilkent University Campus and was very pleased to discover a very large and beautiful hotel room (because it does look like a hotel room!). I truly appreciate this room as I am not a fan of tiny, crowded, shared bedrooms. Many thanks to RELATE staff and Bilkent!
Though I found out that yesterday, the day I traveled, there was a bomb attack in Istanbul, I still felt safer traveling in Turkey than at home. One may say I was simply lucky not to meet any dangerous faces. But maybe the feeling of being more secure is not just a feeling….it's based on facts.
Talking about facts, this journalistic project is about science. I'll report on genetics research. Now I don't remember much from my high school Biology lessons, but maybe that's good. The less I know , the more I'll have the chance to learn, right?…
The reason why I am here? Science topic gets under-reported in both national and international media. We never talk about the people who work to shape our future. The researchers are the ones who will eventually decide what is possible and what not in the new millennium. Not the political leaders, but the men who work in the labs, they will have the power to say "yes" or "no" to our wildest dreams.
Actually, there are dreams who should not become real from the first place! Maybe we'll have the chance to get into an ethical debate here , I'd really enjoy! Daring to talk about the things we don't dare to think about….
Ok, but now it's too late to think about such complicated issues. Going to bed will definitely be the first phase of my RELATE project! See you tomorrow!…
Ps: Amazing news! Youtube is no longer banned in Turkey! Viva media freedom! Congratulations Turkey!

Monday

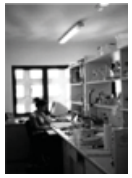
1-11-2010

Monday, 1 November Bilkent Campus tour. Bilkent University is "awfully modern" and "terribly beautifully". Is like the ideal place to study. Make a wish and it will come true. Elegant buildings, modern labs, high-tech equipment, rich library, sport facilities, great places to eat and shop….I don't want to know how much this costs a year, but I believe the ones who study here are truly privileged. This is indeed a top university, above many EU-universities living and studying standards, by-the-way.

They describe Bilkent University as the place "where computers are never turned off". Indeed, there are computers everywhere: in the hotel rooms where there's free internet access, in the specialized labs and in the "free labs" where students can go to work or surf the web as they wish. It's like internet paradise. Unfortunately, in many places and many countries around the world internet access is still considered a luxury. Actually, internet access should be considered a "basic need". It's the only way to connect to the world and learn ten times faster than by reading "printed stuff". If I was "a decision-body" , I'd advice all universities' managers around the world to invest in free, available internet access in all study areas and campuses. I know state universities are sometimes under-funded, but even if there's poverty, internet access can compensate many lacks.



Getting into the labs. This is the most exciting part of the RELATE project. Today, we were trying to figure out what research topic we'll report about. Each journalist is supposed to chose a different project. Difficult decision, because all the research themes are fascinating! I'd like to report about everything that is going on the Genetics lab!
There will be no ethical debate : these scientists are on "the right side". They are working on Genetics applications' into Medicine : cancer drugs, understanding genetic diseases, using stem cells regeneration potential. Everything they are working on now could save lives one day. So, no moral dilemma. (though I feel really sorry for all the mice and rats that are used for experiments and sacrificed every two weeks)
Today we had long talks with MD PhD Kamil Can Akçalı and MD PHD Rengul Cetin-Atalay. We were getting really excited talking about finding cancer cure and combining stem cells with the right biomaterial in order to grow a new bone out of nothing. Both researchers were trying to temperate our "ignorant enthusiasm". "It takes 10 years until something we have been working on here can actually reach people and benefits them", they were trying to explain us. It's a long path, indeed. But they are actually working on solving one of the most difficult today's health challenges. It's hard not to feel hopeful and impatient when you are a young journalist doing a science-RELATEd project!
I was so surprised to discover I remembered almost everything I learned about Genetics in high school. I thought that information was gone forever, but no, it just stayed quietly in a corner of my brain, waiting for me to recall it. Both Mr. Can and Ms Rengul took us in a rapid journey through Biology and Genetics basics. It was amazing. They tried to explain us in one hour what Science students are studying for years! I really enjoyed this! Understanding the scientific basis of the experiments going on the labs was really important for me and I can say the researchers helped us a lot. Yes, I was terrible tired when I left the lab, but I almost felt like longing to go back to school and chose to study Science instead of Journalism.
Nevertheless, I must recognize that we, as journalists, we were privileged to chat with the researchers and ask whatever silly questions were popping in our minds. Academic courses are not like this: students are supposed to sit in their desks and nod politely whenever the teacher speaks. I believe the physical, social and emotional student-teacher distance actually damages the educational process. But that's just a personal opinion.
Tomorrow, we'll go deeper into the labs….

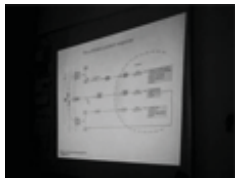






Tuesday

2-11-2010

Tuesday, 2nd November. Yesterday evening, Marie Laurance (marielauranceblog) ,Chiara (chiaraveronesiblog), and me , we were so enthusiastic about Genetics that we discovered we all want to report about the same topic! And we are not allowed to do this, unfortunately. It's a one-to-one process: one topic-one researcher-one journalist. We are supposed to decide ourselves"who is going to cover what". We have to choose between these three topics: anti-cancer research, stem cells and genetic diseases investigation. Yet, since the three of us had the same preferences it seemed like an impossible decision. Marie Laurance saved us: she proposed we drew lots. Brilliant solution! Destiny decided I will follow closely Ms. 's Rengul Cetin-Atalay cancer research investigate work. I am really happy about it, actually I feel lucky!
Cancer research group Weekly Meeting. This meeting was supposed to be on Monday, but it was postponed because of the arrival of the RELATE project journalists (that's us!).This reminds me of the quantum physics principle which says that observation means interaction and interaction means an alteration of the observed process. In other words, we change the thing we observe by the mere act of observing it.
So, I tried to alter the less possible this specialized scientific meeting. MD PHD Rengul Cetin-Atalay and her team consisting of 1 post-doc (Mine Muncuoglu), 2 PHD (Tulin Ersahin , Ebru Bilget) and 1 Master student (Irem Durmaz) discussed the latest developments of their research work. Here everyone works on a different project, hence once a week every student prepares a short presentation in order to present his colleagues the newest findings.




To give you just one example of the topics discussed at this meeting: post-doc Ms. Mine Muncuoglu presented a Cancer Research Journal article RELATEd to her work here at Bilkent University titled " Ortogenic Potential of Retinoic Acid-y in Hepatocelular Carcinome". In approximate translation this study is about the way a retinoic acid derivate is influencing liver cancer cells. But then, of course, one must know first what is retinoic acid!…




So maybe I should say in simpler words that most of the anti-cancer research work going on right now focuses on the cell, the tiny cell that has such a strong personality, that is sometimes able to create huge tumors, by dividing uncontrollably. So in this case, a possible solution is to convince the cell to commit "suicide", or Apoptosis Apoptosis is the best way to get rid of cancer cells without the risks of damaging other cells.
But there are many other methods of killing cancer cells…actually killing all cells. Cancer drug therapy is about toxicity, so people working in these labs are focusing on "small numbers". The lesser the amount of a drug needed to kill cancer cells, the better for the living organism.




I am now looking forward to see a real experiment…

Wednesday

3-11-2010

Wednesday, 3rd November.

Irem 's drug screening experiment. Irem Durmaz is working on testing possible future anti-cancer drugs. She is trying to figure out how these drugs are working to eliminate cancer cells. Understanding how these drugs are effective is extremely important for getting a clear picture about the path the treatment should follow. So through experimental means, Irem is trying to identify the drug's mechanism, the way it affects the cell, and the chemical reactions the drug triggers. Many tests are needed before identifying the way the drug works: that's because, as I said before, there is more than one way of killing cancer cells.
Irem did the "kinase assay" test. She wanted to find out whether the drug candidate was working as a kinase inhibitor. A kinase is a protein that modifies other proteins by chemically adding a phosphate groups to them.This process is called Phosphorylation. Phosphorylation modifies the cell's activity in a certain way. Cancer cells are known to have a problem with kinase proteins: these proteins stop working right inside them. As a result, the cells become malignant and acquire strange properties such as the ability to keep replicating and replicating….So, what the cancer drug needs to do is to turn off these kinase proteins that are literally "out of their mind". This means the drug should be a "kinase inhibitor". So what Irem whas trying to do was to check whether that specific drug she was testing really worked as a "kinase inhibitor" or not.
The experiment followed a precise protocol and well-defined steps. It was actually a whole procedure.I admit I couldn't understand most part of it, but it was interesting to watch. Unfortunately, I was anxiously waiting for the conclusions and I experienced a childish sort of disappointment when Irem told me she will only know the results after doing some more calculations…Oh, well, I understand now scientific research is first and foremost about patience!…








Sometimes I wonder how I felt if I was a researcher and a journalist came to observe my work in the lab. Will I feel enthusiastic and try to explain him everything?…Will I rather feel annoyed by his questions, which , to me, would seem terribly unRELATEd to SCIENCE? How would I react?
The easiest temptation for a researcher is to think the journalist doesn't need to know everything, because he will not understand anything, anyway. Well, of course the journalist will not understand great part of the specialized scientific language. Obviously, the journalist doesn't need to know everything, because he will write for people who know even less.
BUT, the more the journalist knows and the better he understands, the more he will defend SCIENCE in the public eye. And SCIENCE actually needs to be promoted, because so many people are not even aware it exists!…


Thursday

4-11-2010

Thursday,4th November

Interview Ms Rengul Cetin-Atalay. Very interesting discussion. A bit sad though, because I learned cancer research is a very long, multi-phased project, which involves different researchers teams working at different universities around the world, with a new drug being ready for the market in about 10 years time. So…cancer patients should wait (if they have time to wait).Apparently, there's no way of accelerating this process. That makes me less hopeful, but, hey, this is why I came here in the first place: to learn the real facts about science!…

Visiting the National Center for Magnetic Resonance (UMRAM). My interest for Psychology lead me to visit this amazing brain research center. Here, I had the chance to meet Assistant Professor Katja Doerschner and Assistant Professor Huseyin Boyaci , two passionate young neuro-science researchers.
Their work at Bilkent University focuses on "mapping" the brain through Magnetic Resonance in order to come to know the way it functions. Needless to say, this is actually the no.1 issue all top neuro-scientists in the world are working at right now: trying to understand the human brain.
Why understand the human brain? If scientists really got a clear picture of how the brain works, there would be hope for curing mental diseases such as schizophrenia, dementia or even Alzheimer. Actually , some diseases may not be reversible at all, but there is hope for an earlier diagnosis which would help the patient "get ready".
(Personally, I will not be able to prepare myself for developing Alzheimer in 5 years time, so that's why I am still dreaming of a miraculous cure or efficient prevention for neuro-degenerative diseases).
But I'm convinced: when you have the most updated technology and the right people to work with it , you can feel truly optimistic about the future. UMRAM's got everything: MR scanner, veterinary lab, electrical engineering room, and a very diverse multidisciplinary team, made of people specialized in Engineering, Computer Science, Molecular Biology….
I simply don't want to remember now the desperate situation of Romanian research but flash-backs of University teachers protesting in the streets keep coming back to my mind. Here, one can feel in Wonderland and discuss about scientific research as a land of all possibilities. The researchers are really enthusiastic about their work, which they know that sooner or later will have a great impact on society.
BUT, when I'll come back home, I'll have to hear again the endless discussions about University teachers worried they will not get their next salary and brilliant students leaving the country in order to be able to get involved into scientific work abroad.
So how can I feel the joy of discovering a top world university without feeling guilty at the same time for forgetting all the scientists at home who will never have equal chances of proving their value?…




Friday

5-11-2010

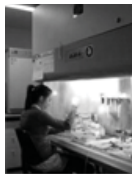
Friday, 5th November

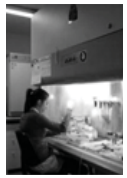
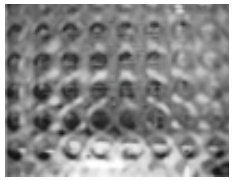
Irem's planting cells experiment. This experiment was about planting the cells needed to test on them the anti-cancer drug candidates. Unlike planting real seeds, planting cells doesn't require much water, but a lot of chemicals.
Here's how the experiment goes (in the abbreviated, tabloid-like version, of course):
Step_1. The cells that are supposed to be planted are taken out from the incubator.(At this point, the cells feel a bit surprised and annoyed by the sudden environment change, but being cancer cells, they don't worry too much about it because they know they are strong)
Step_2.Irem is preparing a nutritive medium that will later "feed" the cells so that they would grow. (The cells are really happy about this and anxious to try it)
Step_3. Irem is labeling the test-tubes because she will be testing different drugs on the same type of cancer cells, so she has to know "which test-tube goes with each drug" (The cells are so excited with everything that is going on around them, that they don't suspect anything)
Step_4.Irem is extracting the cells from the recipient they were previously in (Now the cells are a bit scared)
Step_5. Irem is washing the cells with PBS in order to clean away the dead cells.(The cells are getting a bit alarmed, they don't like it all)
Step_6.Irem adds a substance called Trypsin in order to convince the living cells to detach. (The cells are screaming in pain because Trypsin is actually a substance that can damage them)
Step_7. The cells treated with Trypsin are put back into the incubator for 2-3 minutes . (The cells are agonizing. The incubator that once protected and fed them has now become a "toxic oven"!).
Step_8.The cells are taken out from the incubator and are treated with a Trypsin inhibitor in order to avoid harming them more. (The cells feel somehow relieved, although it still hurts them)

Step_9. The cells are collected and mixed until they form a homogenous solution (The cells feel really dizzy and are about to faint)
Step_10. The cells are put into a special device for counting cells because Irem needs a precise number of cells for her culture.(Normally , the cells would worry about the fact they are counted, but in this moment they are too tired to focus).
Step_11.The cells are put back into the incubator to grow. (The cells are really happy and become optimistic about their future and the way they will multiply. What they do not know, is that tomorrow they'll have to face the killer-drugs. But , they deserve it, after all they are cancer cells).
Step_12. The cells are given the drug and then fixed with TCA-Trichloroacetic Acid (At this point the cells stopped feeling)
Step_13 The cells are stained with SRB- Sulforhodamine B and become pink ! Now researchers will be able to examine them carefully.



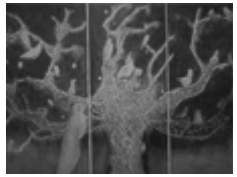





I am very impressed by the professionalism and dedication of the young female scientists of Bilkent University. I came here having in mind the stereotypical image of the over -50 male researcher working all alone in his lab…But these girls form an amazing, creative team and being really brilliant, they have a long future ahead to make themselves known in the world of science.
Nevertheless, I can't stop feeling sorry for all the smart girls in this world who are denied access to education because of poverty and/or cultural-religious reasons.I believe Irem, Ebru, Tulin, Mine, they could all become a model and a good example for all the young women out there who don't dare yet to "unveil" their minds , bodies and souls.


PS:I discovered a beautiful art exhibition in the Library building. Turkish visual artists Ecehan Toprak, Burhan Doğancay, Ferruh Basağa, Mustafa Plevneli, Süleyman Saim Tekcan, Adnan Turani, Demir Kardas, Elvan Tekcan, Sirma Kefeli, and Olca Uzunokur invite us to visit a mysterious world of symbols. Who said ART and SCIENCE can't go together?



Conclusions

RELATE has been the far most interesting EU project I've been part of. I would love to be given the chance to get involved in science journalism again!
Bilkent University is a modern educational center where top scientific research is made possible by young dedicated professionals. Turkey is nowadays a modern country, carefully preserving its traditions, but at the same time fearlessly embracing the future.
The best thing about this project is that it allowed the participation of journalists with no scientific background and no previous experience on reporting about research topics. I truly appreciate this openness. For the first time, I was not told: "you can't do this, because you didn't do it before" . Obviously, when someone prevents you from doing something you didn't do before, that person actually makes sure you'll never have the chance to actually do it! There must be a start, and in order for that start to happen, someone has to trust you and let you try it.
So I am really grateful I was given the chance to try reporting about Genetics, this was a very interesting topic and now I feel more passionate about as science than ever!…. Thank you for everything.
Time to pack, tomorrow I fly back home…

Additional info

My passion is writing and I am very imaginative. I have a lot of ideas that I would like to put in practice. I like meeting new people and learning about other cultures.
I believe science is the right answer to many of today's world problems.Unfortunately, journalists and scientists communicate too little. Thanks to RELATE project things could change for good.
Please check my RELATE blog : lucianagrosublog

EPFL - Lausanne (SWITZERLAND)
//Iva Borisova Doncheva

About me

About my work

Education and training:
St. Kliment Ohridski University of Sofia, Faculty of Law, major: International Relations, state expenditure student, full-time course of studies, second year;
St. Kliment Ohridski University of Sofia, Faculty of Journalism and Mass Communication, major: Journalism, state expenditure student, full-time course of studies, fourth year

Professional experience:
Freelance associate

Monday

8-11-2010

First day at the country of cows (everywhere in the countryside), chocolate and technical universities :) At 9 in the morning we had a meeting with Mary for overview of EPFL and briefing on the program. After that she took us to Lab MX where we are going to focus on concrete researches next days. We met Prof. Karen Screvener. She told us a bit more about the Laboratory of Construction Materials. Then we went for a lunch with her, Mary and some of the students, working on projects in the Lab. It was really interesting to meet them, share information and learn about their projects. Most of them weren't Swiss. Here in EPFL are a lot of foreign students, and I'm not surprised because the EPFL is one of the best technical universities and do a lot of researches.
After lunch I had really unpleasant personal experience. My laptop bag (with my laptop, some money, ID card and international passport in it) had been stolen from a locked room. A disaster. So my afternoon was a bit different from the program. I went to city tour of Lausanne in searching the Police station, where they have sent me to the Gendarmerie. Meanwhile in the Lab the other of my group had professor and PH.D student presentations. Unfortunately I was able to see just the last two of them. They were interesting.
After that we went to the hostel to relax for an hour and then we went to see Lausanne city centre in the evening. It was rainy…It was a long, long day!

Tuesday

9-11-2010

This day started for me early. I had a meeting at 7.30 am in front of my hostel with Mary. She went with me to Bulgarian embassy in Bern. I had to deal the things with my temporary passport and so on as soon as possible if I want to leave Switzerland in Saturday (what I really want right now). And how we say in Bulgaria "Every bad thing that happens is for good reason" (not exact translation :) So I had the chance to see the countryside while I was travelling by train to the capital of Switzerland. Bern is a beautiful city, wonderful buildings and everything looks really nice. Mary was just amazing. She was so nice to me, I would be lost without her. So THANK YOU MARY!
We came back at noon almost in time for lunch with Jerome Grosse in Rolex Learning Center. It was interesting to hear what is his work like, how do they announce scientific news, how the EPFL site is managed, what is the difficult thing in writing about science and what are the difficulties in communication and presentation of EPFL in media. And a lot of other things.
After that we met Pascal Vuilliomenet. He made a presentation of light materials projects of EPFL. It was extremely interesting. Then we went again to the Rolex Learning center (the cheese building, it's magnificent and tomorrow we'll learn more about how it was built) to write our blogs. This place is crowded….

Wednesday

10-11-2010

It was a wonderful day today! In the morning we had a coffee with Prof. Karen Scrivener, Mary and some of the PH.D students. Then we went in to the testing materials lab, where we met Lionel. We learned how to calculate the % of the substances that we should put in the concrete mixture. Lionel showed us how to choose a good aggregate for concrete, how to measure it. Then he made some tests for us to see how the different machines are working. It was really funny because he was making jokes all the time, he made is laugh a lot (he is a wonderful teacher) and the result of every test was breaking the concrete peace. I enjoyed it.
After that we went for lunch with Prof. Karen Scrivener, talking about concrete and many other things. She is great at explaining things and she is of that kind of persons that can make everything look interesting. And actually concrete is interesting and complicated.
After lunch we were shadowing with PH.D students. I went with Alexandra to see what is she doing in her project about hydration. It is amazing how fast that mixture is changing the first 24 hours.

She showed me some samples and how they look under microscope. Alex showed me many things in the lab, it was interesting and helpful about understanding the model that Aditya is working on. It's a computer model based on experimental information. Aditya and the other "modelling" people are using this information to improve their model of concrete's microstructure. Its amazing project, because with this model they are able to explore how concrete mixture will react, how will it change in time, they can stimulate weather changes to see how low or high temperatures are influencing concrete. And they can stimulate this process for minutes, when in reality there are needed years to see this result. Amazing really and I think that these people here at EPFL are doing really important job to improve things, to understand concrete and use this information for us. In the evening we all went out for a dinner with the PH.D students. It was so much fun with scientists! They all are great!!

Thursday

11-11-2010

In the morning we had a meeting with Karen and Mary in EPFL. The plan for the day was a visit of two companies. The first was Holcim in Eclepens. There were really nice people who first showed us a presentation- well done and interesting 6 minutes video about the company. Then they showed us around. Holcim is a big complex for producing cement. It was amazing that everything is so well mechanized that in the night are needed only 3 people. We saw the labs, the quarry… almost everything actually. I was most impressed of 3 things.
The first thing is their green politics. As they are saying, they are producing the cement of the future. Holcim is trying to reduce CO2 emissions by reducing clinker in cement. And in comparison with the other used cements their Holcim Optimo is reducing the CO2 with 10 to 19%. Which is significant. They also do a lot for environmental recovery of the places where they are obtaining materials.
The second one is this Celtic sanctuary. One day while they were digging they found skulls and other objects. They stopped their work on that place and called for some archeologists. And also gave money for this archeological research. It's impressive for me because most of the companies will continue their work and wouldn't care about the importance of these archeological findings and probably destroy it without mention it. So their attitude is amazing.
The third thing is their attitude to us. They were really nice, trying to explain their work and everything they do as simple as possible. They've showed us some samples of different types of cement and aggregate and have explained me so easy for understanding and in detail when I asked what was the difference between two types of cement, which looked exactly the same for me. The best thing in the lab and in Holcim Is that no matter how stupid or ignorant your question is they will answer you nice and they will do everything to make you understand.
After visiting Holcim we went for lunch in one little town on the road for Geneva. We had nice time talking for different national cuisines.
After lunch we visited Prelco in Geneva. They are making precast elements and concrete. It was interesting to see what beautiful concrete they are making for frontage. It looks like stone and if you don't know that is concrete you would never guess. We had a brief explanation what the company is doing and next we had a tour of the production part. Everything is moving so fast in that company even the man who was showing us around. He was full of enthusiasm, really wanted to show and explain everything and walking really fast also. :) It was interesting experience to see how all this we had seen in the lab was happening in companies. How this cement is produced, how concrete could be used as decoration for buildings, how sandwich structures are made and many other things. Concrete is interesting! And another really impressive thing… the air around Holcim was so clean. They use some special "hats" (I don't know what the word is) to capture CO2 and gases and actually there wasn't any black, or brown, or gray smoke from their chimneys.
Then we went back to Lausanne. Lausanne is beautiful! I'm starting to love this city and EPFL. Is it too late for me to change my field?!

Friday

12-11-2010

Last day in EPFL… :(In the morning we went to EPFL for feedback. There were Prof. Scrivener, Mary, Lionel and some of the PH.D students and of course we. Each shared his impressions of this week.
Oh…I didn't want this week to end. It was amazing experience for me. I learned things that I've never thought I will I started to like and to get interested in science and in construction materials. And if someone ever tells m that concrete and scientists are boring (which is the thing the most people are thinking) I will laugh at his face. Concrete is fascinating and all of the people we met are so amazing, smart and nice, focused on their work, but also really funny. They took from their time to spend this week with us, to open our eyes about their world and work and this is something, which enriches my life. I had different expectations from this week and now I really don't want to leave EPFL. I'm starting to consider the idea of making a science magazine and to write about EPFL.
Thank you everyone (if you are reading this). Thank you for your time, for your care of us, for your answers to my stupid questions. Thank you Mary and Karen (you were great with all of us). Thank you Alex, Julian, Aditya, and Théo for your work with us.
In the afternoon I went to Berne for my temporary passport. I visited The Einstein museum, then I went back to Lausanne. I visited the Olympic museum and then in the evening I went to a concert in the Cathedral. It was nice evening. It was amazing week. So unhappy that is over!

EPFL - Lausanne (SWITZERLAND)
//Valentin Todorov

Bulgarian
valentino.t@abv.bg

Monday

8-11-2010

I've arrived in Lausanne on Sunday evening. My first impression is that the city was too dark - typical Sunday night in Swiss. So, I met with Relate contact person - Mary Parlange, and Claudio from Bucharest(currently living and styding in Lion). We had a great night out. So, we got a delicious dinner at 'Chez Mario' pasta restaurant in Old Quarter of Lausanne.
My first working day at EPFL campus was a quite interesting and I had possibility to dive into the world of concrete and cement (at the theoritical level)science. The meeting with the lab's head Prof. Karen Scrivener and 6 researchers from the lab was very impressive. They presented their projects and tried to 'translate' the dry language of scientific terms to identifing from other people language.I have the chance to improve my knowledge and culture about this unknown science.

8th of November: The Laboratory of construction materials in EPFL outside

Tuesday

9-11-2010

I was a great day at Laboratory of construction materials (LCM)today.I,ve learned more and more about of the most used material in the world - the concrete. Olga from the LCM showed around the lab and explained us for different units how they work… So, I've choosen to write article about the Roman cements used for Architectural restoration and to shadow the researcher Christophe Gosselin. He told me a lot of things about this material, which is the best for restoration of our historic heritage. I have learned that the roman cements were produced by firing lime stone containing clay. I have made my first interview with Christophe for the roman cementc and it's properties. So, was very intriging.

9th of November, LCM: The scientist Christophe Gosselin investigate the microstructure of the roman cement - a construction material, which is the best for restoration of our historic heritage.

Wednesday

10-11-2010

We started the day in the technical lab of LCM with Lionel.He showed us how they testing the concrete in the lab and answered to our questions about technical aspects of lab's activities. After that we had the chance to test some concrete blocks. After that we had a nice lunch with Karen and visited the 'cheese-building' - this is the most impressive building at EPFL - Rolex Learning Center. Karen explained us how is it made and about some peculiarities of the concrete and cement used to making this incredible building. Unfortunately, I'll miss the baroc concert at Lausanne catedral this evening, because I feel sick - catch a cold. Sory, gays…

Thursday

11-11-2010

My fourth day at Laboratory of construction materials in EPFL started with sunny weather and I have felt much better than Wednesday night. Although of our late to the campus the our group started with the practical visit of Holsim cement plant near Ecllepens(20 km north of Lausanne). There we met with technical officials of Holcim who told us about every stage of the produsing of this most used material. The factory of Holcim in Ecllepens produce about 300 000 tones of cement every year.The plant is huge, there working 120 workers. After this visit we had a delisious lunch at 'Shez Jeff' Restaurant in Rolle (all of us were with muddy shoes, no way:-). In the afternoon we have visited one company, wich produce concrete - Prelco, based in Vernier, near Geneva. Tiery, an architect from Prelco, showed us sandwich panels, wich Prelco made for the customers and explained how the company works. The whole group was very impressed. Late afternoon we stayed in the newsroom to write our blogs and some of us started to process the data for the further steps. Mary was also with us so we went through the program for tomorrow together. It,s Thursday evening - time for shoping;-)

Friday

12-11-2010

The last day in this wonderful laboratory - LCM, was devoted to the final interviews with our researchers. We had a mini press conference in the seminar hall of the lab, where prof. Karen Scrivener and our shadow researchers answered to all our final questions. It turned out so interesting to be in the company of followers and real friends. Thus I felt all of the team of Karen. Once I made one last farewell tour of the Laboratory for construction materials in the EPFL, me and my fellow journalists got a lunch with young scientists from the lab and Mary in one nice cafeteria. After that I took good-bye to our lovely guide - Mary Parlange (I'll be back in Lausanne, Mary), and each of us took up on their way to their homeland. I'll need from time to be able to give meaning to all the interesting experiences I had at LCM and EPFL in Lausanne.

12th of November, the LCM: The last press conference of Prof. Karen Scrivener was very interesting for us

EPFL - Lausanne (SWITZERLAND)
//Ubaldo Spina

About me

Education and training:

Master degree in Industrial Design - Milan Polytechnic, MILANO, IT
Socrates/Erasmus student in the Product Design Courses (ba HONS three dimensional design) - University of Plymouth, Exeter Campus (Devon-UK)

Professional experience:

2005-ongoing - Design Methodologies and Techniques Area Manager in the Industrial Design Department - CETMA Consortium - BRINDISI -IT
2004-2005 - Designer in the Engineering and Special Development Projects Area, Design and setting-up of the stores on a world scale - Natuzzi S.p.A. - Santeramo in Colle (BA) - IT

Monday

8-11-2010

Morning – It's my first time in Lausanne. It's my first time in EPFL. Mary Parlange is our coordinator, our guide in this discovery. Why not, she is our mum! She presents herself, lots of years spent in journalism, articles and sciences collected in few simple words. Iva, Claudiu and Valentin are my RELATE fellows, nobody has experience in material construction, concrete is the material in which are made lots of houses, probably our houses too. EPFL for now is a wonderful place with mountains and lake around. We arrive at Material Construction Laboratory, concrete stairs with concrete statues…this is the concrete kingdom, just a short break in the press-room before lunch…"concrete pasta" in the menu?
Afternoon – In the afternoon we have met the researchers of the Laboratory of Construction Materials. Karen Scrivener has introduced herself as Director of the Laboratory and has described the reasons, the right reasons for research on concrete. Concrete is not Cementification. In this Laboratory we have known the positive meaning of concrete for the human activities. Concrete, in Karen speech, is definitely the most used material in the world but it has very important positive scores in terms of energy and Kg of CO_2 produced in the concrete production (compared to masonry, wood, steel, aluminium, glass, etc.). And demand is forecast to rise…Yes, we have to think about, demand is forecast to rise!!! What does a Laboratory can make for a sustainable and more performance concrete? Here arrive Mathieu, Christophe, Julien, Aditha… young boys full or life or boring genius? Simply researchers, good researchers in a good place for believe in innovation and in a better future. They present their works about low cost materials for developing countries, roman cement for restoration, expansion in cementitious systems, alkali silika reaction and finally modelling the complexity of cement. They have lose time for us, they were so professional and kind in their words, they have passion…It was raining in Lausanne when we left the Seminary Room, 5°C degrees and lots of students in the campus. EPFL is a very nice place to live and dream…

Monday 08 November 2010 – Theodore Presentation on ASR – Alkali Silica Reaction

Tuesday

9-11-2010

Morning – Tuesday morning. I'm trying to stop thinking about job and to dedicate entirely myself to this great opportunity. Thanks Howard…Lausanne, EPFL, researchers, people, innovation in the air. Europe is mon Pays, is my Country, è il mio Paese. What's the programme of the day? A very nice trip in lots of concrete rooms, the second beating place of the laboratory after the brains of the researchers. Olga Chowaniec is a polish PhD student, she speaks fast and she walks fast in this paradise of the powders and samples. Up and down among the floors, this is not a university laboratory, this is a company that works for brand new concrete babies, durable, sustainable, stronger than the old generations. We stop near a pool, not swimmer in the wards but concrete solids, as always after all! Mathieu is in its bakery, he is preparing the bread for future houses (low costing houses). It's so interesting to see him working with balances and mixtures. I don't remember the name of the composition, I remember the mould in which has finished. Three perfect parallelepipeds are now ready for testing, hoping in good results, for Mathieu, for EPFL, for Cuba's population!

Afternoon – In the afternoon we have a meeting with Pascal Vuillomenet. He opens to us another world of EPFL, no cement, sand, water during its presentation. I miss them yet! Pascal presents a group of slide, entitled "Discovery EPFL". I think that these projects are the most important results of EPFL into the eyes of the world, for different factors. Alinghi, Rivages, Hydroptère and Solar Impulse are products or better prototypes developed in collaboration with different laboratories and departments of EPFL. We speak about composite materials, numerical simulation, engineering activities, results and, above all, records…three of these projects are boats (I know it could be very reductive…), isn't Switzerland a Country without sea? Pascal is very clear in its exposition, he remembers the dimensions of the team involved in each projects and shows the importance of these partnership in terms of world visibility for EPFL. A final question for Pascal! How EPFL works with companies? Which kind of strategies have been planned by the university management? Who's going to pay for this collaboration? He shows a very interesting model for the entities involved. University has topics like real industrial problems to convert them into academic case studies to be analyzed and solved during the semesters. SME's and Large Companies could ask for profiles to allocate to the project and totally paid by the Federal Government. Also in EPFL there is the eternal war between fundamental and applied research…lots of teacher believe in the first one, they don't have interest to technology transfer…other teachers see the applied research as a natural mission for the system growing starting from innovation in small and medium enterprises!

Tuesday 09 November 2010 – A morning trip with Olga

Wednesday

10-11-2010

Morning – Middle of the week. Middle of the EPFL experience. We have to study if we want to absorb the real concrete world, we have to dirt our hands, few days to transfer the notion in a good science article. Lionel Sofia-Gabrion is a civil engineer and he's waiting for us, different tests on concrete have been programmed today. Lionel is a very good teacher. Because of it's very difficult to understand his threshold, is he joking or he is speaking seriously? I have no doubts, he is a very good teacher…if students have fun, time, contents and exercises are so far to be boring. He looks deeply in your eyes, he change the volume of his voice. I'm sure, he knows perfectly the way to keep the attention. Think about a cube meter, is it important to understand the dimensions of the aggregates, in which way you can fill the spaces, how much cement, at the end, you really need. The aggregates, a very wide scenery of typologies and dimension. If you have experience, you can choose the best groups with the only help of your eyes. And after this? Balances, weights, diagrams and another time on the blackboard…it's a complete interactive simulation, not the classic "a day with a researcher with blue eyes!". Lionel shows us the different tests, compression, traction and flexion on different samples. Thanks for sacrificing old samples for 4 student journalist students. Thanks Lionel, almost 8 years in the Lab, maybe too much time but really well expensed…

Afternoon – It's time to meet my PhD student. Julien Bizzozero is a swiss-italian student, a month ago has started his PhD work in the Lab. Probably he has more objectives now than studies and elaborates to present. But I like this challenge, I would like to write something starting from nothing, I would like to see growing my professionalism with his words. The one to one interview shows how much difficult is to transfer researches to a journalist…do you think about the complexity to transfer research to common people? Is a three step process. More subtraction than addiction and you have to be careful about the information that you're going to write…you can't compromise the credibility of the researcher and, indirectly, of the institution. At the same time you have to find the benefits for final end-users, and you could lose yourself in this exercise based on the simplification of the fundamental research and finding of possible applications. Me and Julien are agree, my article will be focused on his Master Degree final thesis. He gives me the report and the presentation, we talk on the pictures and on the results of studies, we share together the article structure. The keywords? Calcium Aluminate Cements, Calcium SulfoAluminate cements and Expansion.

Wednesday 10 November 2010 – Lionel, a new way of teaching!

Thursday

11-11-2010

Morning – Time for trip as in all the schools of the European Union. First theory, then practice and finally learning on-site. We have to understand cements and concrete by the industry point of views. We have to be there for a real comprehension of the production volumes, of the environmental impact, of the human innovation in this sector. Two firms in agenda, Holcim in Eclepens is the first. Holcim is a big company, after a video presentation we start to walk on the dirty routes of the plant…up and down on cement and water surfaces. We hear about the Holcim story and the story of the Celtic archeological sites. We follow the materials way to become clinker, clinker factor are two of the words of the week that have been impressed in my mind. We have to reduce clinker percentage in cement to reduce CO2 emissions. The cement industry is trying to reuse and recycle materials, tires and municipal waste as combustible for the plant…and is growing up the SCMs percentage in the composition, supplementary cement materials coming as waste from other production industries. We stop the visit near when the dark grains are fractured to become cement, the clinker death is realized in the final meeting with gypsum. It's not so easy to see the chimneys expelling these quantities of smokes, they are contributing to the environmental problems of the world, the cement industry has to accelerate the process towards the green cements. It's not a secondary problem to be solved with an end-of-pipe approach. Karen and her staff are working for this, are working for us…

Afternoon – Lunch in Rolle and afternoon in Vernier, PRELCO is the second stage of the trip, from cement to precast construction elements. It's an interesting experience to see how is possible to create building so far from the building site. And I like the sandwiches structures, perfect integration of outdoor surfaces, support layers, internal materials for isolation and indoor surfaces. The architects are the main "enemies" of PRELCO, their ideas are so strange sometimes and probably unfeasible. But the company has to follow them and their architectural dreams…We learn about outdoor surfaces, smooth surfaces, stones, recycled mixtures, marbles…horizontal and vertical covers to dress the building skeletons. After showroom, a fast visit in the outdoor stock and in the production site…water, cements, moulds, human resources. It's difficult to explain the life inside, the working environment and its hard conditions. This is real life and this is the production scenery of concrete in 2010, so far from clean spaces and totally automated processes. It's late, it's time to come back in Lausanne!

Thursday 11 November 2010 – At PRELCO Showroom

Friday

12-11-2010

Morning-Afternoon – Last day in the Lab. I feel today as if I'm part of the staff. In the morning greetings, in the coffees, in the discussions about life, concrete, Lausanne, EPFL and future…It could be very nice to spend a winter season here…they are young, inside…I'm convinced about the importance to end my article here. I have to write, to point, to solve the doubts, to read brochure, to ask…and to meet Julien again. I'm better after introduction closing, I'm satisfied of my focus on research, I have to improve the benefits and conclusions. Me and Julien write sometimes with four hands, it's so and so interesting to start from different brains and to arrive to the same words and sense. We have a strategy…less formulas and numbers, more examples. We gain the apotheosis when we have to describe the difficulties of the analysis on nanoporosity of the cement…how do you explain to common people the observation of the hydrates precipitation in the nanopores? Do you want to know the solution? Please read the article…Thanks Howard, thanks Mary, thanks Karen, thanks Julien, thanks PhD students of the Lab! Lausanne and EPFL have now a very important corner in my memories…we have to love people, life and innovation for paving the way, to reduce gap between research and society, to tell to young people how good is the smell of science!

Friday 12 November 2010 – On the article with Julien

Additional info:
Link to my website:
http://www.cetma.it/design_dis_ind.aspx
My profile is also available here:
http://www.adi-design.org/adi.php?q=
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EPFL - Lausanne (SWITZERLAND)
//Claudio Creanga

Romanian
02/02/1987
danutcre@yahoo.com

About me

Education and training:
2006 - 2009: Bachelor degree in Journalism, University of Bucharest 2006 - 2009: Bachelor degree in Philosophy of Science, University of Bucharest 2009 - 2011: Masters degree in Journalism, University of Bucharest

Professional experience:
2008 - present: Renne SRL

Monday

8-11-2010

Today the group was united for the first time. The breakfast was great, but, unfortunately, we couldn't organize ourselves to take it together. At 9 o'clock we have met with Mary at EPFL and she explained us the details of this project. Then we met Karen Scrivener and her students at the Laboratory of Construction Materials. She presented the laboratory and introduced us to her research on concrete and other materials. Karen managed give us a clear general perspective on this field of research, we understood the basics, how concrete is made, what problems it poses and what they want to change by their research. Then the PhD students presented their researches, which were quite interesting and focused on practical issues. Their interests ranged from how we can use concrete better in architectural restoration to the research of the alkali silica reaction, a reaction that damages the concrete. We chose our stories, talked with the students that we are going to "shadow" this week and decided what we will do tomorrow.

Tuesday

9-11-2010

Today we visited all the rooms in the Laboratory of Construction Materials. We saw the equipment that the researchers at LCM are using daily. Then a PhD student showed us how concrete is made. We shadowed him as he prepared some samples of concrete and mortar. After that we had a break of an hour in which we read more about the story we chose and prepared the interviews for our selected researchers. Then we met with Jerome Grosse, the Director of Communication in EPFL and had lunch with him. He explained us how his department is trying to fill the gap between researchers and society: by maintaining good connections with the media, publishing magazines in which scientific discoveries at EPFL are presented in a clear, quotidian language, so that ordinary people could understand, etc. Lastly, we attended Pascal Vuilliomenet's presentation which further clarified the structure of the University and its current projects. We mainly focused our discussion on the methods by which we can succeed in bringing knowledge from the laboratories to the market. Some of EPFL's projects are aimed at exactly filling this gap between research and the early adopters through co-development. Some successful examples are the Hydroptere.ch and the solar plane. In the evening we went to library in the beautiful Rolex Learning Center building and studied our subject more.

Wednesday

10-11-2010

We started the day listening to one of the best teachers I saw, Lionel. He is an engineer in the lab and he managed to explain us in no more than 2 hours how concrete is made. His lesson was very interactive, we actually participated in the making of a concrete sample. Then, the most interesting part came, the testing. We tested various samples of concrete and saw their level of resistance. After that, we visited some special rooms in the lab where researchers are keeping their samples in order to test the durability of these samples. These rooms have high humidity and the samples are kept at a very high temperature in order to speed up the degradation of concrete, so they don't have to wait for 50 years for the results. After lunch we went with Karen at the Rolex Learning Center and she explained us how the engineers managed to build such an extraordinary building. In the end of the day we followed our researchers and took interviews.

Thursday

11-11-2010

Today we woke up very early and went to the Holcim Cement factory. It was a very interesting experience because we saw how the material is made at a larger scale. We saw the equipment, how it works, and visited some site facilities. Then we took a wonderful lunch near the lake of Geneva and made a last visit to the concrete facility in Geneva. Here we saw a completely new aspect of the concrete industry. This factory focuses not only on composition and strength of concrete, but also on how it looks, on the aesthetics of concrete. This is because they are delivering a finished product, ready to be in people's home. So, their main research is focused on how we can make concrete look better, without affecting its durability and strength and also, not be too expensive. Finally, we arrived back in Lausanne and worked on our articles.

Friday

12-11-2010

Today we started the day with a feedback session. We discussed how the project went, what were the pros and the cons and we thanked the lab for its hospitality. Everyone was happy with how the project came and we think it was a success. Then we had a last lunch with the group and after that we shadowed for one last time the researchers, took interviews and some pictures. The rest of the day we worked at our articles and in the evening we went to a concert in Lausanne's oldest cathedral. It was a very interesting week, I had a great time, I learned a lot and I think it will have a long and positive impact on my career in journalism. I wish to thank the people in the RELATE project and the people in the LCM for this chance.

European Southern Laboratory - Munich (GERMANY)

//Marina Histrova Novacheva

Bulgarian
11 may 1988
mimanova@gmail.com

About me

Education and training:
Senior year Journalism student at Sofia University "St. Kliment Ohridski"

Professional experience:
A bit of everything I like. :)

Monday

8-11-2010

A little briefing for the flight and accommodation. I had a very nice flight and I'm staying at a very cute hotel called "Hotel am Park". The rooms are cosy and clean, and the service is perfect. This place, a suburb of Munich, called Garching is wonderful - so calm, peaceful and has kept the spirit of the old bavarian style and in the same time is modern and comfortable. I'll upload some pictures you could enjoy. :)
So, the First day with a big F. After being quite disappointed with the visa rejection of my fellow turkish friend and kind of frustrated of the idea being here all alone, I gathered myself up. After all it's not like the end of the world or me being stolen if alone. I decided to take as much as possible from this opportunity. So today in the morning I woke up filled with energy and excitment of meeting people who actually make science. Meet ESO.
I imagined the whole building like being taken out of a sci-fi movie. Actually it's quite similar to one of those. Especially from the inside where is like a crazy maze and you can get lost any second - just taking one wrong step. Can't lie it's a very interesting facility but the people … People are GREAT. From the first "Hi" those people treated me like one of them no matter I'm just a journalism student who will look at every step they make.
Actually they are very kind and helped me with anything I needed or wanted to know about their work. It's so wonderful when you have the chance to combine science and jornalism in a way that could help people to understand astronomy better. Not only in beautiful images of outer space but in general. So now comes the big challange to start with the real work. Because today was a day for new ideas and new horizons. :)
P.S. ESO looks great at twilight. :)

Tuesday

9-11-2010

So, day two. Well I'll remember day two mainly with two things - first I got kind of lost and second I lost one of my favourite rings. :(It's the day of the loses.
Today I woke up with the determination to do great deals. For the best start I ran late off my schedule and took the subway later than I should. Then it turned out I got the wrong direction, so I had to go back and lost another 10 minutes. After all I managed to get to the right station and went to ESO. A little late, but there. :) After that I lost my ring in the rest room. What could you do…Girly stuff - washing hands without the ring so not to make it wet. Of course, you mai assume, I forgot it and when came back to look after it, it was gone. Cute!
But enough complaining. Today was a good day for work and me being part of the great ESO team. :) First I went with the team on lunch. I had the chance to be part of one of their stuff lunches, organized once a month. It was quite an experiance because of the difference in cultures. In Bulgaria, when you are out on a work/team lunch, it's always noisy. You can hear laughter, loud talks, etc. Here everybody was quite quiet. Can't explain it. One of the folks joked it was because of me - a journalist being among them, stealing their secrets. It was well said although I don't aim in their personal secrets but their work at ESO! Muhahahaha. (That is supposed to be an evil laughter.)
After lunch I talked about images of space with Dr. Olivier Hainaut. He told me some very interesting facts about the whole way of an space image from the telescope shot to it's publication. It's quite a journey if I mai say. Another good thing is Douglas (my supervisor) helped me to get in touch with some people who work on the ALMA project, so these days I'll meet them and know more about this fascinating one of a kind telescope. :)
Cross your fingers not to get lost again tomorrow. See ya! ;)

Wednesday

10-11-2010

Day three. Wednesday was a tiring, but deefinately a satisfying day. I did some very good work and managed to go sightseeing Munich!
Today I got interviews from Leonardo Testi and Dirk Petry both scientists, working on ALMA. It was extremly interesting to hear about their work and personal impressions by the project. We also talked about what sacrifices has a scientist to make in the name of science. But they both were unconditional that if you love (and if you are a scientist you MUST love it) your work and your family is tolerance enouht there is no such thing as sacrifice. It was nice talking about not only absolutely scientific matters but putting science as a part of everyday life. It was so nicely when Dr. Petry told me about his son and showed me all the beautiful pictures of space rockets and stars he has drawn. :)

After I finished with my work for the day, I asked Douglas to take the day off and go to Munich. :) It was such an adventure for me and I must proudly say - I didn't get lost! ;] To be honest the transportation system in Munich is so easy and convinient (once you fully understand it) that it's almost impossible to get lost. :) So I went to Marienplatz and made a little tour in the central part of Munich. Of course I took a lot of pictures and bought few presents for my dearest friends and family. Hope they'll like them.
And another great thing about today. I was invited by the guys from the department I'm allocated to join them for a concert on Friday. :)Sarah and the others are so nice to me. I said YES, so the day after tomorrow I'd have seen another part ot Munich - the night life! Can't wait! :))))

Thursday

11-11-2010

Last night was awful. I woke up in the middle of the night with a killing pain in the right arm and shoulder. Not only that, but after I woke up, I couldn't fall asleep again because it was hurting no matter what pisition my body took. Any way in the end I found a half-laid pose in which I was feeling better. But in the morning not only my shoulder was in pain but but my whole body was aching because of the uncomfortable sleep. It looked like it was going to be a nice day…
When I went to ESO I felt little better. I focused on my daily contracts. I went for an interview with Dr. Andrew Biggs who is one of the European astronomers in ALMA. It was really nice talking to him. We talked about his current and previous jobs, about Atacama desert, where ALMA is located and many other scientific and not so scientific topics.
After I finished my interview I went back to office 9 where is my workin space and continued with some reading about ESO, ALMA and all the other astronomical events both new, upcoming or already passed. In the early afternoon I was at the weekly conference meeting with Chile. They talked about all the upcoming events and even for the annual Christmas party. We even ate donuts, which were a present from somebody… All of us covered in powedered sugar. It was funny. :)
In the evening something very strange but so nice happened to me. While I was going to the near Pizza Restaurant I heard two man talking in Bulgarian. I was soooo happy to hear bulgarian speach so I, as usual, smiled widely and went to say Hi to them. They were quite surprised but were pleased to meet a bulgarian. They said usually bulgarians dnn't reply when they hear another bulgarian, but I guess it's just up to the person. It turned out they both were in Germany for ten years. We talked a bit and then headed to our own directions. Germany is full with surprises…

Friday

12-11-2010

My last day in Munich ans ESO. Unfortunately it didn't went as I planed it. I wanted to spend my last day at ESO, with the scientists, but instead I spent it at Klinikum der Universitat Munchen. Perfect… As Wednesday night last night I woke up in pains. Much stronger, so in the morning desided to visit the hotel's doctor. He was very kind but extra cautious and said something about lumb embolism. Of course I was shocked. He said I should go to a hospital and be examined. So he sent me to Munich's Students Hospital where the kind young and goodlooking doctors ran few tests. It turned out nothing serious was wrong with me (Thank God!) but they didn't understand where is may pain coming from afteer all… And their recommendation was… to get rest and…see a doctor when I go back home. So to a certain degree all the unpleasant test I it had to go trought (And believe me it was quite painful) were in vain because the doctors told me they don't know where my pain is coming from. At least I'm healthy. And i'm happy about it, still it would have been even better if the pain was eliminated.
Before I went to the hospital I stopped by ESO to say good bye to everybody. I didn't know how long would it take me in the hospital. I saw Douglas and the others. He was worried about me and wanted to help, but I told him that I'd be OK, so we just said goodbye. It was awful… Any way after I finished with the tests I got back to ESO to say a real goodbye to everybody. Not only Douglas, but Mr. Lars Lindberg Christensen who is the head of Education and Public Outreach Department. I really wanted to spend the day with the scientists and feel once again the magic of astronomy but I couldn't and I'm so sorry about it…
Any way I'd like to thank everybody who I met during my stay in Munich. First of all Howard Hudson and RELATE for the opportunity. Then Ms. Hinano Spreafico who came with me to ESO the first day and made me feel so calm and comfortable no matter I was alone. Hinano, thank you so much for the support. I wouldn't have made it without you. And last but deffinately not least I'd like to thank to all the people I met at ESO - scientists, engineers and communication specialists. You were so kind and made me feel as a part of something really important and wonderful - ESO! I'd never forget each and every one of you! :) Hope to see you soon! Best wishes, Marina.
P.S. Lol, It looks and sounds like I'm having an Oscar. :D
P.S.2 Tonight is the BIG night! No pain is going to stop me! Munich, get ready, I'm coming to get you! ;]]]
(Going to a concert with Sarah, Pedro, Oli and the others! YES!)
See ya!

ICFO - Barcelona (SPAIN)
//Dominica Jedrzejczyk

Polish
24.05.1990
dominikajedrzejczyk@wp.pl

About me

Education and training:
Faculty of Individual Humanities, Warsaw University, Poland

Professional experience:
Polish Press Agency, Scientific Newsroom of the Young Journalists Association

Monday

15-11-2010

After a tiring day spent mostly at the airport and on train stations, we (that is Andrada and I) finally arrived at the Institute of Photonic Sciences (ICFO) in Barcelona and were able to admire the magnificent complex of the Mediterranean Technology Park buildings. One thing we immediately noticed about ICFO were colours - just as Alejandra said: ¨It is all about light and light means also colours¨ - these are colours that mark each and every corridor, colours that accompany scientists and researchers while drinking coffee, finally colours that build the nice (not to say - cosy) atmosphere of the place. And, indeed, this atmosphere makes ICFO different from other scientific facilities and institutes that I have visited in my life - one can easily feel that it is not only mere technology or research involving scientists locked in their laboratories that take place there, but also scientific education and outreach opening photonics to industry, schools or simply to the general public.

In the morning we met dr Sinead Kennedy, who introduced us to the main aims of the Institute and we then had a tour over ICFO with Alejandra Valencia. Alejandra, member of the Outreach team, enthusiastically described every area in which the Institute contributes to the development of science - from nanolabs and diagnostics to secure signal transfer or transparent solar panels. It is worth noting that the Institute participates in events such as Science Week (to come by the end of the week, hope I will have an opportunity to take part in it), when high schools students visit ICFO, make their own experiments with light or participate in meetings with well-known scientists, such as Niek Van Hulst, whom we are going to get to know on Wednesday. But in order to make science more attractive, someone has to provide photographs and illustrations. Yes, even scientific intitutes have to have graphic designers such as Tania Gomez Manchado who works with researchers in order to produce the best pictures to illustrate their papers and articles. ¨Sometimes it might be difficult. Researchers have their own vision, their own ideas, very often the eventual outcome of our work is far different from what they expected¨, she says. ¨Sometimes it is often better than in the initial stage of work¨, adds Marta Garcia Matos, who works with Alejandra in the Outreach. ¨I am a bridge between the graphics and the scientists, trying to translate ideas of one side to the language of the other¨, she explains.

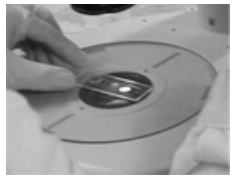
How difficult that might be, knows dr Susana Santos, formerly a scientist at ICFO, now the head of ¨Light for Health¨ Programme. After a few minutes of her talk, I understood what Alejandra had meant saying that Susana had a talent for explanation. If you wanted to look for the most charismatic scientist ever born, she would be a ¨must¨ for the 1st prize, as she really knows not only how to speak about science, but also how to spread the interest and enthusiasm for photonics and how to transform it onto other people. We got to know what optical tweezers where, how to cut an earth worm´s neuron without killing the poor animal or how to destroy cancer cells with the use of gold nanoparticles. Hopefully, ICFO´s research will go forward and in few years doctors will be able to treat cancer with the help of antibodies attached to nanoparticles of gold.

So much information during only one day. I feel that I really need this cup of coffee Sinead told us about. Served obviously in the ICFO yellow mug.

Tuesday

16-11-2010

They are 1 mm long and can survive the temperature of -83 centigrades. The 16th of November should definitely be called the day of Caenorhabditis elegans (as this is the name of the mysterious creature), that is of a worm which is under high scrutiny from the researchers at ICFO. And there is nothing strange in this fact - the worm´s neurons have the unique capability of regenerating after damage. As prof. Pablo Loza-Alvarez told us, we still do not know how that happens and what factors trigger the regrowth, but getting closer to the answer could possibly mean that in the future the worm´s regerating powers will be used in humans to stimulate the neural system regeneration.


One of those who cultivate worms in a biolab is Cesar Alonso Ortega, who showed us how to prepare a sample for further observation and explained meticulously the details of its anatomy. But the best was only to come. In order to observe how the neurons regenerate Omar Olarte hits the worms´ neurons with a beam of laser light which destabilizes the structure of the neuron (or muscle, for example). Within 12 to 24 hours, depending on the scale of the damage and the worm´s condition, the neurons regenerate. The smallest possible diameter of a beam of infrared laser light is 300 nanometers, that is 0.0003 mm.

But apart from using the microscopes, ICFO actually works at enhancing the quality of those already existing. The main aim is to construct such small but still very precise lasers that doctors would be able to use in their clinic practice or even take to the patients´homes. In the future they will probably help monitor degeneration of neurons in Alzheimer or watch the influence of medicines on the neural system.


Wednesday

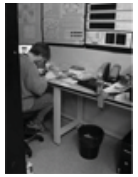
17-11-2010

Imagine what, actually apart from writing about science we also have interest in daily and regular things, such as beaches or sunbathing. Well, the weather was not too appealing so we were forced to resign from the latter one, but visiting the local sandy beach in Castelldefels really refreshed our minds. And we also managed to collect some shells for our friends who are now fighting with bad weather back in Poland and in Romania.



Today we finally met prof. Niek van Hulst, something I personally have been waiting for since Sunday. Just imagine the possibility of seeing one single molecule emitting fluorescent light, think of the possibility of lighting up proteins that cover cell membranes and observing their activity which can in effect lead scientists to discovering early changes in cells affected by immune system diseases as proteins are then differently organised on cell membranes. All this thanks to nanoantennas. They are not normal antennas like the ones that enable you to watch SkyNews in the evening, but antennas that work at optical frequencies. Just take an optical fibre, put metal around it, provide the metal with a small hole at the top, then carve a stick at the hole and what you have created is a nanoantenna. Simple? Not really, but Niek´s team is already working at enhancing the quality of nanoantennas, so that they can perform molecular images with the diameter of a molecule being 20 nanometres, which is 20 times larger than a size of a typical molecule. A huge development taking into consideration that the team started with images in which a single molecule had the size of 100 nm.


The real challenge of research in nano-optics is to bring people from different branches of science together, for example biologists and physicists. ¨A biological lab is like a kitchen, but you need it. You need people who are used to working with pipettes¨, says Niek. However, whom you need are not only biologists but also skilled technicians who can perform the ¨Michelangelo work¨ of preparing a nanoantenna. So at a certain point it is all about cooperation. And this cooperation between different specialists, people from various backgrounds, with different experiences or coming from other countries is what ICFO successfully achieves. Communication is something that not only works well there, but is also worked at in the Institute. Niek´s group aims at developing quantum communication, that is making an ion emit a single photon which can be then received by another ion. So far ions can only ¨talk¨ in certain conditions, that is in low temperature and vacuum, but who knows – maybe in the future quantum communication will enter our rooms?
After lunch we visited nano-optical labs and Daan Brinks explained to us how their team tries to join microscopy with nanoantennas and molecular imaging.

Daan told us that what he was fascinated by at ICFO was his first witnessed response of a single molecule. It was 3 o´clock at night and he went outside to shout into the sky with joy and satisfaction. No wonder - he had solid reasons for doing that ;) Now Daany is working at investigating the quantum basis of the transition of solar power into ATP in plants. Hope this research proves successful…

Thursday

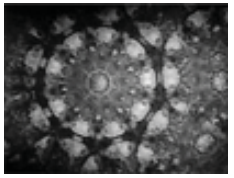
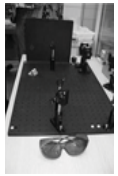
18-11-2010

Today we joined a group of students from St. Paul´s School who visited ICFO. Thanks to the Science Week many scientific institutes and labs have opened their doors to visitors, allowing them to observe researchers at their work. We were all gathered in the Auditorium, where Alejandra introduced ICFO to the students and described some of the most fundamental experiments undertaken at the Institute. Once again C.elegans hit the publicity. This tiny worm seems to be more popular than organic solar cells or nanoparticles of gold. I wonder how it does that…

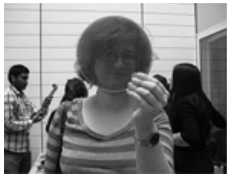


We then accompanied the students during their attempts to perform their own experiments with lasers, telescopes, periscopes and many, many other scientific devices. Then we popped in Omar´s labs to see the lasers and listen about the nanosurgeries.



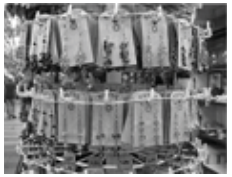




Friday

19-11-2010

Yesterday in the afternoon Andrada and I went on a nice trip to Barcelona. After alighting at Passeig de Gracia we decided to head for the Gothic part of the city, but that took us a little time. And in the meantime… Andrada was looking for a dress, but the only thing she could spot in the crowds were earrings.

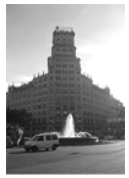


We also found some funny hats.

And a little paradise for every woman in the world (which you can see on Andrada´s blog) ;) But this time there was no buying involved.



But apart from girlish stuff (that is shopping and window-shopping) we have also done some sightseeing.




Today we also learned more about the prototype of the head-up system and about the tweezers, which I am going to write my article about. The tweezers can be used in many different ways - from catching a cell to developing a personal chip-based diagnostic laboratories in the future. A caught cell can than be stretched and scientists, with the help of Raman spectroscopy, can check how this stretching influences the cell´s chemical composition. As Monica Marro Sanchez told us, the optical tweezers research group at ICFO has already proven that the release of oxygen from red blood cells in the capillars is caused by the small diameter of the capillars. Red blood cells get stretched and by that they release oxygen into the surrounding. Well, it seems to be the end of our fascinating trip into the world of science. I really wish I could stay longer at ICFO as I have really learnt a lot, but everything comes to an end. I hope I will have a chance to enrich this blog a bit from home, but it is unfortunately everything for today. Hope more science journalists will have the occasion to visit ICFO in the future.

ICFO -Barcelona (SPAIN)
//Andrada Fiscutean

About me

Education and training:
BA in Math & Computers, MA in Communication & PR

Professional experience:
News editor & anchor at PRO FM Bucharest / Science Journalist at Descopera.ro
Summary:
12 years of experience in Radio (news department)
6 years of experience in TV (news department)
3 years of experience in Newspapers industry
3 years of experience in Online Media

Awards and personal grants:
Science Journalism Fellowship: EICOS: Computational Biochemistry, Biophysics, Immunology & Vaccines.
Science Journalism Fellowship: National Press Foundation, Washington, D.C., USA: Vaccines & AIDS Training @ CNN Center in Atlanta, Georgia

Monday

15-11-2010

The Institute of Photonic Sciences would make Captain Picard leave his Enterprise and come here to work. Scientists from all over the world gathered in Barcelona, in a challenging environment, and are trying to find ways to use light to solve some of today's biggest problems. And their work touches fields like medicine, biology, ecology, national safety, aviation and many more. Over 200 people are found here in research labs or in the offices, their goal being…

Although everyone here tries to solve high complexity puzzles on a daily basis, you'd get the impression that they come to work for fun. Happy faces, colorful corridors, and the table football tournaments make you forget, for a moment, that this is actually a research institute, where distinguished specialists try to make our lives better.

We walked all over the Institute thanks to Alejandra Valencia, who explained to us some of the research that is going on here. And many of the projects could be an inspiration for science fiction writers. Somewhere in the building, a group of researchers focuses on producing a paint-like solar cell that is transparent and could be applied, for instance, on a window. Others try to develop a Robocop display or sensors for harsh environment. New generation lasers could prove to be highly effective in medicine. Imagine nanosurgery, a method that is successful so far in worms and will probably be used in humans in 10 to 20 years from now. But other fields also benefit from the research done in Barcelona. The institute is working with ESA on a quantum cryptography project, that uses quantum entanglement.

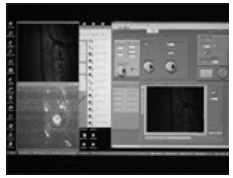
Still, one of the most important use of lasers is in life sciences. As Susana Santos explained, light can be used in diagnose, treatment and imaging. Researchers have been able to capture cells with the help of lasers beams.

One more thing is left to be said: Beam me up, Scotty!

Tuesday

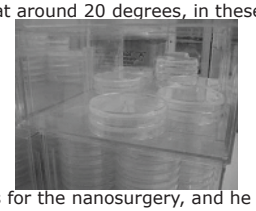
16-11-2010

Breaking news, today! I am one of the very few people on the planet who performed Laser Nanosurgery. You could think of this, in a way, as noninvasive laparoscopy taken to the next level. With the laser and the powerful microscope I was able to cut a tiny hole, about 0.0003 millimeters in diameter, in the rock star of this research group - the 1 mm worm called C. elegans. These instruments allow you to make not only small incisions, but also really precise ones. In the red circle you have my nanosurgery.

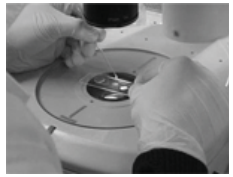


The worm that I performed nanosurgery on is, in fact, a strange being. Its life starts as an embryo, then it grows from a larva into an adult in not more than three days, during which time it multiplies it's length by 4, reaching 1.1 mm. This is a nice picture of the patient:

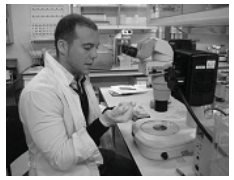
Although the lifespan of the little creature is around 20 days, it can live for even a year with almost no food. C. elegans are stronger than us when it comes to low temperatures. Lab technitian César Alonso Ortega keeps them frozen, at - 80 degrees Celsius, and brings some of them back to life when he needs them. Today, he used some of his worms kept at around 20 degrees, in these Petri dishes.



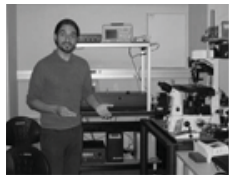
He showed us how to prepare the worms for the nanosurgery, and he let us do it.



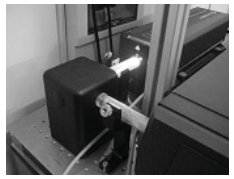
Still, he preferred to use his own sample…



We then took the sample to the big laser machine, where Omar Olarte, a physicist now specialized in worm surgery, showed us his toy…



… that has a cool green light.



Everything we did today was in the research group of Pablo Loza-Alvarez.

At the end, here´s how a million euros look like (that is the price of this new microscope):

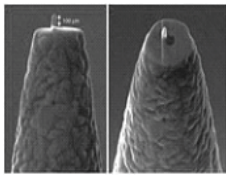
Wednesday

17-11-2010

Imagine a TV antenna that is no bigger than 0.00003 mm. This unusual device, around 20-30 million times smaller than the regular one, is in fact a very powerful tool. It won't be used to capture TV signal, but it could revolutionize all that we know about life sciences. Nanoantennas were our toy, today. But we'll talk about them later. First, we have some pictures we took in the morning, at the beach, which takes no more than 15 minutes to walk to from the institute. Mediterranean Sea is behind me.

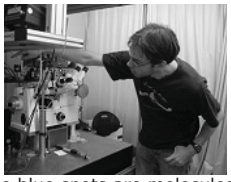
Dominika and I thought of searching for seashells for us and our friends and family, in the morning. The beach was not crowed at all, there was only a fisherman somewhere far away. And yes, we found some perfectly shaped seashells:

But, enough with the daydreaming :). We headed back to the institute to play with the nanoantennas. People from Niek van Hulst's research group are very succesfull in this field and now struggle to improve this device. The nanoantenna is basically that tiny thing on top of the cone below, close to the hole:



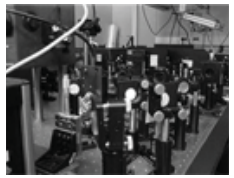
(picture from: http://www.nature.com/nphoton/journal/v1/n2/full/nphoton.2006.93.html)
Microscopes are spectacular tools, but when you want to take a look at a molecule, things get fuzzy. What nanoantennas do is to give them a hand, with the help of light. But things get complicated when you work with devices as small as 0.00003 mm. "Anything you're used to, doesn't work anymore", Niek told us. They make these nanoantennas with the help of a very precise laser, like a sculpture. "This is really Michelangelo", Niek said.

The work this group does could give an unexpected impulse to life sciences, as the researches from this field would be able to see what really happens at the molecular level, how things work. Immunologists could see how antibodies do their job, for instance. But, also, the nanoantennas could help developing new ways of communication. But, in order to succeed, "we have to work together. I'm a physicist, this is too much kitchen stuff for me. We need biologists. You know, a biology lab looks like a kitchen", Niek says. His colleague, Daan Brinks, showed us the labs and told us some of the discoveries are made at 3 a.m. in the morning.

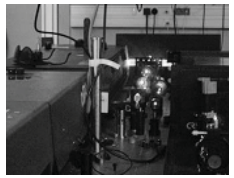


This is what they see on the computer. The blue spots are molecules. Actually, they are a bit smaller than they look on this image. The nanoantenna technique is not yet perfect.

The laser they use looks like it wasn't made on Earth:



The green light seems to follow us here, wherever we go :)



I'll end my post with a picture I took this morning. It has nothing to do with nanoantennas, but even journalists or scientists need to relax and think about other things every now and then.

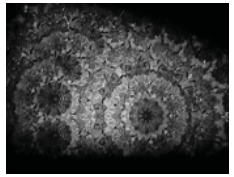
Thursday

18-11-2010

Science day, today, at the institute. High school children came here to better understand light and to find out what researchers do. So I took the 3D glasses and I joined them :)

First, Alejandra told them what light is and what the researchers at ICFO do, then everyone got the chance to see some laser experiments. The students were literally amazed at what light can do.

They have enjoyed some of the properties of light and lenses.



See this frog on top of the black flying saucer-like object? Actually it´s not there. It´s inside the object, on the bottom of it.

Someone measured the thickness of the human hair, while somebody else thought about singing "The Red Submarine" song…

While having fun, they've learnt that light could be a tool for everything. It can help us see better, even touch or smell, can help us develop ultrasecure communication between long distances, better ways of treatment, or ecological devices. Experiments that are going on at ICFO cover a wide range of fields.

Then, they visited the nanosurgery lab, where Omar explained them how he cuts the neurons of the worms with the laser beam.

After that, everybody knew that discos wouldn't be that interesting without laser technology. Basically, that was the students´ conclusion of the visit to the institute:)

— o —

The afternoon was dedicated to visiting Barcelona. We enjoyed walking on the old streets of the city…

… where we found the Paradise…

Still, what we bought were books. I was happy to find one of my all times favourite, in English: Dune by Frank Herbert.

Barcelona was full of life! There was someone on the street pretending to be The Mask, in La Rambla area…

Pigeons were flying so close to us…

We walked by a kiosk with hundreds of chocolate bars and cakes. They even have FC Barcelona sweets!

After such a relaxing afternoon, we couldn´t wait for the next day to come, to see what surprises are there for us at the institute. So we headed back to Castelldefels.

Friday

19-11-2010

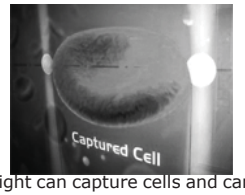
Every driver will be in the future a Robocop, or at least this is what a group of laser researchers from ICFO are working on. They have developed a so-called "head up display", that could replace the front window of our cars. Imagine that, while you are driving, you can see on your windshield the speed, the weather conditions, the GPS coordinates and maps and even the name of the streets that are crowded. Just like our friend from the SF film saw data about law breakers.

picture from: http://en.wikipedia.org/wiki/File:Robo_close.JPG)

The project is made in close collaboration with Seat and the prototype car will most likely be presented in February, Silvia Carrasco from the institute told us. Such displays already exist, but they are not compact and are very expensive, therefore, not available to the public. Military helicopters and even fancy cars are equipped with some of these devices. "What we did was to create a head up display that is cheaper, lighter, brighter and more compact. How we did it I cannot tell you. It´s confidential", Silvia said. If all the cars were to have such display it is believed that the number of accidents will decrease, as the driver will be able to look at the road all the time.

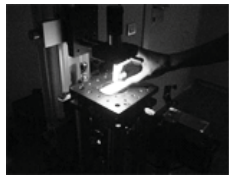
But that´s not all. Researchers at ICFO have another project that everyone might benefit from in a short time: 3D display for mobile phones :).

The rest of the day was more technical. We saw what optical tweezers can do. Long story short, cells from our body can be trapped only by using lasers. That´s an image from one of the posters at ICFO.



It sounds like SF novel material, but yes, light can capture cells and can keep them prisoners until researchers study them, as it happened to that red blood cell from the picture above. It is trapped between those laser beams and scientists can stretch or compress it. Alejandra Valencia showed us how it is done.

Let´s take a look at the sample. Those molecules have been trapped many times in the name of science.



Monica Marro Sánchez told us a bit about her work. She said that tweezers can have all kinds of medical applications. We could even have a personal doctor - a chip on which we put some blood and tweezers can tell us if we are healthy or not. Also, those devices can show how a virus infects a cell. "Without tweezers, you won´t have any tool to move things at this level", she said.
But how can we hold and move things with light, we asked them. "Basically it works like the hairdryer, Alejandra said. The hairdryer can hold a ping-pong ball with the jet it produces. More or less, this is what the laser does".

(poster from Alejandra´s office)

And with those tweezers our visit to ICFO ended. Thank you, Sinead, for taking care of the two of us. It was a pleasure for us to be here, to have fun doing experiments and talking to the scientists. I believe that a program like this one could definitely help science journalists in the beginning of their career.
andradaf@gmail.com

Additional info:

Link to my website:
www.andradafiscutean.com
My profile is also available here:
http://ro.linkedin.com/in/andradafiscutean
Additional relevant information:
I like journalism, astronomy, nanotechnology, physics, SF literature, art

ENEA - Roma (ITALY)
// Agnieszka Adamska

About me

Education and training:
B.A. in Journalism and Social Communication (specialization:in the media),
Maria Curie- Skłodowska University in Lublin, Faculty of Political Science
M.A. in Political Science (specialization:local government and local politics),
Maria Curie- Skłodowska University in Lublin, Faculty of Political Science

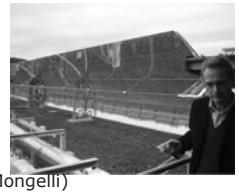
Professional experience:
Local correspondent in "Observatory of Media Freedom in Poland" (Helsinki Foundation for Human Rights)

Awards and personal grants:
Scholarship of Piotr Mroczyk

Monday

15-11-2010

Hallo! Cześć (in polish) :) My name is Agnieszka Adamska. I come from Poland. Like you know (from my profile) I finished two faculties: political science and journalism at Maria Curie- Skłodowska University in Lublin.* And now I'm on the first year of PhD in political science.
RELATE (REsearch LAbs for Teaching Journalists) is founded by the EC under the Research programme, Science in Society, FP7-SiS. Project partners are: EJC (European Journalism Centre), ENEA (Italian National Agency for New Technologies, Energy and The Environment), EPFL (Ecole Polytechniques Fédérales in Switzerland), TÜBITAK.
This project it's a great opportunity for journalists to know labs across Europe. To enhance dialogue between researchers and journalists.
80 journalism students had a chance to visit (for example):
• Max Planck Institute for Astronomy in Heidelberg (Germany)
• Estación Biológica de Doñana in Sevilla (Spain)
• European Southern Observatory, Munich, Germany
• Bilkent University, Ankara, Turkey
• Institute of Photonic Sciences, Barcelona, Spain
• Universitá di Bologna, Italy
Like Maria Curie- Skłodowska said:Nothing in life is to be feared. It is only to be understood. So me and other participants (Greta, Yolanda, Inma, Elvir, Ewelina, Antonia) will spend 5 days in ENEA in Italy trying to understand and create better connection with researchers.
The Casaccia Research Centre is ENEA's largest complex of research and development facilities (it was set up in 1959). The first day started from meeting in "Minerva" room with Fabiola Falconieri. She described RELATE project. Fabiola is working in ENEA Web TV (http://webtv.sede.enea.it/index.php).
Later we spend time in labs:
• Thermodynamic Solar Plant (L.Rinaldi)



Sismic and Dinamic Tests Hall (M.L.Mongelli)

We heard some information about system "Earlyprot" developed by ENEA for earthquake protection of movable and semi movable Cultural Heritage Objects: high vulnerable statues and museum teches. Shaking Table experiment.

"Semi-Anecoich" Chamber (P.D' Atanasio, A. Zambotti)

After this interesting tour we spend time in our newsroom, working and searching materials for our articles.

* Maria Curie- Skłodowska - She was the first woman in Europe to receive her doctorate of science. She also became the first woman to win a Nobel Prize for Physics. The award, jointly awarded to Curie, her husband Pierre, and Henri Becquerel, was for the discovery of radioactivity (1903). She won second Nobel Prize (this time in chemistry) for her discovery and isolation of pure radium and radium components. (http://www.staff.amu.edu.pl/~zbzw/ph/sci/msc.htm)

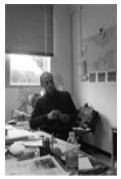
Tuesday

16-11-2010

CLIMATE CHANGE LAB

The important thing is not to stop questioning. Curiosity has its own reason for existing. Albert Einstein
Today, we spend time in our lab. My and Greta's lab is climate change modelling lab and our tutor is Dr Sandro Calmanti. Sandro described how the lab works and then we had a conversation with Gianmario Sannino about the theoretical and numerical modeling study of the exchange flow in the strait of Gibraltar.

At first, there was few ocean modeling groups- physical oceanography group. After this they move to the climate research, they started to use an atmospheric model. So the lab had two tools: one to simulate the ocean and the second one to simulate the atmosphere. To simulate the atmosphere researchers use the same tool as to do the weather forecast or to understand that the system is changing. This lab connected this two things ("couple them") and now there is a system, which simulate one time atmosphere and the ocean -as a one system. This tool is use to study issues concerning subject of climate changing.
I asked Sandro about climate change concept- I was interested in scientific point of view. He explain us the final objective is to study the impact of climate changes. And that is why Sandro's lab is modelling impact of climate change.
Sandro's job contains two things: following the development of numerical simulation and analyzing data. He also explained as two types of simulation: one is the present and past climate and the second one is scenario for the future.
We also discussed about scenario for the future from film ,,The day after tomorrow" and it is possible or no? (after extreme weather events the ice age will come back- link to trailer of the film: http://www.youtube.com/watch?v=JQDSAiPiEDU). Sandro said to us that it is possible that the circulation stop and then the north part of our planet colds down. But what is not true in the "The day after tomorrow" scenario? That this could happen in one night. But the scenario is based on realistic signs from the past. Sandro said that the whole story is just science- fiction.
CLIMATE- how the whole planet behaves over a very long period of time.
CLIMATE CHANGE- an event where you change the face of the earth.
After very interesting conversation with our tutor Sandro we went to another researcher - Gianmario Sannino. He is oceanographer. He explain us the theoretical and numerical modeling study of the exchange flow in the strait of Gibraltar.



Gianmario Sannino

The Gibraltar is so important, because through this channel flows more than 80% of the water leaving Mediterranean Sea. Circulation characterized by a two- way exchange, with an upper flow of fresh and warm Atlantic water spreading in the Mediterranean basin, and a lower flow of cold and salty Mediterranean water. The problem are numbers- how many water exchanges between the Atlantic and the Mediterranean. It is very difficult to monitor, so they use numerical simulation (it's not so expansive). Simulation is mathematical memory. There are many numerical models, because everyone have different way to translate this numbers.
After lunch we had a discussion with Fabiola about: Is my lab newsworthy? Because of…what?

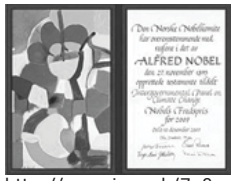
Wednesday

17-11-2010

Today I had a great opportunity to meet Dr Vincenzo Artale. He is the most important person in climate change modelling lab- the chief. I could describe his research interests, publication, work experience, etc. , but this is very long list, very interesting list. If you want to know more details/ informations about Mr Artale you should click this link: http://utmea.enea.it/people/artale/vincenzo%20artale_cv.php

Dr Vincenzo Artale

You should also know that Mr Artale was involved in IPCC. But you are thinking….what is IPCC? So…. IPCC (Intergovernmental Panel on Climate Change) is an organization, which was established by UNEP (United Nation Environmental Programme) and the WMO (World Meteorological Organization). IPCC has a scientific structure. Thousands of scientists from all over the world are working for IPCC for free. IPCC contains three Working Groups, a Task Force and a Task Group.
The most important prize for IPCC is 2007 Nobel Peace Prize "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change". Later the IPCC established a IPCC Scholarship Programme with the founds received from the 2007 Nobel Peace Prize award to the IPCC (http://www.ipcc.ch/ipcc-scholarship-programme/ipcc_scholarshipprogramme.shtml#).



http://www.ipcc.ch/7g0_nobel_popup.htm
I asked Mr Artale about the main task of his laboratory. He said that the lab is trying to connect the main question related to the problem of the energy. Just to control the development of some kind of energy and security and relation with environment (not only for "today", but also for the future). He explained us what kind of laboratories contains his department: model climate change (impact of climate change), observation of the climate ability, security- model for extreme events. Mr Artale said that his main aim is now to connect all tree, but it is not easy do to it. My second question to Mr Artale was about meaning of "climate change", from scientist point of view. He answered me that we could talk hours about this, because it is very big issue. But later he used an example of weather prediction.
Conclusion: THE CLIMATE CHANGE is the human impact on the climate. Natural with anthropogenic.
My lab friend Greta asked Mr Artale about the situation of science in time of crises. Mr Artale answered on his example: money for his cases came from european founding and the salary comes from government. And the last question was about what kind of connection is between Mr Artale work and the business in Italy.

Thursday

18-11-2010

PROBABILITY

I was sad today, because this was the last day in our lab. But I think very varied. At first, me and Greta had an interview with Paolo Ruti (http://clima.casaccia.enea.it/people/people.php?dest=paolo%20ruti)

Dr Paolo Ruti

He described his activities and projects. For example, he was engaged in management activities (on international level he was part of the management group of European project on the south of Africa). In ENEA he is coordinating laboratory on climate modelling and impacts.
We asked Dr Paolo Ruti about conception of climate change and "green advices". So, the scientific community is trying, for example, increasing the number of meetings using online tools to reduce the travels. Because when you are travel you are consuming CO2. If there is a meeting on european level they suggest , if it is possible, to use train instead of plane. So there are some good practice that the scientific community is trying to apply. Mr Ruti said that the most important thing we can do is to increase the awareness and the education. We should speak, talk and teach students than to spend a lot of money for (sometimes) changes/ behavior of life, which is difficult to change. The most useful things to reduce CO2 is to invest money in the education of the young generation. Mr Paolo Ruti said that the problem is also in the political level how to manage the town- to use public transportation instead of using a car.
There are many people working on the analyze of probability of some kind of events and how this probabilities will change in the future.
Mr Ruti also described projects, which concern Africa.
And very important question of the interwiev with Mr Ruti: how the journalists can help?
He said there are two ways:
1. Education- journalists have power to educate people
2. For Africa case- journalists should not forget about Africa

Journalists have the power to introduce some important arguments in the society.
After an interview with Dr Paolo Ruti we had an interview with our tutor- Dr Sandro Calmanti. I asked him about two projects, but more informations you will read in my article… :)

Me and Dr Sandro Calmanti

Friday

19-11-2010

This was our last day in ENEA. We had presentations about what did we learn during RELATE project and what we will do with this informations.
This project was a great opportunity for me. I met great researchers- and I just want to say "thank you" for spending time on interviews and explaining everything.Also a big "thank you" for Fabiola Falconieri- she took care of us- always advising and helping.
And what about my RELATE friends: it was my best group ever.I hope we will stay in touch :)

ENEA - Roma (ITALY)
//Greta Ivova Petrova

bulgarian
21.05.1989
greta_fsg@abv.bg

About me

Education and training:
3rd year journalism student in University of national and world economy, Sofia, Bulgaria

Professional experience:
I was working as a reporter about 6 months in Infomation agency "Focus" in Bulgaria. At the moment I'm working in the Public Relations Department, part of the biggest bulgarian natural gas distribution company Overgas Inc.

Monday

15-11-2010

Today was my first day in Cassacia Research Center – the small town of the Italian scientists, a small sensitive place. A place, where you can find more than your expectations: knowledge, science spirit and friendly people.
Our tour in the ENEA started from Thermodynamic Solar Plant Laboratory. Mr. Luca Rinaldi told as more about solar power technology. He showed us a system with parabolic shape mirrors which are following the sun and produce energy.
After that we go to Seismic and Dynamic Tests Hall where Mrs. Mongelli told us more about what simulations are made in the laboratory, how scientists in ENEA work for preventing the damages after the earthquakes – test the isolation of buildings for seismic attacks, sonic and ultrasonic tests and showed us how the system works.
The third laboratory where we've been was "Semi-Aneocoich" Chamber. There Mr. D'Antanasio and Mr. Zambotti demonstrated us a test about the electromagnetic waves around us (our mobile phones had no connections in that moment) and how they reflect to the environment.
After lunch Mrs. Fabiola Falconieri told us the story of ENEA and more about its activities and projects, what we can expect next few days and what we have to do.
After that we spoke about climate change and peoples guilty and she said: "If you have knowledge – you have a power. If you have power – you have the responsibility." So let's take the future in our hands like journalists and change the people's thinking.

Tuesday

16-11-2010

The climate is changing. Everybody knows that. But most people don't know why. That's what journalist has to explain to people. Today, the second day, our tutor – Dr. Sandro Calmanti, led us to think about planets behavior and how it's changing the face of the Earth.
He was our turgid in the Clime MODE and told us more about the laboratory and about the people who works there. Their general objective is studying the impact of climate changing. Scientists make 2 kinds of simulations – 1) what's the present situation and what was the past and 2) simulations for the future (for the next 50 years).
After simulations scientists write scientific topics and translate the information to practical actions. Then they give this information to the Ministry of economic development and the Government takes the decisions what to do.
"Prediction for the future must come only from global simulation." That said us the oceanographer Mr. Gianmaria Sannino. He is one of the people who are most familiar with the climate of the Mediterranean, what defines it and why. He made the first 3D simulation of Gibraltar. At the moment he's working on a project for produce energy from the tides at Gibraltar. This is something new which is not done before and I can say that it is a big challenge for teams in the laboratory.
And tomorrow - a new day, new challenges, new discoveries. The City of Michelangelo has many faces and one of them is ENEA.

Wednesday

17-11-2010

Our lab is part of panel for Modelling and Observing Regional Systems. It works on understanding and predicting climate variability and change at the regional scale. Key activities include satellite observation of the ocean, the development and maintainance of a regional Earth System Model for climate change studies, the implementation of very-high-resolution ocean models for ocean forecasting and process studies; the study of large scale ocean and atmospheric dynamics. It also included modeling and observing regional climate systems, designing energy strategies and providing new technologies for the adaptation of infrastructures and human activities to environmental changes with special emphasis on low-carbon society. The director of Technical Unit for Energy and Environment Modeling is Mr. Vincenzo Artale. He is a part of Intergovernmental panel for climate change, which won a Nobel Prize for peace in 2007.
Third day. Today was the day to make interview with Mr. Vincenzo Artale and we were waiting for it. After several minutes at the lab we understand that Mr. Artale is here. The best thing today was that we met him and took an interview. We asked him many questions about his work and lab's activities. He welcomed us and answered fully all our questions. That was the main activity today.

Scientists are strange people. They know so much, but they can't explain it to the public and that is the biggest problem between them. Many people think that they are crazy, but they aren't. They are too much addicted to their work and they forgot to connect with the audience. They forgot the way to do this. It is so unfortunate, because people can learn a lot about life firsthand from the scientists, rather than the books.

Thursday

18-11-2010

Let me start with a little lyrical deviation. Science always was moving humanity forward through the ages. We need it if we want to develop ourselves. Our children need it if we want they live better than us. Science is like a flower - if you do not watering it with desire, it will wither.
Forth day. Today we met Mr. Paolo Ruti. He was the right person that I need for my article. He is working at the Climate and Impact Modeling Lab and his activities are connected with atmospheric flow, monsoon systems, climate simulations, climate change at regional scale, extreme events in the climate system and environmental risk assessment.
I asked him how we can reduce the greenhouse gases and he answered: "We must increase people's awareness and education". His opinion is that the governments must invest more money in education to prevent the problem and must realize more activities to improve the society. I'm totally agreed with him. "We need a better relation with the newspaper's readers and you, like a journalists, have the power to introduce and popularize our issues", said us Mr. Ruti.
He also told us that scientists don't have good skills to predict climate changing in Africa for the next 20-30 years. Because the risk is a probability – nothing is sure. Only we know that impact of climate changing is on agriculture and water and the scientists are trying to make a platform for water management and risk view.
After meeting with Mr. Ruti we spoke with Dr. Sandro Calmanti about the Ethiopian projects "Leap of earlier assessment of protection" and "Risk View", which are funded by European bank. During the projects researchers are collecting climate scenarios data from all over the world because they are focused on understands is it possible to create a risk management. "Modeling of climate is an international effort. You start a tool when you can improve the forecast", told us Dr. Calmanti. He thinks that we need ability to understand how our planet behaves.
Let me finish with a little lyrical deviation. For scientists it's difficult to do pure science because each one sector pursues its own interests - the business wants to dispose its production, the government wants to protect nature, but not to stop the economic development, and people just want to live well. Like we say in Bulgaria: "Хем те боли, хем те сърби"("You want to scratch it, but it hurts"), which means you can't do this things together because it doesn't works.

Friday

19-11-2010

The last day was the best. Each of us made a great presentation about our work in laboratories, for meetings with scientists on experience and ideas for the article.
I told about my expectations before I join the project, about my experience during visits to ENEA; I presented my findings and conclusions of my staying in Cassacia and described what will be the control points in my journalistic material. Fabiola has helped us to integrate successfully into the project, showed us the right way to survey researchers. Scientists listened to our presentations with interest, and then we made a lot of pictures and leaved with a smile on our faces and warmth in our hearts.
It was a great pleasure that I was part of the RELATE project. The experience and knowledge I gained will serve me in my journalistic practice.
This week was one of the most amazing in my life. I met many new people, made a friendship with them, even argued with some of them, but eventually loved them all. I tried Italian food and I liked it, I visited all the interesting places in Rome and loved them. This city is incredible and all the people here are very warmly. Thanks all my RELATEr friends – Ewelina, Yolanda, Anieszka, Inma, Antonia and Elvir for shared experience, fun and memories that will stay forever in my heart!

ENEA RELATErs

ENEA - Roma (ITALY)
//Yolanda Alamillo Jordà

Spanish
21/06/1986
yolanda362@hotmail.com

About me

Education and training:
- Master Degree in Public Relations and press offices, Universidad Autónoma de Barcelona, UAB, (Spain), October 2009 – June 2010.
- Fordham Global Gateway Program: Public Relations, Marketing & Media Program, Fordham University (New York), June 2010
- Graduated in Journalism in the Faculty of Communication Sciences (Universidad Autónoma de Barcelona, UAB, Spain), 2004 – February 2009.
- EF International Schools of Languages, Oxford (UK). Preparation for CAE exam (Certificate of Advanced English, Cambridge ESOL examinations). March – June 2009.
- Certificate in Advanced English (CAE), University of Cambridge (ESOL Examinations).

Professional experience:
- Internship in Communication and Marketing agency, "Imago, marketing y comercialización S.L", located in Barcelona city. Working in communication department and helping marketing. Management of events, press releases, data bases and journalistic monitoring. (Some of their clients are: THQ videogames, Turner Group with television channels as TNT, TCM or TCM classic, Luke International, etc.). October 2009 - February 2010.
- Internship in "Catalunya Ràdio" (Public Radio Station of Catalonia) in Barcelona, society section (news department). Writing and taping news for this section. Also helping the 24 channel of the radio station "Catalunya Informació". October 2008 – January 2009.
- Internship in "Diari de Tarragona" (newspaper; working in the local office of Salou) summer 2008. Working as a journalist in sections as "Campo de Tarragona" (Tarragona Area).
- Press department of ECREA 2008 press conference, about communication policies in Europe (25 to 28 November 2008, held in CCIB, International Center of Conventions in Barcelona, Spain).
- Internship in "Diari de Tarragona" (newspaper; working in the local office of Salou) summer 2007. Working as a journalist in sections as "Costa" (coastline cities).

Monday

15-11-2010

Today it has been the first day in my stage as a member of the Relate programme in the research centre ENEA of Casaccia, Italy. As a young journalist interested in science, I am very aware that society needs to have more chances to know about science and also to be able to understand and have their own opinions. So that's why we are here, to make science reach people, definitely a very challenging and encouraging project which will let us broaden our professional experience and knowledge.
The day in ENEA has been very busy and productive. First of all, we met with the responsible of the Relate programme in Rome, Fabiola Falconieri, who has been introducing us to all the work that is done here and also being our tutor. My own impression has been very good from the very beginning because even tough science it can be a complicated field, Fabiola and the rest of researchers are very nice and willing to help all of us, which I appreciate a lot.
After our first contact with the installations of ENEA this morning, we went straight away to the Thermodynamic Solar Plant. It was a very interesting topic, because we learnt how solar light produces heat that can reach up to more than 500 degrees, that then produces the steam needed make electricity. The plant itself was quite nice to see. One of the things which I find more interesting is that ENEA is working with the goal of being able in the future to produce the energy that will be useful to power the hole complex. I think is very good to promote the main theme and motivation of the laboratories, which is the sustainability.
After this, the second stop was waiting for us in the in the Seismic and Dynamic Test Halls. There we learnt the last techniques to protect buildings from the external impact that produce natural phenomena like earthquakes. The scientist in charge explained us how they make research with sensors that give data so they can analyze how the buildings react to the movement. Therefore, they can design techniques to protect them better. It was quite impressive for me that they have shaking tables where they can test and simulate this movement in situ. I also want to point out the fact that these pioneer techniques are very popular outside the country, which I think is very good for the promotion of the centre and will encourage more companies and governmental institutions to give it more funding and distribution.
Next to the second lab we visited the last laboratory for the day, the Semi-Aneocoich Chamber. This was a bit more technical subject but thanks to the explanations of the researcher we could manage to get the procedure. Inside the chamber they study how electromagnetic fields coming from antennas affect different devices and machines. The main reason of doing this work is because they test how different machines affect to one and other while working in the same space. I thought it was very impressive the effects that an electromagnetic field can have on some machines, and specially on military equipment which has to be very exact and accurate.
By the end of this visit I can say I am very excited to keep on learning during this week. I want to make the most of the great opportunity we have while working with researchers and spreading science in society. I am looking forward for the next step.

Tuesday

16-11-2010

Today it's been a very productive and interesting day. This morning I was very curious and nervous to find out more about this fascinating field within physics that is spectroscopy.
So after checking in ENEA facilities, our tutor Mauro Falconieri, was waiting for us, my colleague Imma and me, ready to introduce us to the labs of Spectroscopy and science of materials. But let's go a little bit back on time. Before going to the lab I wanted to make clear on my mind what spectroscopy means and how I can explain it. After reading about the subject on the internet I would say in a standard language, that is the science that studies how substances react when they are being shoot by light and the exchange of energy that happens to them. To do this, spectroscopy uses beams of light, lasers and lamps among them, to shoot the light to the materials they want to study, mainly nanoparticles. After that, the sample gives a graphic of the different wave balances within the component after the shooting. Physicians can determinate reading this information properties like conductivity, thermal dispersion or optical properties.
Going back to this morning, when we got to the lab we first met the people working with our tutor, the researcher Rosaria D'Amato, and also the researcher Flaminia Rondino, that will be assisting our work during these days. Just after the first meeting with them, Mauro took us to the labs, one of the places that impress me more. As a journalist it's a great opportunity to get to know the subject I have to write about for so close. Mauro explain us the main machines they use to study different materials and nanoparticles in their different spectroscopy projects. These different machines use different kind of lasers that adequate to the aim of each project.
After our intense introduction to the spectroscopy world we started speaking with Flaminia Randoni, who is a researcher working in ENEA specially for the project Nanohex, that involves 12 different organizations in 6 different countries. The project is developing cooling fluids to refrigerate machines for industrial use. It was very cool and exciting to see her working with the laser while she was giving us all kind of technical details. Her mission in the Nanohex project is to test different components for the cooling fluids to see which are the ones with the better thermal properties.
Flaminia is working now with the element Titanium (Ti), which she disperses in water or ethanol to be able to study it by means of spectroscopy techniques. It was quite impressive for me how accurate and exact it has to be the preparation of the set of lasers to be able to get the sample. We received a brief explanation about how the lasers that she uses work and how the beams of light have to merge to shoot perfectly the light to the Titanium dispersion.
Los of data and new information to process for today!:) But I hope spectroscopy will get clearer for me while we spend our mornings in the lab learning everyday more. Now it is also time to discover the beautiful city of Rome, to get the energy for another busy day in ENEA :)

Wednesday

17-11-2010

It seems I just got here and is already the third day of our Relate Programme. Today I woke up and my head was going back to spectroscopy and all the explanations I received yesterday in the laboratories. I want to know as much as I can and make the most of the time here so I was very eager this morning to ask lots of questions to our research team and keep on learning.
Our morning started with Ruchika Bagga. She is a PhD student in India. Thanks to the International Center for Therotical Physics she has the opportunity to use the ENEA facilities to make progress in her research during 6 months. I think this kind of projects are very good for the students because they have the opportunity to learn and travel and have lots of new professional and personal experiences.
Ruchika explained us the aim of her project. She is developing manocrystals, that will give better properties to normal glass, giving it a better structure, because glass for its nature is amorphous and doesn't have an structured shape. Along with the development of the nanocrystals she will use nanocomposites (made of Rare Earth components) that will facilitate the spectroscopy analysis with the lasers. I am every time more surprised of the amazing quantity of things that researchers can study with the spectroscopy technique. Ruchika is in the first stage of the investigation so the applications of this improved crystal are not proved yet.
Our busy morning has continued with Flaminia. This time she explained us more specific details about the Nanohex project. It was also very useful for us all the explanations to help us understand better the subject. For example we learnt that cooling fluids were already being done in the 50's, but now are becoming very popular in the refrigeration of industrial equipment. Also I was wondering all the time why she started with Titanium for the trials. Flaminia made clear that the reason is because this component has proved in the past to work very well for nanofluids.
What Flaminia is specifically studying is the thermal diffusion of Titanium, for this reason the effect of shooting light to the component permits that she can study the thermal diffusion. This is related directly with the curve of the change of energy (inside the nanofluid when this reacts to the shooting)in time. But the most complicated part for me it's to understand the interactions of the two lasers (the green one Ion Argon Laser, and the red one Helium Neon Laser). In this case one laser has a wave length of 636 nanometers and the other one 514. To make them interact she has to put a serial of glasses that refract the laser in a chain in a very specific way. In the end they merge in a prism that makes possible that the lasers are shooting at a certain angle and at the same height.
It's very interesting for me that so many things have to be taken into account, for example by using formulas she could determinate at which angle the two beams of light had to be in order to shoot at the same point into the sample.

So quite tricky, but this is just the first stage of the experiment, that's setting up the lasers. Then after some weeks, Flaminia is planning to start with the measurements of the Titanium.
So like yesterday, my head is just thinking now about lasers and beams and interactions of light. And tonight I will keep on reading about the subject, so Flaminia will not get bored tomorrow answering more of my questions :) But now I'm already thinking about a new experience in Trastevere area, Il apperitivo is waiting for us tonight… molto delizioso! A domani Relaters :)

Thursday

18-11-2010

The Relate experience is being a very formative and productive experience. As the others days, today it's been very busy, I have learnt many kind of details about the project Nanohex, which the department of Spectroscopy and science of materials is working on.
For a start we had a very interesting talk with the head of the department Mauro Falconieri. As I said before, the Nanohex project is studying a serial of cooling nanofluids for its industrial application. But which application they are going to have? And why are they studying them? And who is involved with it?
So the Nanohex involves 12 different fields of work, that imply 6 different countries. In this case, our laboratory is involved in the Nanofluid Characterization and Optimization, that is why they are testing which nanoparticles are the ones that have the better thermal dispersion properties. The two main focuses of the project are: the application of the nanofluids in data centres and in power electronics like trains. Mauro explained us that the conditions of this project are very demanding, because in the research project has to reach the level of giving solutions and facts to companies. That's why companies like Siemens (for trains) or the Centre for Process in Innovation (for data centres) are also collaborating and being an active part in the research.
The cooling fluids to refrigerate systems in industries have been used for more than a 100 years but with the raise of nanotechnology the study of the nanofluids is being very popular. In this case, it has a direct effect on the functionality of the industrial equipment, because companies can reduce the energy they use and the costs by improving the quality of the cooling fluids (they need less amount and they are more efficient). I think this fact has a direct consequence on society and also nowadays with the sustainably of the planet and the climate change debate, every single thing that is being done to improve the conditions and minimize the effects will benefit all of us in the long term.
I think is very interesting that this kind of improved nanofluids could be very useful too for the equipment of space shuttles, because as Mauro explained us, they would mean a decrease of the weight of the machines traduced in less cost to send them into space.
But it is also very important to take into account that researchers have to take lots of aspects into account to determinate how efficient are these nanofluids. For this reason they have to study parameters like the corrosion they produce or the amount of time they can last working properly. In the ENEA facilities, there is another department where engineers study the corrosive and the thermal properties of different kinds of nanofluids. It was very interesting to see the software they use to control every single detail of the machines used for that, because they are working 24 hours non-stop and the software permit a very precise and instantaneous monitoring.
So another day more, and another day of lots of interesting minutes recorded that will help me to prepare my article. Tomorrow will be the last day of the Relate project, I still cannot believe it went so fast, but they say that is always a good and positive sign :) Tomorrow we will have to give a short speak about our experience and the briefing of our news piece, so more research is waiting for me tonight. Lots of luck to everyone. Energy Relaters!:)

Friday

19-11-2010

Five days seem a lot, but when you are enjoying yourself it is nothing. The last day in ENEA arrived so fast and a mixture of feelings was rushing inside me. Satisfaction because all the things we had learnt and sadness that we had to leave after all the nice and great experiences all of us had shared together.
The Friday morning was dedicated to the personal presentations about our experiences in ENEA and the explanations on how our articles are going to be. It was very interesting to know better the subjects that all my mates had been working on. It's amazing how much we have learnt in just one week. When I had to do my presentation I was a bit scared because all the researchers were with us and I wanted to give a good explanation of what spectroscopy is and means for me. But with the support of everyone in the room it was easy. About my article, I think it will be focused on the advantages that using nanofluids as cooling fluids can give to companies, always relating this fact to the sustainability of the planet and saving energy. I think that's how I will be able to make my article interesting to the big audience. But of course, I will focuse it too on the important mission that ENEA has as is part of the Nanohex project, which is developing these nanlofuids at the moment.
Writing about science is such a challenge, because sometimes it can be very complicated. But I think both parts, journalists and scientists, have to help each other to make the science a popular field. The Relate Programme has proved to me that this is possible as everyone in ENEA was willing to help us and be an active part of it.
Relate has been so interesting and it has learnt me so many things, about science but also about all the friends I have made. I want to thank you Fabiola Falconieri for being so nice, guiding us in our work and taking so good care of us.

And also my colleagues and friends, Greta, Inma, Antonia, Elvir, Ewelina and Agnieszka. It has been so nice to share the experience with them. I will always remember our trips to ENEA, having loud and funny conversations in the metro and the train, :) our long and fascinating walks around Rome, our funny moments, enjoying Italian food together … I would love to repeat it :)
Our mission now is to make a good piece of news. I am so glad of the opportunity I have had with this programme and I hope that many people have the same chance in the future. Thank you so much and I wish to all the Relaters the best of luck!:)

ENEA - Roma (ITALY)
// Inmaculada Luque Galán

About me

Education and training:

2009-2011 POSTGRADE DEGREE. SCIENTIFIC JOURNALISM SPECIALIST. Universidad Nacional de Educación a Distancia (UNED) (Currently in progress)
2002 BACHELOR DEGRE IN PHYSICS. Theoretical physics specialist within Cosmology and Astrophysics branch. Universidad Autónoma de Madrid (UAM)

Professional experience:
UNED (Gabinete de Comunicación y Prensa). Ávila, Spain (Julio 2010). Colaboration as a journalist in the news coverage of the "XXI Edición de los Cursos de Verano".
GRUPO SM. Madrid, Spain (August 2007 – April 2009). Textbooks publisher. Secondary Education publications.
"LOS SAUCES" SCHOOL. Madrid, Spain (September 2006 – June 2007). Secondary education mathematics and computing teacher. Secondary education tutor.
"DECROLY" SCHOOL. Madrid, Spain (September 2003 – July 2006). Secondary education teacher. Secondary education tutor.
CIENCIA DIVERTIDA. Madrid, Spain (April 2003 – July 2003). Educational and recreative events responsable. Educational Activities Instructor.
"COSMOCAIXA" SCIENCE MUSEUM. Fundación "la Caixa". Madrid, Spain (May 2001 – January 2003). Education Department. Instructor in several educational activities. School and general customer service. Explanation and scientific difusión. New activities management. New instructors training.

Monday

15-11-2010

Today has been an exciting and very long day.
We began our adventure at the ENEA - Casaccia Research Center with great anticipation. Among my workmates, I'm the only one that comes from a scientific career and, sometimes, it brings certain advantages (because maybe I understand some topics better than them), but on the other hand I can see that they have much more ease than I have, for example, asking questions that may be more interesting to the public.
The Casaccia Center is enormous, like a small town. More than 1000 people work here, in an enviable environment full of greenery, trees and with a pleasant atmosphere. After meeting our tutors and hosts, we have spent the morning knowing more closely the work done in the Research Center. First, we visited the Thermodynamic Solar Plant, where Luca Rinaldi explained to us in a quite clear way how to generate energy without hardly having an impact on the environment. Huge parabolic mirrors focus the sun rays towards a long black pipe, covered with a layer made of a transparent material (with vacuum between both of them), which allows it to pass the minimum heat to the environment; in this way, the water that travels through these pipes can reach very high values in such a way that generates heat cleanly, heat that can be used directly. In addition, this heat can be stored in tanks, to use it in not sunny days (as today).
We then met Dssa. Mongelli, who explained to us the investigations carried out in the Sismic and Dinamic Tets Hall. This laboratory has the important task of strengthening architectural structures preventing them of suffering less possible damage in case of seismic movement, something Italy is used to (we can remember the catastrophic consequences in the region of L'Aquila). This laboratory has two major tasks: on the one hand, to implement systems in existing buildings, with and historical and architectural importance, avoiding that seismic movements could affect them as less as possible; and, on the other hand, to apply isolation systems in newly constructed buildings. The fact is that most of these systems studied here are exported, mainly to countries as Japan; but in Italy they are not implemented, even though it is a zone seismically very active, as it is throughout the Mediterranean.
Finally, but not less interesting, the doctors P. D' Atanasio and A. Zambotti have shown what a "Semi-Anecoich" Chamber is and how it works. All devices that work with electricity emit some electromagnetic radiation. What would happen in an aircraft carrier if the radar system emits some radiation that interfered with other instruments, for example, those that handle the military weaponry? We can imagine that the consequences could be terrible. It is therefore important to know exactly what kind of radiation emitted, and with what intensity, every electronic device is used, not only in military environment but also in the civilian industry. To get the best conditions for emulating reality, researchers carried out their measurements within a Faraday Cage (that is a room lined outside with metallic walls, where it is impossible to let possible electromagnetic radiation coming from the outside). Similarly, the interior is also lined, the four walls and the ceiling, with an absorbent material in such a way that the electromagnetic radiation doesn't reflect them and disrupt thus measurements.

The only portion of the interior that is not insole of this material is the floor, and the reason is that they need to emulate the worst possible case, which is when it is an electricity conductor. This is done because in the "real world" most floors will be like that (wet floors, with some metal component, etc.).
And this is only a small part of what is being done here at the ENEA - Casaccia Research Center. I am sure that in the coming days I am going to enjoy much more. And I am here to tell you all.

Tuesday

16-11-2010

In Spain, faculties of Sciences are full of women; in classes of biology, physics or chemistry the female students predominate instead of the male. However, in laboratories and research units, male presence is much larger than the female. What is happening with the research women? Is it that scientific research isn't interesting for the Spanish women? It is not at all. Probably, it is due to social, cultural or political reasons. And as Fabiola told us, in Italy the same happens. However, this is not so in Mauro Falconieri's workplace. Marco is the director of the Laboratory for spectroscopy on functional materials and in this laboratory three women collaborate with him (Rosaria D'Amato, Flaminia Rondino and Ruchika Bagga), although they wouldn't be upset if they have a male workmate… As Mauro has told us, Spectroscopy is the branch of science that studies how matter behaves when interacts with light, i.e., when you apply an energy on it. This is a broad discipline that uses light (laser, primarily, but also through lamps) as a tool to study the different properties of matter. The kind of light source used in one or another experiment depends on the magnitude of the constituents of matter you want to study. In a first approach to the work performed in the laboratory, Mauro explained the operation and the usefulness of the instruments used to perform their experiments. And it was very interesting to see that in just a few square meters it is possible to perform as many researches at once, without bothering ones to each other.
It has also been a nice morning in the human aspect. This laboratory keeps in track with other laboratories and research units, here in Casaccia and in Frascati (another of ENEA Research Center, where most of the laboratories dedicated to the study of materials are located). So we share with them the healthy habit of having the midmorning coffee with their workmates from Casaccia. I am sure that, if possible, they would also do with Frascati's, but the place is on the other side of Rome, about 50 km from here.
Yolanda, my colleague, and I have great difficulty with our topic, because investigations carried out in the laboratory of spectroscopy are at a fairly early stage so the practical applications of their results are not yet absolutely defined. So we are still looking for "the story" which will be the leitmotif of our work. But we don't despair; we will find it out…

Wednesday

17-11-2010

Third day in Rome and it is becoming increasingly interesting :) Not just for the chance to know the scientific work 'inside out', being in direct contact with researchers (and notice that they are 'human beings' like the rest of us, though their mind 'work' in a different way), feeling that you are in a privileged environment or accessing to information which otherwise would be quite difficult to get; all this is quite interesting by relations that we (the 'RELATErs') are establishing among us. Every day we have the opportunity to know us a little bit more thanks to the program enables us to enjoy this beautiful city in the evenings; so we don't lose the chance and we organize to discover, little by little, some of the spots in Rome (all that our young but tired legs allow us). Fabiola always says that one of the RELATE's objectives is that this experience will help us in our work, as journalists, establishing contacts, knowing more in-depth how researchers work… But I would add one important point: the relationship with my colleagues. I learn every day about their experiences, their different views of the profession and the world, and I am sure that this mutual understanding will take us to a good long-lasting friendship.
But returning to the empirical world, today I can tell I am a little more calmed down. We have not yet found that "great theme", but we are increasingly closer. The day started chatting with Ruchika Bagga, a PhD student from the University of the India, who participate in the project thanks to the ICTP (International Center for Theoretical Physics) program, which allows students to stay for a period of six months at ENEA facilities to make their experimental studies. In her project ("Rare Earth Doped Nanocomposites. Optical and physical characterisation"), she prepare glasses, which are amorfous in nature (that is, they have a disordered structure) and tray to develop some crystalline feature in the glass matrix, to develop some crystals in the scale of the nanometers. By doing this, they can improve the quality of the glass for the applications in lasers, in biomedical uses, etc.
Then, Flaminia continued explaining some things of his work in the laboratory. Her particular research is to measure the thermal diffusivity (i.e. particle transport in a fluid due to temperature differences) on titania dispersion by optical measurements, that is, using the laser techniques. But before taking measures with the titanium sample, she must measure the thermal diffusivity in pure ethanol, just to check that the laser setup is good. She knows the value of the thermal diffusivity of ethanol (thanks to previous studies of other colleagues) so if you do measurements, you get the same data on a sample of ethanol, you know that your setup is correct. But before beginning to do the measures for ethanol, you must make sure laser rays are all in a correct and perfect determined position. It takes a long time and requires lots of accurate and patience from the researcher, since every time you need to adjust a lens, a mirror or a prism, it is necessary to check everything once again. But far from seeming distressing, it is almost like solving a detective case. Every day we learn a little bit more, largely thanks to the help of Flaminia, who is spending much more time in explaining their work in this great puzzle that is "NanoHex" project. Tomorrow, I'll tell you more and better.

Thursday

18-11-2010

Albert Einstein used to say that most fundamental ideas of Science are essentially simple and that, in general, could be express in an understandable language for anyone. For me, this is the essence of scientific journalism and it is the reason why (now I can say it with total certainty) I want to do this.
Finally, today we have had a long chat with our tutor, Mauro Falconieri. He has given to us a general view about the project his laboratory (the Laboratory for spectroscopy on functional materials) is running in this moment. In fact, my colleague Yolanda and I are here to announce to the general public what is this project research about, and we needed this chat with Mauro, who has clarified all our lots of doubts.
"NanoHex" is a nanotechnology project that aims to develop a cooling system for a range of industrial applications. By using carefully engineered nanofluids, the project try to develop more compact, lightweight, energy efficient and environmentally friendly processes and products. The project involves 12 different organizations from 6 different countries and is the World's largest collaborative project for the research and development of Nanofluids coolants.
After his long explanation about the project, Mauro had a discussion with us about the communication in Science. Although he has a sister (Fabiola) who works in Science Communication, he is a little bit skeptical about this (although he is a very good communicator). He thinks that general people aren't really interested in Science. He thinks that when they ask to the scientists about their work, and the scientists explain it, people just want to know how this research could be useful immediately. But in Science, in many cases, the uses of the researches aren't immediate. So, we told him we were here, precisely, for trying to reduce the gap between society and Science, by means of scientific journalism. I can say it was a very interesting discussion. Then, Mauro led us to the Laboratory of applied thermo-fluid dynamics in energetic systems, belonging to the Technical Unit for Advanced Technologies for Energy and Industry (UTTEI), in which they research about the corrosive behavior of the nanofluids when they put them through the pipes. Francesco D'Anibale also gave us an interesting explanation about this. After lunch, the RELATErs were working on our presentation for the next day. I think we all were a little bit nervous about that, so some of us decided to do something funny in the afternoon: we tried to find a famous gelateria in Rome: "Giolitti". We must be very tired (at least, our mind!) because we spend two hours on finding it! But it was worth the effort. The ice creams tasted so good! :)

Friday

19-11-2010

I think my situation is a little bit different than my colleagues', not even because they are very much younger than me, but because they all have studied journalism or have worked as journalists. Some of you know I studied Physics, and it takes me some advantages on a hand, and some difficulties on the other. I can understand more easily what the researchers explain to us, but I don't have all the tools they have to be a good journalist. And it is one of objectives I wanted to obtain with this RELATE program.
You know, I realized two things in these days. One of them is that I need to improve my English. I don't have any problem with the writing or the reading, even with the listening, but I must express myself much better than I do. I knew English in Science is the language in which all the researchers publish their work, but indeed it is also very important if you are in an international environment. So I must do it.
The other thing, and most important, I realized during this week is that THIS is what I want to do; this is the profession I want to work in; this is what drives me. This morning, when I've told this to the audience in my presentation, Fabiola put their thumbs up :) I don't know if I will achieve to be a scientific journalist, but I will try it with all my energy. Also Mauro encouraged me to do it; he thinks it's a very good thing that someone like me, with some scientific knowledge, works in this field :)
After the RELATErs' presentations (by the way, those from Agniezka and Greta were so good!), we all spent time taking pictures of ourselves with our tutors an, of course, Fabiola, la nostra mamma italiana :) And it was a mixture of feelings, between the happiness for getting this wonderful experience and the sadness for leaving Casaccia and our hosts. But Rome was waiting for us in the afternoon :) At least we could see this lovely city with the sunlight! :) Colosseo, Arco di Constantino, Fori Imperiali, Palatino, Basilica di S. Pietro (with that wonderful Michelangelo's sculpture: Pietà),… In the evening, RELATErs –Agniezka, Antonia, Elvir, Ewelina, Greta, Yolanda and me– had a very nice dinner at San Lorenzo's, the area around University.
It has been a very nice and revealing week for me. I've met a great amount of interesting, kind and unforgettable people. I'm so happy for having this experience that I know my life will be better from right now. Thank you, Rome; thank you, Casaccia; thank you, Fabiola and Mauro; and, of course, than you, my young colleagues, because you have tought me lots of things, not only about journalism, but also about the life :)
I hope we'll keep in touch! Ciao, amici! Mile baci!

Additional info:
Link to my website:
http://elpatocientifico.blogspot.com/
My profile is also available here:
http://www.facebook.com/inmaluke
https://www.xing.com/profile/Inma_LuqueGalan

ENEA - Roma (ITALY)
//Elvir Vesanovic

Croatian
2nd March 1986
elvir.mesanovic@gmail.com

About me

Education and training:
2009 – until date - MA in Journalism - major in Political Communication and Media and Journalism. Communication and Journalism department. Faculty of Political Science; University of Zagreb
2005 – 2009 B.A. in Journalism - major in Broadcast Journalism; Faculty of Political Science. University of Zagreb

Professional experience:
2009 – three-month internship at Croatia's national television NOVA TV news room (Research of current issues for TV packages, writing and editing of television stories for Daily News)
2008 – three-month internship at national public television Croatian Radiotelevision – HRT (field work, research of current issues for political tv show Latinica)
2009. Documentary Production – TV workshop (mentor: Lois Bianchi)
2008. Basic of Television Reporting – TV workshop (mentors: Gary Worth and Hugo Perez)
2008. Summer Academy of International Relations – in Serbia Topic: American presidential elections and impact on Southeast Europe – received a certificate upon completion
2008 – present – member of Youth Atlantic Treaty Association - Croatia
2003. CESI – Center for Education, Counseling and Research – workshop for high school students about problems of the violation of human rights, in particular woman's and minority rights (mentor: Davorka Horvatek-Modric)
2002. Computer Operator Course – received a certificate upon completion

Monday

15-11-2010

Tutte le strade portano a Roma!
We've finally arrived in beautiful Rome and our science journalism experience can start. Science journalism? Yes, I'm participating in the project called REsearch LAbs for TEaching Journalists with 6 other colleagues from Europe. This is the project which gathers young European journalists and scientists in order to make better connection between them. We are here to promote activities and results of European Labs which have received funding from the European Commission to carry out their work. Project is funded by the EC under the Research program, Science in Society, FP7-SIS.
So, 80 journalists are visiting labs around Europe in three rounds, trying to build a link between science and society. We've got the Casaccia Research Centre, which is ENEA's (Italian National Agency for New Technologies, Energy and the Environment) largest complex of research and development facilities. And it is really big. Because of the research of nuclear energy for peaceful uses, rules are very strict. We are not allowed to take pictures and videos of the buildings from the outside because of safety reasons.
After emailing with Howard Hudson from European Journalism Centre, which selected us for the program, we met Fabiola Falconieri, Relate representative. She is taking really good care of us, so we've started to call her our mamma. First day was introduction day so we visited few labs. Thermodynamic Solar Plant, Sismic and Dinamic Tests Halls and Semi-Anecoich Chamber. We talked with researchers in every lab just to get better idea what is it all about. I never got a chance to learn more about science journalism at my college and now I am in one of the best labs with world famous researchers to learn more. This is unique chance for all of participants.
As I mentioned before, there is only six of us in ENEA. They divided us in even smaller groups so that every group can explore other field. My partner is girl from Poland, Ewelina Kawczynska. We met our tutor, Massimo Pinto, radiation biologist who is also polite and communicative. He is younger researcher and he has a great approach to us and he is familiar with journalism language so he is always ready with the example from everyday life about somehard scientific topic. During this week he will be explaining us about increasing cancer treatment efficacy using brachytherapy. This is very important research because results of the research could really help people with cancer. But I will write more about that in next posts.
I always thought that science journalism is very boring part of journalism with only facts and complicated words bur after just one day in labs with researchers I'm slowly changing my opinion. I realized that science is not only that, it's important part of our life with strong impacts on everything people consider important. Everything we have and everything we see is part of science and somebody has already researched that. With that kind of importance of science, science journalists are expected to consider their work with big responsibility and to make science closer to people, to society.
After the project ends we are obligated to write an article or make a video about the project and our research. I took a camera to make a video but I am still not sure shall I make a video or an article. We have to try to publish our work so now I think that it would be the best to write an article with additional video about brachytherapy process. I am taking notes and recording at the same time so I will decide later what is the best way of using my material. It is important to publish our work so that other people can also see how important this research is.
I am really excited about Relate project because of its possible influence on my future career. Who knows, it's science. I have great mates too, they are all fun and smart. Of course, our second very important scientific assignment is exploring - la città di Roma.

Tuesday

16-11-2010

Ciao a tutti
After our introduction day at ENEA, a magnificent night spent in center of Rome and just 4 hours of sleep, we are more than ready for our first working day in labs. We met our tutor Massimo at the entrance and first went for a cappuccino, typically Italian. On our first working day we met Pierino De Felice, the director of Instituto Nazionale di Metrologia. We were introduced to the National Institute of Metrology of Ionizing Radiation, and discussed fundamentals of Metrology with the director and Massimo. Mr. De Felice emphasized the importance of accurate measurements.
One of the special interests of ENEA's research is ionizing radiation which impacts us in many aspects of life: industry, food, radiation from space, health issues to name a few. It is very important to measure ionizing radiation because it can be useful,however it can also be very dangerous. High ionizing radiation can cause cancer but it can also, if it is used in defined doses, can help to destroy sick cancer cells. Therefore measurement is important to prevent the killing of healthy cells. Mr. De Felice mentioned the concept of risk as well. In everything we do there is some risk, so why shouldn't we try to reduce that risk as much as possible?
In radiation therapy, especially brachytherapy, uncertainty is a factor to eliminate, and that is why brachytherapy researchers are given millions of euros. National Institute of Metrology of Ionizing Radiation is funded from different sources and of course, they are expected to provide results. As a safe check, they are evaluated from third parties who are themselves, not included in the project. All research is transparent, so there are no secrets. In these labs researchers are not inventing new treatment equipment, they are focused primarily in measurements, but their European partners have other responsibilities and tasks in researching brachytherapy.
Tomorrow we'll visit labs and discuss more about brachytherapy. We are happy that Massimo is very interested in the project, as he went over and above by sending us some additional information about the our subject. So, after our second walk through town, we will spend the rest of our night reading more about brachytherapy.
Every day, after labs, we are meeting with Fabiola in the Press RoomItalic Text where we discuss our day, experience in labs and possible misunderstandings. In addition to that, we are discussing science journalism. Today, Fabiola talked about the importance of science journalism, including the approaches and responsibility of journalists themselves. It is important for journalists that they have a good background in science, to educate themselves and to be up-to-date because science is improving every day and so should we.
I am looking forward to tomorrow when we will visit more labs and learn more about our brachytherapy research. Stay in touch.

Wednesday

17-11-2010

To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science. Albert Einstein
It's the third day and I feel like we jumped right into our subject. Massimo gave us a presentation about brachytherapy so we could finally understand everything. I see this project as more interesting now, and feel very motivated to work on it. Our main subject of the day was low dose brachytherapy. Low-dose means that a low dose radiation source is implanted in the patient who then lives with it for few days. The high dose radiation treatment means that the patient is exposed to high dose of radiation momentarily but the radiation source does not remain in the body for a long time.
Planning of treatment depends of the size of the cancer, trodimensional shape and it's type. That is why they have to know which amount and in which area they should place the radiation source. So, if they want to do all that, they must to measure the radiation exposure because if you expose to much of healthy tissue, patient is at a big risk. Researchers have to make more accurate primary measurements of absorbed dose. To make a proper measurement, the scientists use water instead of tissue because our body is composed of 70% water. Hence is the term absorbed dose to water.
Researchers also make calibrations to make sure that the measuring instruments are measuring properly, in that way they are providing the primary standard. With the calibration factor they can decide if they will need to correct the instrument they are exploring or only convert. So metrology work is basically to assure that the measurements are correct. I know that everything sounds very complicated and it is hard to understand the calibration process so I will write you the example which Massimo gave to us. When you think about time, we all know that one hour has 60 minutes and that in different parts of world it's not the same time. So in Rome is 3PM, and in Chicago is 10PM at the same time. But somebody first had to measure and decide how we would measure time. Every summer we change the time, or rather, we are calibrating the time to summer time.
Massimo showed us a really good video about the brachytherapy treatment process which I found quite easy to understand. Doctors put a piece of radiation in the patient through a catheter but first they have to put the catheter in. Sometimes it can be very painfull to the patient because he can feel everything.
The EU gave 3.6 million euros for this project. Partners from 8 countries then have three years to decrease the uncertainty of absorbed dose to tumor from 10% to 5% to satisfy the international standard. Bachytherapy is still not as accurate as other radiation therapies, however the coordinator of the project, Maria Pia Toni, believes that they will meet the standard by the end of the project in July of next year.
It is very a sensitive subject because if researchers make a mistake in measurements, the hospitals will sensitive so it can't be moved to other places.

Massimo also took us into the labs where we saw ionization chambers and other equipment. He explained what they do with them are how they work. It is really amazing how significant that equipment is. Because it is very safe we took a small machine to measure the radiation of our bodies. I felt really privileged to get access to these labs because even very important science journalists don't get in so easily.
I already mentioned problems with international standards but there are few more factors which effects the decision to use brachytherapy to treat a patient. First is type of tumor. We can't use brachytherapy for every tumor, sometimes it's not very suitable, and other times different therapy can have a better impact. Another factor is availability, which can really influence the choosing of therapy. If brachytherapy or another therapy is not available in your country than it is more likely that the patient will be treated with the best available treatment. Last but not least is reliability, which is the ability of systems to maintain their functions as they relate to the international accuracy standards I already mentioned.
I am really satisfied with today's work because I feel we really learned a lot about our subject with huge help from Massimo. He is preparing more excitement for tomorrow, and I am more than ready to discover more about this very important project.
But first, the evening with my RELATE mates in Rome. We are strongly decided to see Piazza di Everything and we are doing really good job since far.

Thursday

18-11-2010

On our last day in the labs, Massimo introduced us to a researcher named Antonio Guerra. Mr. Guerra made a big effort to explain us what exactly they are doing in the labs and every objective they have to reach. He mentioned the importance of phantoms which medical physicists are building to simulate the body and use for experiments. There are different kinds of phantoms and the one we saw today is called the standard phantom, that consists of a container which looks like cube made by plastic and filled with water. Then, through the a small hole they put a radiation source.
The measuring of radiation is very difficult to realize, as it is not easy like the measuring of weight or length. Scientists have come to a certain agreement about standards in measuring the radiation very late, following the Second World War. The history of radiation research started in 1895 when Wilhem Röntgen produced and detected electromagnetic radiation in wavelength range, known as X-rays. Very quickly after that researchers realized that they can kill tumors utilizing this radiation. The first brachytherapy treatment was held in 1913.
Today in 2010, brachytherapy treatment is one of 21 very important European Joint Research Projects in metrology co-funded by the European Commision under the Seventh Framework Programme. Mr. Guerra gave us a good example of what they want do do. One meter in Italy is the same as one meter in France or Japan. They want to accomplish the same with type of radiation. That is why the measurement is so important. With exact radiation measured, the treatment of tumors will be more safe for patients. He also emphasized the cooperation between scientists and doctors. Such cooperation can only improve treatments in hospitals.
With more accurate measures doctors will be able to use brachytherapy treatment more often. Also, that will decrease the treatment expenses because brachytherapy equipment is less expensive than other equipment for cancer treatment, and the treatment procedure itself is easier and faster. That is also less dangerous for patients who sometimes don't feel any health consequences like, for example, in chemotherapy, after which many patients feel powerless, lose their hearing, weight etc. Brachytherapy usually takes only 20 days.
Casaccia researchers are involved in the first stage of the brachytherapy project in which they are taking referenced conditions; ie. they measure radiation in plain water. Mr. Guerra showed us all the equipment and phantoms in the labs which they use during the research process. Second and third stages are called clinical dosimetries. First they try to measure the dose only in phantoms that are human like, ie. simulated as human bodies, and after that they measure different shapes and consider the different densities because of the differing tissues which make up our body.
Tomorrow is our last day in Casaccia, when we all meet, students and tutors and our Relate coordinator, to discuss our projects, and experiences in the labs, our future articles and general impressions.
Restiamo in contatto

Friday

19-11-2010

Friday was our last day at the Casaccia Research Center, and I can say it was very emotional. We had to present our work in front of everybody, so Fabiola invited all our tutors to join us during our last meeting. Our presentation consisted of three parts; first we had to tell something about our theme, project and labs. Next we had to relay our favorite experience, and to finish it off, how we plan to publish our work.
In the last posts I wrote about my project and experience but I reached a final conclusion. I am very happy that I got the theme of cancer treatment because I prefer topics which are connected to people and improvement, or growth. I really hope that the results of this project will actually make for improvements in cancer treatment therapies and that more people will be cured because of it's results. In the past, I was always interested in the correlation between media and human rights. This week I realized that science is also an important part of human rights. All scientific research and every discovery can strongly influence human life in both good and bad ways.That is why we need highly-skilled science journalists with not only a strong background in science but are also aware of the possible influences of science in everyday life.

That is one of my experiences which made my week in Rome all the more satisfying. I am happy that I was selected to participate in this program because I've never had chance to explore science journalism at my college.
As I mentioned before, we were very lucky because we got a great tutor in Massimo. He is great and we will stay in contact. He gave us so many materials about our project and will try to connect us to other people who can help us with our articles.
We also gave a present to nostra mamma Fabiola. It was a present from the heart and she was so touched that she cried a little but it was still a happy moment. We will stay in touch with her as well. She gave us a few important peices of advice about our future work which we we will, I hope, put to good use.
I am still not sure in which form of journalism I will publish my work. First I have to see the video I recorded and then decide if it is better to make a tv package or article. Either way, I would like to make it very professionally as that should always be the goal. Because of this program, we should be possible to make a very good piece of journalistic work.
And for the end, my RELATE mates. My ladies. I spent this week with six beautiful woman, and each of them is special in her own way. However they do have somethings in common; they are all smart, talented, objective, fun, friendly and all in all, good people. I will miss them a lot, especially all the laughs and fun times we shared. Because of that, I am sure that this is not the end of our friendship. We have already made agreements to visit each other in our respective countries and we will definitely do that during the next spring and summer. With some of them I already started to plan some special projects on an international level. So we have big plans. I am happy that we were great group, that was productive and motivating. And who knows, maybe we will see each other in January already when it is planned to finish the RELATE workshop in Brussels. :D
Now I have to put all my effort into making a great article or video. Thank you for reading.
Stay in touch.

Elvir.

Monday

15-11-2010

Today is the first day at Casaccia Research Centre. I am actually very positively surprised. All the people are very nice, we have our own personal tutor who looks very young for his age;) and everythig has been organised ina very professional way. I found out today that I will deal with the BRACHYTHERAPY that is one of they ways to treat cancer. IT is like a "tabula rasa" for me so I am looking forward to find out more about the topic. We didnt go to our laboratories yet but we visited the Thermodynamic Solar Plant, Sismic and Dynamic Tests Hall and Semi Anecoich Chamber. The first one deals with using the sun energy. Sollar Batteries preserve the heat from the sun and are using the energy. We were able to not only hear the speech by the researcher but also we were shown the sollar batteries and the way they work. The second one Sismic and Dynamic Test Hall was totally new for me as we dont have such things in Poland. The main goal of the research is to build building and improve the consruction of the already existing ones so they dont get damaged when the eartquake takes place. Japan is the country that uses the sismic test the most. The third one "semi- Anecoich" chamber looks like a big box that produces magnetive waves. TO be honest I found this one the least interesting as the guy who was explaining used very technical language.
After great lunch we came to the newsroom where Fabiola gave small presentation about Relate and our tasks and goals for the next week. I am really looking forward to tomorrow.

Tuesday

16-11-2010

Today is the second day. It didnt start the best because we took the wrong bus from the station to the research centre because some people(which is me:) were preety sure it was the right bus. Well in the end we just had to walk a bit in the rain which was quite refreshing.Our tutor Massimo picked us up from the entrance and we went to see the director of Meterology Institute- Pierino De Felice. He gave us a brief introdcution on what the institute is actually doing.He also explained the project we will work on which is the Brachterapy. It is a type of treatment that is based on radioactive source that is introduced on the human body to reach the tissue. To translate it in a more understandable language the radiation works from inside and not from the outside of the body. Tha advantage of this method is that is quite economic and reliable but it requires the specific standards. The role of the meterology institute is to the develop the measurements for the therapy. I really liked the Massimo's comparison to the football players. "Role of the meterlogy is like a role of the player. He(meterology) helps the other players (Brach Therapy research) reach the gole so the whole team can win." In that way the Brach Therapy can be more succesfull. This meeting gave me an insight in what the institute is doing but I think in order to really understand and explain to the people what the therapy is about I will need to go to the laboratory and talk to the researchers. In order to understand the project well, journalist like a child needs to see, touch and smell.

Wednesday

17-11-2010

Third day at ENEA and it is finally becoming clearer and clearer what the Brachy therapy really is. Today we went to the laboratories and we had a look at the ionization chambers that are used to measure the exposure of radiation. The thing with Brachy Therapy is that the radiation works on only on the tumor itself and it does not affect other tissues around but the radiation needs to be accurate otherwise it can be harmfull. The ENEA project was set up in order to reach the goal of decreasing the uncertainty to 5% which is international standard set by IAEA(International Atomic Energy Agency in Vienna). The goal needs to be reached by the end of July 2011. The project is supported by the European Union and its conducted in eight countries. Today in the laboratories we were shown the special machines: ionization chambers and also the portable ones that are measuring the dose of radiation. In the afternoon we did interview with the Coordinator of the project for the whole Europe- Dr. Maria Pia Toni who underlines the importance of Brach Therapy. She says: " In case of the tumor of the prostate it is very increasing therapy because in comparison with the chirurgical treatments this treatment avoids all the secondary effects that chirurgy may cause, also for genological tumors we can insert the sources directly in the tumor so we radiate only the affected tissues and not the others." Advantages of Brach Therapy:its cheaper and is more precise, especially in the case of prostate and brest cancer. I keep my fingers crossed for Mrs Toni and I hope that all the countries will reach the goal by July 2011.

Thursday

18-11-2010

Today is the last day in the Labs. We met one of the researchers today mr Antonio Guerra. He showed us special instruments phantoms that are used to measure the radiation. They are simulating the human bodies. This is the first stage of measuring the radiation the second stage takes place in hospital. My college Elvir recorded everything on the camera. I wanted to do the same thing but as I dont have the proffessiona camera I decided to write an article which is also easier to sell than a video package. Mr Guerra was very interesting but he is typical researchers who talks a bit too much and goes too much into details so it was hard to concentrate by the end of his "presentation".He said that the standard time of Brachytherapy is about 20 days but it also depends on the type of tumour. He undelined the advantage of Brachytherapy over the chemiotherapy. It is cheaper and the patients get a better quality of life.

It doesnt cause any damages to the human body as in case of chemiotherapy.

Now is just a time of working on our final article. I have to organise everything in my had and think what I want to write about. Tomorrow we have a presentation of what we saw and what we learnt in the labs. I must say it was very interesting but also very difficult to understand. I think science journalism is not really my "thing" although it is quite challenging.

Friday

19-11-2010

I am back at home in Brussels. I am really really tired but positevely tired. As my friend Greta said the whole week was waking up at 6:30 and going to bed at 12:30. I am tired but also very happy and satisfied. Not only I learnt something about Brachytherapy this week and science generall but I also had an opportunity to explore the most amazing city I have ever seen. I have to say that the last day Friday was my favorite day from the whole week. Each of us had to make a short presentation about his/hers project and what did he do during the week and what will be his/hers approach to the article or video. I summarized very briefly what my project was about and epxressed my concerns that it might be difficult to sell this because what it is done in Casaca are mainly measurement for the dose of radiation used in Brachytherapy and people are not interested in this kind of things, they are interested in how they can use the therapy, how different and better it is from the other radiation treatments. So I decided to concentrate my artilce on that and use some of the quotes of researchers at Casaca. I think the RELATE project is a great success and I am very happy I was a part of it. I realized that science journalism is quite difficult in comparison with politics. Working together with researchers and scientist side by side let me understand them much better than before I came to Rome. Fabiola was a great mentor and she was always very nice to us. We gave her a small gift something to remember us by and she was very touched. I think I was very lucky with my group. They were all very open minden and friendly . I will miss Elvir jokes, Antonia long and interesting stories on the way to Casaca and back to Rome:), Yollanda ala Shakira singing, Agnieszka positivism, Inma kindness, Greta energy to go and explore with me every single part of the city. We are all so different but have one thing in common passion for journalism and passion for exploring the unexplored. Tomorrow is new day and after such intense week I have a lot of enery to start new one with fresh ideas. Thank you RELATE for giving me the chance to be a part of it!! See you hopefully all in Brussels.

ENEA - Roma (ITALY)
// Antonia Ceballos

About me

Education and training:
I graduated on Journalism in the University of Seville in the year 2008. I speak Spanish (mother tongue), English, French (I have the DELF B2), Italian and Slovak.

Professional experience:
I have made several stage. The first like a cultural journalist in the Spanish newspaper "ABC de Sevilla" (2006). The second it was in a Spanish radio station for English people, Onda Cero Internacional (2008). Also in a press office of the International University of Andalucía (UNIA),(2009).
I took part of the Leonard program and I worked in a digital newspaper of Padova, Italy (http://www.padovando.com/), (2009). And I also took part of European Voluntary Service in Slovakia (2009/2010).
As I freelance I wrote a guide of Bratislava (http://www.guiadebratislava.com/) and I work in the digital media Suite 101 (http://www.suite101.net/profile.cfm/antoniaceballos).
As a researcher I have work in the University of Seville since 2005. First I worked with Francisco Sierra Caballero about participative communication and after in the research group Eurasia Observatory (http://www.observatorioeurasia.org/). The Observatory, in collaboration with Lliga dels Drets dels Pobles, publish a monthly magazine about the Caucasus (Caucasus News) where I write a press review about what's going on in the English and French media about Russia and the ex Soviet republics.

Awards and personal grants:
- Several literature awards.
- Honors High School (2003)
- Research grant. Topic: "Communication and war. Peace journalism". 2007-2008.
- Leonardo grant. Italy. 2009.
- Relate project. 2010

Monday

15-11-2010

'Journalism is a disease', states my mate Greta (from Bulgaria) in the long way to Casaccia. I look at her and think: 'that's it'. So, maybe if I have to answer very honestly to our Italian coordinator to the question: 'why are you here?', I have to admit: 'I'm ill'. It looks quite simple, doesn't it? But it's not.
My name is Antonia Ceballos Cuadrado, I was born in a very little village in the South of Spain. My mother is not able to read and my father only in a very poor way. In total, we are seven children and only my sister (a biologist) and me, we have a university degree. My mother is always complaining about how many books I have (but I can promise that my library is nothing huge). And all of this, in a magical way makes me like I am (if I have to choose a word about me, I'll choose 'curious') and brings me to this marvellous place. Me, the most complaining person I know, was chosen to live this marvellous experience and this makes me feel the luckiest person all over the world.
Journalism is my personal disease from I can remember myself. Wittgenstein used to say: 'the limits of my language are the limits of my world'. All thinking that passed for this incomprehensible machine that is the brain must be a linguistic concept, must be expressed with a word. So, I really wanted a wide world and to be able to tell it.
So, like in the Kavafis' poem, I 'set out on my journey to Ithaca', I have no idea what Ithaca was, but she gave to me very beautiful things. RELATE program is one of this. I applied for it just to arrive to Ithaca 'full of adventure, full of knowledge'.
I applied for it just by chance. Holly facebook, how not? A girl from my village post the link on my wall and I said: 'it's a good idea'. So, I applied and totally forgot it. But two weeks ago, I receive a mail saying that if finally I wanted to come to Rome or not. It was the first mail I received about the topic so I was a little confused. It was a quite complicate moment in my life. So I answer with a first mail: 'I have to think'. And the second after with another mail: 'I'm going'. And here I am.
Scientific journalism sounds quite serious and important for me. Even, I didn't choose this subject in the degree. But, why not? I'm ill, do you remember?
So the first thing I did was going to the library and choosing two books: "Introducción al periodismo científico" from Mariano Belenguer and "Manual de periodismo científico" from Manuel Calvo Hernando (I really recommend you the last one). And something inside me sparked off. My previous idea about this kind of journalism was totally wrong.
The second step was to collect all the possible information about ENEA and my project. I read it carefully, trying to understand every word. It was amazing!
After, I started to share my enthusiasm with Spanish media (to try to sell my report), but I feel very disappointed because they are not so enthusiastic as I am. Such a pity!
Finally, my adventure started. I met my mates and Fabiola. They are so interesting people, so I feel quite comfortable. In Casaccia, they have a lot of security measures, quite annoying, but it's ok.

From the beginning I felt like VERY IMPORTANT PERSON, having access to a very exclusive place. Wonderful, isn't?
We visited three labs yesterday to have a general idea about the place. The first was the "thermodynamic solar plant". It was the most interesting for me because the following days I'm working in photovoltaic. When we caught the bus to go to the next lab, Fabiola made her sure that I understood the difference between that lab and my lab's project. Basically, in the thermodynamic plant, they try to reach very high temperatures in order to boil the water and with the steam to produce energy. In my lab, the point is to found how to make from obtain the energy directly from the sun to the photovoltaic cell.
I really enjoy the second lab. It was about seismic and dynamic test. They have reconstructions of real buildings and they test how they react to the earthquakes with and without isolating materials. The technical part was quite interesting, but for me the most important thing is that Italy produces the most of material to protect buildings from earthquake, but it exports almost all of this material. So, an earthquake of the same intensity like the Aquila's one in Japan has no importance thanks to the Italian materials. Crazy! But while I was hearing that information, I had on my head the famous sentence of Deep Throat "follow the money". So, I tried to discover who is paying the research and who is profiting the research. Is it public money? Is it private? Who makes the materials? Who sells them? And so on. I had some information, but not enough. But I keep this idea for a future report.
The "semi-anecoich" chamber and the electromagnetical compatibility was a totally mystery almost until the end of explanation. But, I think, finally, I got it. But I have to think about it a little bit more to be able to explain.
At the end of the day, Fabiola gave to us some information about what Enea is and how it works, and also about the history and future trends of the research. Interesting, but you have to wait for my report to discover it. I'm so sorry.
This was my first intense day in this stop of my journey to Ithaca.
'Ithaca has given you the beautiful voyage. Without her you would have never set out on the road. She has nothing more to give you.
And if you find her poor, Ithaca has not deceived you. Wise as you have become, with so much experience, you must already have understood what Ithacas mean.'

Tuesday

16-11-2010

My journalistic work starts. I met my tutor. And at the beginning I didn't know how to deal with him. This idea of the scientific like a kind of special man in a way out of the world makes me a little afraid.
Ok, I have some knowledge about science, but so basic. I've devoted my life to literature, politics, and this kind of stuff. But things, usually, are simpler than we thought.
We arrive to the lab. Massimo, my tutor, look a place for me to work and this is so nice. He also gives me a present: a photovoltaic cell (for the fridge, hehe). And I start to feel more comfortable. But suddenly he does something totally unexpected: he sits in front of me and says: well, tell me something about you. Oh my God, about me?, I think in a panic crisis. Come on, I'm the journalist. I must ask the questions. Ok, no problem, well my name is Antonia, I'm a journalist, I was born in Córdoba, … At least, I achieve one of my goals: we speak in Italian.
A lot of people start to pass. Oh, come on, I want to introduce you Antonia, she's from RELATE program and she is here because she has to write and article about our work. I am not able to remember all the names but they were so sweet and kindly. Nothing related with my previous ideas about scientific people.
And after the presentations, the real work starts. We speak about energy in general and about politics. So I really enjoy the topic and specially is exacted what I want to tell to other when I finish my RELATE program. Massimo tell me which used to be the Spanish politics about solar energy and the consequences of this change recently. We speak about how the energy is produced and how the photovoltaic cells work. So, I look at him with an expression of incredulity in my face and I achieve to ask: but what is inside this cells? "Il materiale di Dio" (God's material). Il materiale di Dio? Yes, the silicon. Silicon can do whatever you want. And with this thought we go for a coffee, Italian coffee, of course.
With the coffee in my desk, like a proper journalist, I start to use a documental source that he provides me (the magazine PV International). I have in front of me a summary of all the research in my lab. The magazine has an article called "ENEA and its studies on the main sectors of photovoltaics". At the beginning it's ok, some historical background quite useful for my future report. But after it's not so easy, I note all the technical words and I really make an effort to remember my technology lessons in the secondary school.
I concentrate on my work. The phone rings but I think: it's not my business. So, I continue working. "I call you and you don't answer me", says Massimo. I thought it was not for me. "It doesn't matter", he replies with a smile. "I sent you an e-mail with some videos about the smart grid". And he takes a pen and starts to draw some useful information in the blackboard. He explains to me the traditional system of energy distribution: a big/huge central that produces energy with high voltage (10.000 volts) in order to safe energy when it is transported by the cables. After it arrives to a smaller central that transforms the high in medium voltage (3.000 volts) and distributed it, we receive it in low voltage (220 volts). In this way, we lose 30% of the energy that we produce. So, the smart grid turns every unit (house, office and so on) into a producer of its own energy. This energy is integrated in an intelligent system that calculates how much energy I need and transfer the rest to the other units. The system is provided as well with a storage system.

So, we can use all the energy we produce. Absolutely amazing. I've found a very interesting topic to work on in. After the technical details, we discuss a kind of "philosophical question": the social meaning of the energy. That was exactly the topic on my head when I started to think about my report.
I watched the videos. One is more philosophical and the other two are more technical. And my brain works with dizzy speed. A lot of ideas come in and really I feel I need to order them. But it's lunch time.
I share my lunch with other researchers from my lab and we have real good time. Oh, maybe I was wrong about the personality of Scientifics. I don't care about changing my mind. That's great. After lunch, we (me and my mates) have a journalistic discussion with Fabiola. What is newsworthy? How to do our labs newsworthy? What is the role of the journalist? Good way of ending a very productive day, isn't it?

Wednesday

17-11-2010

The Sun. This magical force that has had a very important role in all the cultures over the world and that has had a consideration of God in a lot of them.
I remember that the day I discovered it is a star I felt very disappointed. I really preferred the story of Helios in his golden cart crossing the Earth. Even in these days I admire the capacity of he human being to create explanations for the incomprehensible things. And in a way I understand the science in a similar way.
Several years after, I felt a similar disappointment with my concept of science. It was in my times at university, concretely my second year. We were in a lecture of "Information theory" and I heard for the first time in my life about Khun and his theory about paradigms and about the Popper's theories. Oh, my God, so the science was not this sure thing that teachers have told me at school.
Life is quite strange. The Sun is a star and the science is ideological too. So, what to do? But show always must continue, so nothing real special happens in my life after these two discoveries.
"We're going to turn the Sun on", it's the first thing that Massimo told me after our fast coffee (with political/social ideas exchange included). Turn the Sun on? I looked at him with a mad face. Ok, I can accept that the Sun is a start, I can accept that the science is no so stable as I used to think, but that was too much for a humble girl of the deep Spain.
But he just said 'yes' and started to walk, so I followed him. We entered in a lab and turned the Sun on. I really feel some kind of privileged person; like the intelligentsia in the ex URSS or a priestess in a Greek temple.
In fact, our Sun was so simple idea. The Sun contains different kinds of wave (from the ultraviolet until the infrared). Each of these waves has a different power related with the length of the wave (short wave is equal to high power –like ultraviolet- and long wave is equal to low power –like infrared-). So, our Sun has two lamps, one reproduces the short waves and the other reproduces the long wave, both together has the same power like the Sun in ideal conditions (1kw/m2). The other part of our Sun is a machine that achieves to maintain a constant temperature of 25º. These are the "standard parameter" that allow to compare the results of research all over the world.
After turning on the Sun (that even produces ozone), we visit another lab. Massimo showed me how the silicon is and the differences between the monocrystal and multicrystal silicon. The first one is formed only by a kind of granite so it's easier for electrons to move on it, in other words, it can produce more energy. The second one is formed by a lot of different kinds of granite (aesthetically it's much more beautiful) so it works worse but it's cheaper.
We were speaking about electrical champs and how the energy is produced. And also I was able to understand what is the exactly meaning of the efficiency percentage that were everywhere in the article he passed me the day before.
Once I knew what the silicon is and his properties and how we do to produce energy with photovoltaic cells, he showed me how the photovoltaic cells are made: silicon wafer, a blue layer to avoid that the light goes out, argent, a serigraphic technique to print the wires (similar to the one I knew that Goya used for telling the horror of the French invasion of Spain), a dryer for the morbid substance we obtain and an oven. Ready!
In the office, he drew a diode. The process is simple (or at least Massimo makes it to me so understandable). The silicon is the second material in the world after the oxygen, but we can't find it in a pure state. So, we have to obtain it from other materials, mainly quartz. We boil the quartz in high temperature and we separate the elements we don't need. The silicon is a neuter element (it has the same number of positive and negative charges) but for a diode we need a positive and a negative champ. So, when we are boiling the quartz, we add, for example, boron, and we have an extrapositive charge. After we transform one of the positive champs in a negative one, so we have an electromagnetical champ. When the Sun arrives and touches one of our neuter atom of silicon the positive part will remain in the negative champ and vice versa (you know, the opposite poles attract each other). In this way, we will have energy!!!!!!! It sounds magic, doesn't?
Another researcher explained to me other techniques to build photovoltaic cells with cheaper materials. These photovoltaic cells are called "thin film". They are cheaper, sometimes more beautiful (to use like an integrate part of a building, for example), but less efficient.
After lunch, we visited an old photovoltaic plant that it was installed in ENEA about 25 years ago to check how long is the life of a photovoltaic cell. They still work.
In the afternoon, Massimo passed me an article about the photovoltaic market. We were speaking about how much is the cost to produce a photovoltaic cell and its price in the market according to the offer and demand law. We also speak about the Chinese power and how they produce cells very cheap and provoke that the other producers get the prices down. We were speaking also about the money for researches and how it works the patent system and so on.

Finally, he showed me some very interesting pictures about buildings (mainly in Germany) that integrate photovoltaic cells and explained to me some mistakes that made them less efficient. For example, one of the buildings has plates of amorphous silicon and monocrystal in a vertical wall. The amorphous silicon works anywhere you put it (like the solar calculator that have a battery of this material) but it's not so beautiful, so the architect put some monocrystal that in this position lose efficiency. The problem is easy to solve, but maybe the architect has no right information about photovoltaic cells. So, like Massimo said to me: it's the responsibility of journalist to give the correct information to the people.
Will I be able to do that?

Thursday

18-11-2010

Last day in my lab. I feel so sorry. I would like to spend more time here and to speak with all the researchers. I really like the topic and I would like to write quite accurate article. So I have to profit as much as possible.
The day started with a bad news: my tutor, Massimo, couldn't come. At the beginning I felt so disappointed because I really like his way of thinking (and his way of connecting technical topics with politics, economy and so on) and he has promised me to make a photovoltaic cell together. But at the end it was quite ok because I had the opportunity of speaking with other researchers and they were quite interesting as well.
I was speaking with Giuseppe Arabito. He started to work in ENEA as a nuclear researcher and he was from the beginning in the lab of photovoltaic cells. We were speaking almost all the morning and it was a real pleasure. We spoke about the research work in the lab, the people who is working there, the problems of the lab and of course about politics. He gave me a marvellous sentence to use like a title, but it's a pity because I'm not able to translate. After, I was speaking with Rosa. I really like her from the beginning. She started to work in ENEA six months ago and she is trying to develop new materials (cheaper than silicon) for the photovoltaic cells. We were speaking about the situation of the researchers and I discover that there are not big differences between Spain and Italy. Only one word describes both situations: precarious. She told me that you can spend an average of 5-6 years like a precarious (even 13) before being a member of ENEA. So, finally my last day in lab was great as well. I didn't learn so technical aspect but I obtained so valuable information for my report. I obtained this human side that is necessary to write a good piece of news. So, even if I would enjoy making the photovoltaic cell, I feel so proud of my work in this lab during the week.

Friday

19-11-2010

There is a very famous song in Spain that I always remember when I have to say goodbye. The lyrics are something like: "something dies in your soul when a friend goes". This song express a lot of feelings that I feel in my last day in the RELATE project. Why? I'll try to explain. Life often it's quite strange, mine, at least, it's. So, at one point of my life I stopped believing in the human being and also I stopped believing in the journalism. My first scepticism is the result of a long (and very personal) story that I'm not able of telling here. But at one point of my life I felt very upset with friendship and all this stuff. The second scepticism is born of my inability to find a real job like a journalist.
I always wanted to become a writer and a journalist. When I was a child I wrote impulsively like a way of being free. But at one point I discovered that I was writing the same story all the time so I gave it up. After I grow up (not so much, but enough), and I went to university. I thought I'll become a journalist but it's not so easy. So I finished my studies and I was travelling because I thought that knowing the world and speaking languages were the keys to become the kind of journalist I wanted to be. Now, I'm in a quite special moment of my life because I feel so sad in general and quite frustrated with journalism. I know that people from outside are not able to understand why I need so much to become a journalist, but I know it's the only thing I want to do. So, when I landed in Rome last Sunday I had a lot of thing in mind and a lot of fears. Was I able to have a good relationship with people? Was I able to do my work in a proper way? What happened if I didn't understand anything about what they spoke about? And so on.
But one week after, I have to say several things. From the human aspect, I have to say that I discovered very interesting people that taught me very important life lessons. So, that's way this old Spanish song sum up my feelings. In a way, even if life takes us to different paths, I feel they are so valuable people that they will stay with me. From the journalistic aspect, I have to say that this is the first time in my life that I feel like a proper journalist. So, I'm quite satisfied and in a way I can say that RELATE gave me back the enthusiasm for fighting to make my dream comes true.
So I would like to say "see you soon" and not goodbye.

Additional info:
Link to my website:
http://www.observatorioeurasia.org/
http://yoqueriaserperiodista.blogspot.com/
http://refugioparasolitarios.blogspot.com/
http://areopagiticaglobal.blogspot.com/

MAX PLANCK INSTITUTE - Heidelberg (GERMANY)
//Angel Angelov Petrov

Bulgarian
January 22, 1989
commonwealth@abv.bg

About me

Education and training:
Sofia University "St. Kliment Ohridski"

Professional experience:
Bulgarian NGOs, "Dnevnik" and other local newspapers (trainee reporter in 2 of them), currently in National Cable Television "Evrokom"

Monday

15-11-2010

I'm beginning with the little acclaration that as my Internet connection was broken for the whole night and I didn't want to disturb my colleague Gerogi (we were both very tired), it was nearly impossible to post 'day-to-day' stuff in the blog. However, this text was written on WordPad the same night, so it does count as a live sharing experience.

Today was the day for introduction. We were put face to face with the facts of the upcoming week - that the MPIA is in the mountains, that it has scientists from all over the world, that it's part of other networks… nor did I have any information on its activities. In the morning Markus Pössel introduced us to OPTICON and gave us some astronomical background - something I admit I partially lacked in - thren we had a tour of MPIA with Claus Jäger, and later on we learned what the LBT is. Our focus was on mirrors and how they can be used to obtain the best space pictures possible. We've had 2 tours at the Institute and they were worth the time.

To be honest I feel a little weird. Before taking off to I already expected a difficult schedule at the Max Planck Astronomy Institute. I supposed there would be things I didn't know, too many of them and perhaps rather making it a harder task to communicate with specialists (at the beginning). Well, that first day showed that I turn out to be both right and wrong. I'm right because I did learn many things today. When we arrived in the morning, I did't have the faintest idea what the main difficulties with telescopes are, what makes the difference between a space and a ground telescope. I thought of a scientific lab as of a place which uses special equipment to boost the research processes, not a place which relies on self-produced technology, depending only on equipment made by the team's engineers. I also didn't know that Pluto is not a star any more - i.e. that it doesn't fall into that cathegory. In a nutshell, I learned both things that need a special place to be properly discovered and things that can be checked out in a simple way but normally no-one would do that as people pretend to be in a constant hurry… And I strongly believe both type of knowledge is necessary.

I'm wrong because learning and understanding some of the terms, concepts, events and processes explained to us turned out to be quite easy. A first insight into astronomy for someone who's got nothing to do with it? Quite successful, I believe. And it was obvious that both Georgi and I already have an overview in our heads. Some sort of a scheme how mechanisms in this science - and in this place work (efficiently if not the best). We even knew some of the things that have been told to us. However, the 'wrongness' comes from the fact that scientific terminology and briefly studied scientific point of view for natural events aren't what's most impressive (as an obstacle) for a new guest. For me the problem lies in reaching the next level. Looking for the unusual in a whole world of unusualities we people have come to accept - I mean general scientific public. Making ourselves ask questions and avoid the process of only absorbing information - the way many people do when reading encyclopedias or watching a documentary. Because we know more information can be extracted, more can be affirmed, even confirmed. The next level should be reached even though all topics have not been covered. Satisfaction with a pseudobig or pseudocomplete picture would put a great barrier in front on any similar attempt.

I must also admit I'm a bit irritated as writing in WordPad isn't difficult but was not what I was supposed to do and I'm just forced to it - so I'll give a better account tomorrow evening.

P.S. (Added Tuesday) Here it is - my Internet! My connection was shut down due to an unpurposeful existence of a P2P programme, uTorrent, in the msconfig of my Startup, which I forgot to turn of before entering the Guesthouse network, but the sys admin here has no way to know that - so - it's my fault.

Tuesday

16-11-2010

In terms of project-related activities it was definitely a shorter day, but it seemed longer. And not because it was boring - actually it gave us a great deal of information. Well, maybe not as great as to make us well prepared in these fields (telescopes, interferometry, machines' design, engeneering and development, etc.). Nevertheless it added something to what we came across the day before. We got an insight into the general points of observing galaxies, evolution in concepts about the "content" of the Universe (it had crossed my mind that it is "mostly empty" but I've never really paid attention to it), discovering new characteristics of space objects in the course of technological upgrades…

We had a funny experiment with metal rectangles in which some holes had been made to simulate telescope mirrors. It was simple but effective as yesterday I heard about the benefits of interferometry (merging the efficiency of 2 telescope mirrors to make them act as) a couple of times but found it a little hard to imagine the differences between the images received.

Later on we had an overview of how big telescopes are built and what new projects are being implemented with the help of MPIA. I´ve written things down but right now I can´t remember some details. In the afternoon we could look into some of the cryogenic workshops for the VLTI. We even made some pictures that I´ll upload tomorrow (maybe I´m no good for science as there are always technical problems around and about me - my USB slots refuse to function). The encounter with apparatus in different stages of production (design, elaboration, almost done, etc.) helped understand the process of construction. Later in the day we went to the town to buy some food. Now I suppose my idea on a possible material gets clearer and clearer but I´ll wit for the next 2 days to pass to be sure.

Wednesday

17-11-2010

It was quite curious to know - and SEE, in both senses - how much aspects of human activity can be related to astronomy. It is not something that sticks in our minds when we hear it because it sounds boring, dull or whatsoever definition you would like to use. Or rather, it sounds plain. To see and realize it, however, is yet another world to explore. Even though laymen (and occasional passers-by, what we are) normally don't get much of an ability to look into it.

Today was a good example in that direction.

At the beginning it was just explanations and Q&As based on the E-ELT project and other telescope-related topics. We had the opportunity to learn many interesting facts about where the idea came from, how it is currently managed, what problems (mainly one problem) lie in front of the astronomer's work in case of the project - or any other project of that type. From basic technical matters to national budgets and their percentage in astronomy.

Later on there was a very different experience - observing (and symbolically participating in) parts' design and elaboration. It is true that mechanics for cryostats, detectors, interferometers, etc. are much more complex and require a lot of factors to have in mind. However, we were given the chance to create some small objects with our names on them and used the same apparati that processes different materials into technological parts. It was fun, but what if I had to repeat this process all the time? Besides, pieces created there requiere greater thought and precision. But nevertheless it was great because we put our hands on it. And even if it's not a real idea about how exactly these things are made, it's surely an image. And a good beginning. Not like just 'theoretically' or 'abstractly' knowing something, e.g. that development of any kind of technology takes time, effort, skill and patience. Now we have the freedom of our imaginations to work in that direction. No matter if we decide to use it or not.

Afterwards came another not-just-science session. Well, it wasn't practice but was definitely another perspective - meeting the editor-in-chief of the 'Sterne und Weltraum' (astronomical) and 'Spektrum der Wissenschaft' (generally scientific) magazines. We talked about the history, development, public, (hard to forsee) future of these editions, etc. I was pleasantly surprised to learn that in a seious scientific magazine amateurs can contribute openly and they are respected. In this, as well as other aspects, this seems to be a media holding to its traditions and nevertheless keeping the interest of its readers. It may seem normal for most people but I also noted that 'Sterne und Weltraum' considers communication with the readers very important. And these are, besides, definitely beatiful editions… I was impressed. Pity such thing hasn't made its way in our country! And pity there wouldn't be many people to have more than a glance.

I am still not sure I can fully organize all that knowledge (for me it's "all that" and I realize that for someone deep into astronomy it's less than a byte or even bit of info). It's just quite new to me and perhaps it will take more time than I expected, even though I believe I undestand the greater part of it. Honestly I don't believe that the upcoming meetings will make any kind of an order out of the mess in my head. Even though I try a self-pose and convince myself it's all been organized, doing this with apparently plausible arguments. What I definitely know, however, is that people at the Institute know what they're doing. Now let's hope when I sit and begin to write something related to the last 5 days, I'll also know what I am doing.

Thursday

18-11-2010

(written between 23 and 23:30 on Thursday, 18.11.2010) Now I'll make a silly joke… But as they're my special part, I hope nobody gets offended. Well, we and Germany are definitely not meant to be! I am too much the absent-minded kind of guy to survive here. I had to make an important phone call and thus forgot to remove a P2P client from my Startup before connecting to the Guesthouse network. So I was shut down again, just like the first time - because I'd never had such an experience and had never considered torrents a menace to security, intellectual property, etc. Nor am I giving a small charade or justifying myself. It's just that I understand. I know it's not personal, just principles. You postpone turning a program off with a second and the firewall shuts you down - just security. Nothing personal. Here if you get distracted, you might get killed. No matter that exchanging a few Skype pictures or forgetting open a torrent client can be a lesser crime compared to Facebook's Farmville. Who cares? I'm not going against the system. Just having a thought on it. It's alright to come from a different culture and feel puzzled by the new culture's properties! Or am I wrong?

Leaving that aside, it was a great day. A weird thing - yesterday I thought I had heard as much as I could about adaptive optics. Then it turned out that we had a whole morning and afternoon dedicated to them. We spent out time to lunch at the lab where a detector for LINC-NIRVANA is being tested and calibrated. We needed patience to contemplate the progress of this testing - and imagine how patient scientists can be! We realized most things they usually do are not friutful just at the moment when they begin their implementation.

We had the opportunity to participate in the use of their software, but I believe out interference was rather vague. Nevertheless it was a curious feeling to imagine what would the world look like if we were in their place. We heard a few interesting stories behind MPIA scientists' work - things that happend to them in the process of construction, experimenting or just looking for a suitable place to put a telescope. However, it's a little difficult (or rather I'm a little reluctant) to tell about that chat in details. I only know it was once again quite useful speaking of explanations, introductions, Q&A and, of course, stories. What we are here for even behind the self-misleading mask of science journalism. Lunch followed and then we went to test apparatus working with piezo matter, trying to eliminate vibrational disturbancies as part of the Argos equipment. We had a great talk too - and among the important things in the session were mistakes. Or rather takes that won't work. It's true - science is perfect only when presented on PowerPoint… The good news is that I've got an idea for my topic. The bad one is I need some sleep.

Friday

19-11-2010

Just as I suspected, the last day didn't become a completely free part of our stay here. It wa rather well organized - as we had 2 appointments and one half-appointment in schedule. Added a small trip to Heidelberg (we didn't use the bus but climbed down the mountain for about 30 minutes), it was all like a final sketch to our activities, observations, impressions related to work in the Institute. Because no matter astronomy is some kind of exact science, it has its relation to places, faces an other aspects of human life. It wouldn't be possible without human life after all.
What we mostly did was meet people for 'last checks'. First we met a Bulgarian - how curious there could be about 3 Bulgarian people at the Institute and we learned that yesterday! Bulgarians don't tend to show off too much, don't we? We talked to Maria about a project that is supposed to lead to the construction of a Planetarium in Sofia. It turned out there was a group of astronomers in Bulgaria we knew nothing about - even though they'd had some media activities! Quite unfamous. But I guess with current attitude of our country to science such state of things is also quite expected. I believe we'll help her cause - I have some connections in newspapers that could help. And I also have a workplace whose owners prefer scientific news! But alright, I guess a cable television wouldn't bring much news to many people. We'll see that…
Then it was Jakob Staude, the ex-editor-in-chief of the 'Sterne und Weltraum" magazine, one of the most popular astronomical magazines and surely unique of its kind - I don't know if I mentioned it yesterday, but it's quite cuirous that its office is in the Institute and one of its goals is to reach more people belonging to the general public. Apart from learning stories about the magazine, we could make some conclusions on how such media could be made the best way - not by targeting it to a cetain group but by writing it in a way people could understand. I was amazed. No by the statements by but the way Jakob Staude explained it to us. And all that sincerity.
Then we met Wolfgang Gässler and finished our conversation on human stories in science at the Insitute. That's also a thing that doesn't really need to go to a blog but rather deserves an article. It's quite interesting, though - to keep your respect for astonomy even when you here things suitable for the EPIC FAIL blogs. I loved this part.
Then we went to the town. It was fun. And definitely an experience. That's what matters for the blog's purposes. The rest, I guess, is for my grandchildren :D
I want to thank to RELATE for having the possibility to spend a week at the Institute. Secondly, but with the same priority, I want to thank Markus Pössel for the help and the organization. I also want to thank to Jakob Staude, Wolfgang Gässler, Tom Herbst, Leonard Burtscher and all the people that made me remember some theory. For science and me in one place? If I remember something, that's remarkable. And I did.

MAX PLANCK INSTITUTE - Heidelberg (GERMANY)
//Georgi Krasimirov Rumerov

Bulgarian
9 May 1988
g_rumenov@abv.bg

Sunday

14-11-2010

3:20 Local time; Sofia – I'm so late for my flight. I fear I can miss the plane. I tell a friend of mine, who is driving me to the airport "Bro, I want you to drive like Schumacher, I'll pay your fines". After several yellow traffic lights and some fast driving, I'm running into the airport, checking in and going to the departure point. The plane is taking off.
17:45 Local time; Frankfurt – the plane is landing in Frankfurt airport with about 15 minutes behind schedule. Frankfurt airport is huge! Really huge! It is probably as big as a whole neighborhood in my city! So it takes a time for one to walk through this airport, receive his luggage and get out. As a result I and my fellow Bulgarian Angel missed the bus to Heidelberg, and after we declined some really "favourable" offers from the local taxi drivers we decided to take the train to Strasburg, get off in Mannheim, and from there to catch the local train to Heidelberg. And so we did. At Heidelberg we faced the difficulty of not knowing how to reach our hotel. So I gathered a group of local people and asked them for the directions, while my fellow Bulgarian asked for information in the station. The locals didn't know where the Goethestraße is located and the lady in the station's information point gave us wrong directions. But every cloud has a silver lining, and that gave us the opportunity to take a good look at Heidelberg's streets, people and architecture. I was very impressed by the tidiness, clearness and the way this town is organized. For example I very much enjoyed to see how widespread and popular are bicycles around here. There is a net of bicycles' alleys all over the town and everybody just leaves his bike not locked in numerous places, provided for that, or just near the place he is going to. In my city if you get off your bike, and blink for a moment, it is likely that it may be stolen in one hundred different ways.
At the Kohler hotel we met our contact here – Hinano Spreafico. Despite the fact that we were over an hour late for our meeting with her, she was very nice and helped us with the accommodation. We had a little chat with her, and we made an arrangement for tomorrow morning – we are going to reach our main aim – the MPIA.


An evening in Heidelberg

Monday

15-11-2010

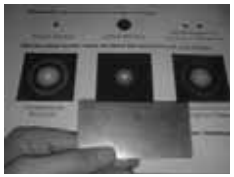
It's a rainy morning in Heidelberg. I and my colleague Angel are having breakfast at the hotel. Here comes Hinano and asks if we are ready to go. Yes, we are! We grab our luggage and follow her to the bus station, to catch the bus, which will take us up the hill to the MPIA.
After 30 minutes of traveling trough the forest and up the hill we are there. We got off the bus and started making our way to the main building of the institute and telling jokes about scientists. At that point we didn't exactly know what to expect here. Science and science research is a topic that is very interesting to me and I have read many articles, magazines and books dedicated to this matter, but this was the first time I was about to visit a real science facility of such size and magnitude - my first chance to see how the whole thing happens from inside. And it is not only about the machines and the technology, but about the people who work there and their everyday life.
With that being said it won't be surprise for anyone who is reading this right now to understand that when we entered the institute even the lobby was very very interesting for me. There I could look at the models of world's biggest telescopes for which I've read. What I didn't know yet was that in the very same moment I was in the building in which were invented and manufactured some of the most important parts of those telescopes!
In general, this was the day for introduction. After we spend a few minutes in the lobby, Markus Possel who is our main contact here arrived and welcomed us to the institute. First we followed him to a conference hall where he introduced us to the week's schedule - activities in which we will participate, people we will meet, things we will learn. After that we went to his office where he firstly gave us some basic background in astronomy and told us about The Optical Infrared Co-ordination Network for Astronomy (OPTICON), a part of which is also the Max Planck Society. He told us more about the history of the institute and then introduced us to Klaus Jager and Martin Kurster, who both took us to a brief tour in the institute. They showed us some of the labs, where scientists are doing practical work and engineering and they told us about VLTI (The Very Large Telescope Interferometer) and LBT (The Large Binocular Telescope), two of the world's biggest telescopes, and about the adaptive optics and interferometry, the two main research and production activities of MPIA. Later during the week we will have closer encounter with both practical and theoretical side of the above mentioned things, so I'll share more details and impressions then.

The MPIA

Tuesday

16-11-2010

Day two in MPIA. The last two days were so tiring and I had only couple of hours sleep. So now, I am asleep and even my colleague Angel knocking on my door, can't wake me up. But suddenly, I open my eyes and quickly turn my head towards the clock. It's 9:27! Just 15 minutes before that Angel had decided that I'm already in the institute and had left the guesthouse. So now I jump from my bead, get dressed and rush to the institute.
Fortunately, I was just on time to meet Leonard Burtcher. After Martin Kurster had told us with details about the (yet not fully operating) LBT the previous day, now Leonard was about to do the same, but about nowadays biggest and most efficient astronomical observatory - VLTI, located in northern Chile in the mountain Paranal. He and his colleague Sarah Kendrew, who joined us later, explained to us why the consortiums are building telescopes mainly in that region (Chile) – because of the altitude, the atmospheric condition, and the latitude, which makes it the best region for astronomical research. Well, if we don't count the Antarctica, but there is still unpassable technological difficulties for constructing a big telescope there. They also told us in details how the adaptive optics and interferometry research and instrumentation is applied in the VLTI. Leonard showed us in a quite amazing way what is the difference in the data and the images produced by a small, a big, and a interferometer telescope. In the multimedia room in which we were, they had a set of neon lights that represented different type of stars. He gave us a metal plate with tree wholes – small whole that stood for small telescope, big whole that stood for big telescope, and two small wholes, very close to each other, that stood for the interferometer. It was quite an interesting experiment, that explained many things to us.



The afternoon was also quite interesting! We had a meeting with Werner Laun, who is an expert in cryogenics. First he widely explained to as why there is a need for cryogenics in the constructing of telescopes – basically some of the most important devices in the telescope, such as the detector, need to be cooled down at temperatures of 60 - 70 K (about – 200 ºC) in order some difficulties concerning radiation can be overcome. In such low temperatures there is no radiation or inconsiderable amount of radiation. Then Werner told us about the cryogenics projects the institute is working on, and showed us the designs. We even had the chance to follow him in the lab where he filled the daily amount of liquid nitrogen in PANIC cryostat. He also took us to a more detailed tour through the labs and workshops in the institute.

PANIC

Later that day I and Angel went to downtown, did some sightseeing, had something to eat and did a very strategic purchase of food for the next day and even more strategic purchase of a bottle of strange German alcohol, which reminds of Bulgaria's most popular strong alcoholic beverage - РАКИЯ!

Wednesday

17-11-2010

So, day three in the MPIA. Time is running so fast around here. The more time we spend with the astronomers here, the more interesting for us the project RELATE becomes. We are starting to understand not only the specific terminology and principles of the astronomy, but the scientific way of thinking, we are becoming to realize that the people here are not only produce technology, but they produce knowledge. And most importantly, they're not only putting they're minds in the work, but their hearts as well.
This morning is dedicated to theory. A theory concerning one of the most important projects in science today. For what I am talking is the E-ELT (European Extremely Large Telescope). We met Reiner Lenzen, and Tom Herbs, who was about to tell us more about the E-ELT. They told us about the history of astronomy in Europe, and how Europe had to completely change their approach, political and financial attitude towards astronomy in order to catch up for the Americans. These and many other factors finally resulted in the approval of the project for building the E-ELT. And this "E" which stands for "extremely" is not just an attractive word in the name of the telescope. Today's biggest telescopes in the world have diameter of the mirror of 8 meters. E-ELT has 42 meters diameter. The telescope will be at the size of a football stadium, and Tom Herbs, which participates in the project told us, that he personally had the task to calculate how much it will cost a night observation in it – more than 250 000 milion euros per night, which is 10 euro per second! Some of the instrumentation of this telescope will be constructed here in the MPIA and we had the chance to look at the projects and instrumentation's design.
Well, if the morning was about the theory, the first part of the afternoon was all about practice. We had an amazing time and unforgettable experience in the MPIA's work shop. There we met Armin Bohm, with whom we discussed the construction process of parts, tools and instrumentation for telescopes. In cased I haven't mentioned yet, the institute relies on a self made technology and produces all of the extremely complicated instrumentation tools from a piece of metal! They even write their own software. It's fascinating, really! So what we did, was first designing a key ring and a spinning top with the logo of the institute and our names on it, then we went through the process of constructing our stuff in the workshop and had the chance to use machines like huge metal cutting devices and even a laser. Although the things we made were quite simple, the principles of constructing overwhelmingly complicated technology like LINC-NIRVANA, is the same.
The last activity of the day was especially interesting and some kind of special for us, because we had a meeting with the chief editor of "Sterne und weltraum" magazine (one of the world's most prominent magazines dedicated for astronomy) Uwe Reicherts. I and my colleague, having some professional background in journalism, were very happy to meet this person. As learning journalists with the wish to develop and improve our skills, we had quite an useful meeting there, and of course we had numerous questions to ask. Actually we spend maybe 2 and a half hours with him and exceeded the scheduled time.
That was a long day and it ended with a 3 euro, 1 kilo lasagna (quite a good deal, isn't it) and a glass of that strange German alcohol. Cheers!

Thursday

18-11-2010

Four days in the MPIA have passed, and they seemed like four hours to me. This place is amazing. What makes great impression to me is that people here are not closed in their shells. Neither in their professional specialty, nor in their social life here. Everyone is exited not only about his work, but also about the work of his colleagues. All the people here gather, eat together, drink coffee together, talk about their work, discuss many other topics. It seems like for them we are not annoying journalists or students but a part of the whole thing here. And as we are exited to talk to them and learn something new, so they are exited to talk to us, introduce us to what they are doing and also to learn something from us.
Today is all about the adaptive optics. In the morning we met the person, who is managing the labs and research concerning the most important part in the earth based astronomy today - the design, research, manufacturing, applying and usage of the adaptive optics. Wolfgang Gassler is quite an interesting person. He is both uncompromising professional and a man of the earth - it's always fun talking to him. We spend almost the whole day with him and his colleagues in the adaptive optics department, but I needed only an hour or so, to be sure that he and the things we're talking about will be a considerable source of information for my story (article or radio podcast) so I arrange another meeting with him for an interview session for tomorrow.
In the late afternoon we had coffee and informal conversation with some scientists in the rest room. Then we went to prepare for a joint dinner downtown with Markus and one very prominent person here – Jacob Staude. He is a scientist and the one responsible for the great success of the magazine Sterne und Weltraum. He started to chief edit it when it was in its most difficult and complicated situation. No one worked there and it had no publisher. When Jacob took on the magazine he started to organize things his way and began to make gradual but apparent and perspective progress. And today, three years after Jacob was succeeded by Uwe Reichert, the magazine sells more than 20 000 copies per month and has un increasing number of online sells world wide, as the magazine is available for buying in pdf format in the internet. It's a peculiar and interesting story and it attracted my personal and journalistic interest, so I arranged another interview for tomorrow.
Oh, I forgot to mention that we had an awesome traditional German dinner and one very pleasant conversation.

Friday

19-11-2010

So last day in the Max Planck Institute for Astronomy. We haven't left yet but I feel kind of I already miss this place, hah-hah. We have planned the day so that there will be a time left for us to go downtown and look at the castle, the old bridge and buildings, visit some museums and so on.
Earlier in the week I had asked Markus if we could see and learn about the two telescopes of the institute. So we had arranged a meeting with him, and this morning we went to the building where the telescopes are. Markus told us about them and we even had the chance to operate with them. We adjusted the telescope for observing the crane at the construction point of the new MPIA galaxy shaped building. This was educational… and fun!
Then we had an unexpected meeting with Maria Lyubenova - a fellow Bulgarian scientist who is currently working here. She is also publishing a scientific magazine in Bulgaria – "Andromeda". She told us about a project for building a planetarium in our home city of Sofia that needs to get as much support and media coverage as possible. And since I am managing a student radio in my university I told her that I am very interested in the project and I can assure a time for promoting in our radio where we're targeting the young people - people who will be interested in having such a facility in their city. So I exchanged contacts with her, and then I, my colleague Angel, Maria, and another girl from Bulgaria doing her doctor's degree in the MPIA, formed a whole Bulgarian delegation to have lunch.
After lunch we went to find Wolfgang and make the arranged interview. The topic of my article/radio podcast was already crystallized in my mind, so no matter how interesting and amusing the communication with Wolfgang is, I knew the exact questions I was about to ask and the time for the interview, so I said to Angel: "Let's finish this and go sightseeing!" And most importantly, Wolfgang had a responsible work to do, and I didn't want us taking too much of his time.
And there it is. Our free time in Heidelberg. Whole afternoon! And since both I and my colleague Angel are enthusiastic mountaineers, I proposed we go downtown through the forest down the mountain. What's better, eh? So after 40 or 50 minutes of walking downhill we reached the town. The beauty we saw is almost impossible to be described. The nature, the terrain, the architecture, the medieval castle! It is one of the most beautiful places I've ever been to!
And last but not least I want to express my gratitude for being abele to Participate in the RELATE project. So thanks to the EC which is funding the RELATE and thanks to all its organizers and partners. Thanks to all the people in the MPIA - thanks to Markus Poesell, Klaus Jager, Martin Kurster, Leonard Burtscher, Sarah Kendrew, Werner Laun, Rainer Lenzen, Tom Herbst, Uwe Reichert, Wolfgang Gassler, Jacob Staude, Maria Lyubenova and all the others! It was quite an interesting and unforgettable experience.

Estación Biológica de Doñana (SPAIN)
// Caterina Ferrara

About me

Education and training:
2006. Master's Degree in Medical Biotechnologies (University of Naples "Federico II"); 2008. Training Course about the role of Information in Oncology (National Cancers Institute "Regina Elena", Rome); 2010. Journalist Internship (ServizioCivileMagazine.it Editor: Amesci); 2010. International School of Scientific Journalism and Communication (Ettore Maiorana Foundation, Centre for Scientific Culture, Erice in Sicilia, Italy)

Professional experience:
2006. Graduate student at the Genetic and Biophysical Institute of the National Research Counsil (Project "Study and elaboration of a non-invasive method to misure β-cells pancreatic mass"); 2009. Scientific Writer for the free-press web magazine "Ecomagazine"; 2009. Scientific Communicator for Aimac, Cancer Patients Italian Association (Project: "Informa Cancro", a campaign of information about cancer, therapies and cancer patient's rights); 2010. Scientific Communicator at the Science Centre Città della Scienza - Fondazione Idis, hands-on museum.
Awards and personal grants: 1998. Winner of "Scrittura giovane" Writing Competition (Philosophical Studies Institute of Naples Prize)

Monday

15-11-2010

Today begins my journey to discover Science "inside out"! My first discovery: I was convinced that a laboratory is a place made of test tubes, pipettes, centrifuges. But this mornign I'm arrived at the Biological Station of Donana, I had a quick tour of the Institute and I understand that there's a very greater laboratory, where you do not need any special equipment or machinery, but only of your open eyes to watch the real laboratory that is: Nature. Here, Researchers, PhDs and Post Docs dedicate their work to the flora and fauna of the beautiful Andalucia, which hides the source of wealth that tends to become increasingly rare and that is Biodiversity. Enemy number one: Biological Invasions. I hope to learn a lot about this topic and to understand the role and the effects level that human action and climate change have on it. I have a week to do it and so: two, one, ready, go!

Tuesday

16-11-2010

Everyday a discovery! The studies about alien species and biological invasions are very young. Only in the last 10 years the researches are increased and science has reached the latest developments. Look for a solution to the problem is not easy even for this reason. Certainly more than pointing to programs of monitoring and eradication of those species whose costs are often high, however not highest than the damages, it would be better to invest time and resources into prevention. But preventing also means - to predict - and this is the crux of the matter because it is very complex the prediction of species that can become invasive and of the risks and consequences that will ensue. However, an interesting element to consider in the work of monitoring and eradication is the enrollment of volunteers and the projects of citizen participation. Many programs like this are active in America, at least in Europe. Thanks to the volunteers, it is possible to create databases crammed with data and collect more information behind that collected with the available resources. The citizen becomes so a little scientist!

Wednesday

17-11-2010

Have a trip in Donana Park! Go to the park with a very strong rain and a cold that freezes the blood is not ideal, but if this is the Donana National Park, it is right to face the weather and go to see what's there. A castle of sand carried by the wind, a salty smell that follows you everywhere with advancing dunes sucking vegetation: a landscape in constant motion for a park very unusual. 500 sq km of "Coto" - land - for thousands of plants and animals, but also a place steeped in history and charm. For about 900 years it has been an aristocratic hunting lodge and now it is National Heritage of UNESCO.

Incredible to say but the park in 1998 touched the environmental disaster because of toxic waste from a nearby mine, the acid water contaminated with heavy metals, flooded the surrounding fields, a memory evoked by the recent dispersal of toxic mud in Hungary. Has no price take a look to the environment that changes its path and its colors. Gulls, horses, birds, Nature here feels safe thanks also to a sophisticated monitoring system. There is no doubt that the Donana National Park is one of the best conservation centers in the world, a place where it is clear that Nature is art.




Thursday

18-11-2010

To be communicative... The academic world of science is often cold, closed, limited and self-confined. Its fence is a square whose sides, geometrically perfect are: the method, the hypothesis testing and therefore the experiment, the publication. Unable to get rid of this form the scientific community tends to lose its contact with the outside world and marks a tremendous own goal, as it doesn't promote itself, doesn't value itself and does not look hearing between normal people: the citizens. But here at the Biological Station of Donana, instead, there are many researchers who have a very good communicative approach and lend their selves readily to scientific communication. Today, many of them have welcomed me to tell stories about science in a practical way understandable to everyone, very interesting stories about biological invasions and the considerable impact that they have on the environment and the economy. The collaboration between researchers and scientists is the connecting link necessary to tighten and tie for a more fundamental relationship with the public and institutions. I sincerely hope that in the next 10 years the two professional categories will go marry into a lasting marriage.

Friday

19-11-2010

An House for Science.

Science often is hosted in the most curious places. Here in Seville it founded home at the Pabellon de Peru, a structure that was the location for the Ibero-American Exposition. The building had two tenants, the first was the Donana Biological Station, which later moved to the Isle of Cartuja, the second "Casa de la Ciencia". What better way to close a visit to Seville than to make a jump there and then to the Biodiversity Forum, in the Patio de Banderas, between the Giralda and the Alcazar?! Knowing that science prevails in Seville at a few steps from art and history is incredibly pleasant. At the end of the day and especially at the end of this trip incredibly surprising that was ReLaTe, it strikes me and I almost get emotional when I read this sentence going away from Casa de la Ciencia: "La Ciencia mas util es aquella cuyo fruto es el mas communicable" (Leonardo da Vinci).

Additional info:

Link to my website:
My profile is also available here:
http://www.serviziocivilemagazine.it/images/profili/ferrara_caterina.htm
Additional relevant information:
"PET Imaging of Vmat2 in Beta Cells of the Endocrine Pancreas". Antonella Maffei(1), Caterina Ferrara(1), Pasquale Barba(1), John Mann(2), Robin Goland(2), Masanori Ichise(2) and Paul E. Harris(1,2). (1) Istituto di Genetica e Biofisica " Adriano Buzzati-Traverso", CNR, Napoli. (2) Health Science Campus, Columbia University, New York. 2010. Present at the Ecsite Conference 2010 (European Network of Science Centre and Museums), Dasa (German Occupational Safety and Health Exhibition) Dortmund, Germania. Poster presentation: "Science on Wheels, experience and outcomes". 2007. Present at the Telethon Convention (Salsomaggiore, Parma). Poster presentation:

Universitá di Bologna - Bologna(ITALY)
// Stephan Van Duin

About me

Education and training:
MSc Biology at Wageningen University (NL), internship Science Communication at the University of California at Berkeley, minors in Business management and Communication

Professional experience:
Project manager at Science Center NEMO (Amsterdam), Subsidy consultant at DDF, Freelance Science Journalist

Monday

22-11-2010

Today was a very eventful day. According to our schedule we had a presentation, a lab tour and an introduction to the staff. Oh, and also time in our newsroom. What we actually did was something completely different - after the morning presentation that is. We first had coffee with our assigned lab members, Lorenzo from the DiSTA lab and Erik from the marine biology one. We then toured some of the old university buildings, looked at a large stuffed beaver in the evolutionary museum, and had lunch in a cosy student establishment.


My kinda lunch!

After another coffee - the best in town, according to Lorenzo - we went to the faculty, a short bus ride from the center. There we met with the professor, some other lab members and had a short tour around the facilities. It's quite an impressive building - Bologna University has to provide shelter to a staggering 85.000 students - and I'm sure we will get lost at some point this week. A very different day from what I expected, but better and more refreshing none-the-less.
So the main conclusion for today is, well, that we established now that the schedule is kind of a 'guideline', to use the words of our friendly professor, Andrea Monti. Which conveniently brings me to the topic of today: the life and times of an Italian scientist. A microbial ecologist, to be precise. Cause although the coffees and lunch were nice and all, we did get a lot of time to spend with Lorenzo, and we talked and talked and talked some more. About life, the universe and everything, one might say. Or at least the universe of a scientist.
And one of the first lessons we've learned is that scientists don't really do 9-to-5. They do experiments, they do congresses - they basically do their own thing, which makes it that much more convenient to plan their own day. And it also gives room to breathe for those who aren't the first to rise in the morning...
On the bus Lorenzo went on about the frustrating part of being a scientist in Italy - that the system can put people on sidetracks for years, that it can be really hard to find good projects, or even to write your own. But that at the same time it's still worth it, because even though the pay isn't astronomical, you are a free mind, which makes everything you do so much more rewarding. And then his eyes start to gleam as he talks about finding work that makes you excited. Sure you work long hours, but when you find something you really like and that also challenges you, you don't even notice.
In between talking about his own life and explaining why this one place (Terce) has the best coffee in town ("they ground it and weigh the coffee before they make it, so it's really perfect!"), he talks about the university and the city of Bologna, obviously two sides of the same coin. Bologna is the oldest university in the Western world, and great minds have thought alike here for about a millennium. Lorenzo explains why the two towers of Bologna are actually more like one and a half tower (the family who builds the highest tower has the right to cut off the other one), and how the Americans bombed the city in the second world war because their first target, Lorenzo's hometown of Prato, was covered in clouds. And there's more; the murder of a professor in the nineties, the new communist movement that characterizes Bologna, the patron saints of musicians and the city - Lorenzo is a walking library.
So this seemingly unrelated talking about the city and university life also shows the inquisitive mind of the scientist. Bologna is not Lorenzo's hometown, but he could probably tell you more about it than any other non-scientist from the area itself. Why? Because there is always that urge to know, to investigate. And after this surprisingly refreshing but tiring day I can honestly say I look forward to the coming week. Because I can feel the urge rising...I want to know!

Tuesday

23-11-2010

Our second day at the lab started with a lab meeting, so that we could choose the subject to write on and the researchers to shadow. But the guys at the lab were all so enthusiastic about their work that we now have a week planned with visits to just about everything: some lab farms, some labs, some growth chambers - and on top of that more shadowing than the CIA does in an average month. It almost made me a bit uncomfortable cause I still needed a focus for my story! It turned out that the variety was partly just virtual, and that most of the people are working on different angles of the same projects. Now that sounds more like it!
Our main trip was right after the meeting, to a farm outside the city. Well, farm.. It's a nature park owned by the university and used for experiments - without a cow or red barn in sight.

But with the fieldwork essentials!

One of the areas was reserved for erosion research, and we were showed around by Dr. Linda Pieri, the scientist involved. She is, among other things, investigating the run-off of pesticides sprayed on plant crops, because a lot of surface water can get contaminated with it. So they make plots with plants, spray them with pesticides like farmers do, and then analyse the water that comes off of the field. That is all automated, I might add, like a beautfiful choreography of pipes, tubes, pumps and beakers...

First you get it off the fields...

... then you sample it. Poetry in motion...

The first thing I, being an interested but uninformed guest, wanted to know immediately of course, was 'what influences erosion'? Dr. Pieri's answer; 'well, it's not so simple, cause there are a lot of factors involved..' We started talking some more, and at the end of the visit I can say I have an idea of (a part of) the factors that together make up the total erosion in an area. Hold on to your horses: soil quality, soil texture, soil structure, soil type, crop type, crop quantity, crop foliage type, crop root systems, slope angle, animal presence, the direction of the crop rows, sunlight intensity, rainfall pattern, rainfall seasons, rainfall quantity, rainfall intensity, and, finally, man-made adaptations to influence erosion.
Now, as someone who is trying to convey science to the public, this struck me as a nice opportunity to tell a story. You see, I'm asking a lot of scientists what the main conclusion of his or her work is, and the answer I continuously get is 'it's a bit complicated'. In other words; don't expect streamers or soundbites out of me. But the media do work with streamers and soundbites, so this is a problem - maybe not so much if it's about erosion and most people will never have to use the results.
But what about climate change? Scientists who take their work seriously will try to provide nuance to what a journalist writes. And science by definition doesn't give definite answers, so the answers is always going to be 'a bit complicated'. This also explains why there are still groups out there criticizing climate change - and evolution, for that matter. They hear the scientists say 'it's a theory' or something like that, and immediately see the opportunity to debunk the whole story, conveniently swerving around the heaps and heaps of evidence supporting it. But a scientific theory is different from a 'normal' theory; it's been tested and it's the best possible explanation for a certain phenomenon. Not something someone has dreamt up while having a shower.

So back to erosion. This relatively small-scale problem has at least 17 factors involved. Now, after reading this, do you really expect somebody who's working on a global problem to go ahead and say "I've figured it out! Now we can rest on our laurels.." I sincerely hope not. But the general media want that or they're not interested. And if they can't get it, well, they sometimes just create it.
Now what should we do about that? Should we try to drown the public in even more evidence about CO2 emissions, the albedo effect, energy vs food use of crops, ocean currents, cloud formation, glacier retreat, influence of wind on grass growth, energy production, short and long CO2 cycles or any of the other gazillion factors involved in climate change (or any other problem)? Or should we educate the public about the way science works and why the answer is always a bit complicated, thereby teaching them to trust the scientists involved? Thinking about an old saying, I think we've known the answer to this for quite some time: give a man a fish and he can eat for a day. But learn him how to fish, and he'll never go hungry again. I guess that when it comes to the dissemination of science it's time to - excuse the pun - put the school back into fishing.

Wednesday

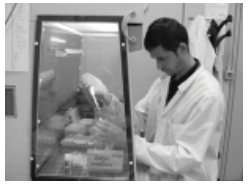
24-11-2010

In contrast to the amount of daylight, our days are getting longer and longer. This morning we met at 9am at the labs, and I think that the fact that I'm typing this at 10pm says it all. We do have the newsroom, but no time to visit it at all!

This morning we did visit one of the farms though - called Cadriano, with Walter and Guiseppe. They grow multiple crops there, but since it's November already the only thing still standing was Sorgum, a crop for biofuel. Sorgum is a grass, but like corn it grows up to 3 meters high. Depending on the variety, it is either high in sap or high in cellulose. Both can be used to make biofuels, but in different ways. I won't get into it here, cause I would like to save that for my article..

They tried to hide it at first..

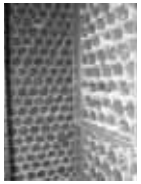
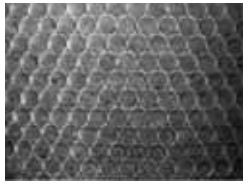
They also do crop rotation research there, and one of the experiments is the longest-running experiment of its kind in the world: 44 years. Cause when it comes to growing and changing crops, and measuring the consequences of that with any reliability, you really need this magnitude of time. This is also one aspect of scientific work that I think is nice to put in the spotlight, cause it's exactly what sets science apart from other types of work.
Some of the activities that scientists do on a daily basis are not very complex in itself. It can be pipetting, planting seeds of various varieties, or building giant plant pots that allow you to follow the growth of root systems. In itself not highly complex work, although you do have to have a system. (It's definately not like they show you in Indiana Jones or Jurassic Park..or at least not most of the time..)



It's mainly lots and lots of pipetting.. :)

But in some jobs you are doing those same things all the time, without getting anywhere. Like house cleaning, or making sandwiches, or policework. It's important, but the building you clean today will be equally dirty in a week, and no way is making it extra clean today going to prevent it from getting dirty in the future. It's an endless cycle. Then there's work like teaching. It's also quite repetitive, but the knowledge you convey does change a bit with the status quo of your expertise. And then there is science, which is nothing else than building upon existing work (or fundaments if you like). With everything scientists do, they cite earlier work and try to comment on it or fit it into the existing framework. It's working to collectively get somewhere.
All this not-very-complex work is necessary to be able to say something complex about a subject. And collectively, all these simple tasks and relatively simple results will combine into one huge, immensely complex conclusion that can really change the way we see the world. Maybe now it's not so hard to understand why in this line of work the little things really count.

Like creating databases, such as the one on Bifidobacteria. You see, there was this professor at 'my' department, a long time ago, and he discovered a bacterium that lives in humans, now called Bifidobacterium (Bifido is an empty term used by food companies to get you to think it's good for you, but it's actually banned from the ingredient list - cause it's nothing). And just like humans have families and races, so bacteria have strains - largely similar, but slightly different. Like brands of beer, or hairstyles (as in being fundamentally the same, except for some slight variations). To be able to talk about this bacterium and it's habits, it's likes and dislikes and, here it is again, to get somewhere with this knowledge, it's important to know what you're talking about - which beer, for instance.
So the professor, Scardovi, started a database with all the varieties of Bifidus. He cultured a large number of them, like 10^12, or 10000000000000 of each strain. Then he dried them, and they could be conserved for about a hundred years. And he didn't do that with one strain, or two, which is what would be quite simple in itself. But by making 6000 of them, divided over 25 different species, he transferred this from being ordinary work to being science. So persistance and care or even humbleness is what characterizes the scientist. By the way, in the end that database looks something like this:




Every blue dot is a little tube containing a different strain.

Of course, to write a little bit of moral into this story, this tedious work sometimes means (and especially in agricultural research) that results may take a while to emerge - even more so with my blog from yesterday in mind. So when politics implement some sort of policy based on research, it may take years for science to figure out that it might not be such a good idea, even though it looked that way earlier. But by the time science acts on this, there is so much depending on this policy that it takes years for it to change or improve. And that's really nothing less than a missed opportunity to improve society.

Thursday

25-11-2010

Today was finally the kind of weather you expect in Italy: Bright, clear skies and actually warm if you happened to be in the sun. Which unfortunately was only half an hour during lunch. A lunch, I might add, during which Lorenzo was telling me another university-related murder story - he's been telling me one every day so far, so I'm curious to see what he'll come up with tomorrow.. (He also said he liked my Tuesday blog better than the Wednesday one, so I'll put some extra effort into this one I guess! :))
The day started with a couple of hours in the lab with Alessandro, who was trying to measure various sugar contents in a variety of Sorgum. To quote Run DMC, 'this goes a little something like this': When they harvest the Sorgum stems, part of the stems will have the sap extracted. Then all of them are dried in an oven and ground up. The ground, sawdust-like plant remains have little bit of water still in it, but for the sake of simplicity I'll say they are moisture-free. Alessandro weighs the samples, and then during three washing steps he'll take away (remaining) sap-related sugars, hemicelluloses and cellulose, respectively. And by weighing the samples in between, he can see exactly (with FOUR digits after the comma, so very precise) how much of that sugar/(hemi)cellulose was originally in the sample. This gives you the percentage of the desired stuff (cause the various sugars will give you biofuel!) in the original plant. You can then calculate how much bioethanol for example you'll get from an acre of the plants. If you do this for different varieties and over a long harvest period, you can optimize the growth period/area/duration for maximized output. Pretty nifty, eh? If this sounds too simple for the complexity of the project, you're right. There's a lot more involved, but I like to keep that for my article!
After this interesting story I went into the lab with Lorenzo some more, to take a look at the results from yesterday's real-time PCR. I haven't really told about it yet, and I won't do it now - even though it is pretty interesting! But there's something more important brewing, something that might keep Lorenzo from doing a lot more PCRs in the future, and that something is changing government policies. (You might have read Mico's blog yesterday, where he already touches upon the subject, but since it's the talk of the day here, I can't really ignore it. So scuzi for any doubling.)
I was given this pamphlet this afternoon, by one of the other DiSTA researchers - conveniently called Lorenzo as well. I will spare you the details, but you get the idea - looks pretty serious, right?

Well, it is

See, the group of Italian businessmen who happen to run a country on the side - let's call them 'government' for short - have come up with an ingenious plan (I would like to take the opportunity to state that that last part was meant to be as sarcastic as they come). The plan? They want to lower the budget of the public universities, but keep the budget of the private ones intact. Now, you might have noticed how the words 'private' and 'public' say something about the likely main source of funding, which is exactly what makes this a monster of a proposition. Yesterday when we were eating, riot police was outside, banks were getting 'egged' and buildings occupied (seriously, read Mico's blog too!). Today, even some of the scientists of the lab were going out to manifest themselves. I would have gone myself to check it out, but I finished late again.
Now, this parallels nicely with a conversation I've been having all week mostly with Lorenzo, namely that scientists should be independent. I have to go into history for a bit, but then you'll see some shocking stuff. In 1158, when this university was still pretty fresh, the duke of Schwabenland Frederico II, owner of the Bologna area, said the following: "The university is where research takes place independently from every other power."
Let that sink in for a bit, because even though we like to think about the medieval years as the time we just put down the clubs and our heavy eyebrows, this guy made more sense 852 years ago than the Italian government is right now.
Lorenzo agrees very much with Frederico, and so do I. Independent minds will be able to approach problems with an open mind, free from the restrictions that a real(istic) viewpoint gives them. For instance; researchers who work a lot with industry may come up with really good ways to improve a situation, but they'll immediately say 'oh, but that's impossible to achieve, cause the fishermen/farmers/political partners/etc will never accept that'. And the situation remains in the same suboptimal position, or it will change very slowly (and bear in mind that politics works in periods of just four years). Free minds can really think outside the box, and come up with solutions that may be harder to reach, but are better for all. Personally I can vouch for this - I have met people and colleagues at both ends of the spectrum, and it's not hard - save a few exceptions - to point out the guys with the best ideas. I'm stating the situation a bit black-and-white here, cause there are also lots of good initiatives with industry - I'm just generalizing.
Now, how does this relate to public/private universities? Independence from money sources guarantees your free mind, so the more money is put into a university to spend at their own discretion (that is: based on their scientific interest), the more independent the minds will be. And the brighter the ideas. Restricting this money will force researchers to cooperate with industry, and this will either steer their results, or valorize them. And that's a bad thing, cause where a new variety of plant for example used to be 'owned' by the scientific community (i.e. everyone), it's now patented by Monsanto cum suis, and you only have to watch the doc King Corn to see where that has gotten us.
Less money for the public universities means less independence from the influence money has - in other words research driven by request rather than curiosity. And it's happening in France, the UK and The Netherlands as well - so scientists and students alike are damn well in their right to take to the streets.
Free minds are what this world needs the most right now, but when this government proposition really follows through, I'm afraid Lorenzo will have been telling me two murder stories today…

Friday

26-11-2010

The final day. Already. It's of course cliché, but this week really passed quickly (and not to worry - more clichés will follow!). If I think back to the past five days, I honestly can say I have had a unique experience. The visits to the labs, the field excursions, the deep (and less deep) discussions about life, work and everything, the food, the culture, the jokes and - here's another cliché - the bond with some of the people you actually manage to build up over the course of one week.
So this blog won't be as philosophical as the others; it will be a monument to my experience here. And that starts with a thank you. I have written about some of the work I have seen, but I haven't necessarily mentioned everyone involved, so here it goes. Thank you Andrea, Lorenzo, Alessandro, Guiseppe, Walter, Guiseppe, Lorenzo, Paola, Linda, Prof. Venturi, Cicilia, Erik, (and everybody who's name I've forgotten…) and of course Mico and Allison, Andrijana and Daniela. For the patience, the information, and just the good time - it was great! Oh, and I almost forgot the organizers of the Cioccolate festival. Very, very good timing lads! It was nice and tasty to walk around town here last week, with chocolate waterfalls (or chocolate-falls?) on one street corner and chocolate kebab on the other.


And scooters pretty much anywhere else.

One of the things I got reminded of this week was the quirkiness of scientists; they have their own little jokes, and every desk has some cartoons behind them that maybe 100 people on earth could understand because they're just too damn specific (like a joke based on the difference between the location on a hydrogen atom in a molecule or something like that).

Lorenzo - the molecular ecologist - actually had a drawing on his wall depicting some biker-worthy tattoo stating 'born to clone'. Brilliant!
Today we had a very nice lunch with most of the people from the lab that we worked with last week (Lorenzo was sick..very sad!). Fortunately they think it's been a good experience as well, so it really has been a win-win situation. I guess we weren't too horrible at understanding sugar contents, antibiotic resistance, the early days of biofuel research, and everything else we've heard last week. The lunch was nice and relaxed, and I got to know the boss a bit better; Andrea Monti. He actually did a cycling tour through the Netherlands once, so I got every reason to respect him - I never managed to make a trip like that! Though I already knew he was a nice guy, cause he gave me a ride to the hotel in his stylish BMW earlier this week. :)
Speaking of lunch; I won't surprise anybody when I say the food is really good in Italy - especially in Bologna! But the more admiration I have for the lunches and dinners, the more abhorred I am from the breakfasts here. It's all so sweet - the breakfast table looks like the final stand in a battle against diabetics. What Italians eat for breakfast is more of a special treat in Holland - you know, to go with a cup of coffee if you have visitors or something.(I can really picture the 'mammas' getting up in the morning and saying "Ah, screw this, I'm still tired from preparing lunch and dinner yesterday. I'll just rip open this old pack of cookies.")
But that really is the only complaint I can come up with. I must confess I even started to copy the Italian way of talking, because being surrounded with people who talk with their hands - not to mention the Italian pronunciation - is quite addictive. Andrea said Italians talk like they sing; it's very melodious. I was quick to answer that while they talk as if they're singing, they also look like they're conducting an orchestra to go with their singing..

That is, if they're not drinking coffee - like we are here on the first day.
Maybe there's one other thing that would be worth mentioning. When the lunch group was discussing how the week had been, we were talking about the way scientists and journalists look at each other. I, being a bit of both, think I know what actually causes the misunderstanding, and we had a nice exchange of ideas. Unfortunately, Andrea was right to conclude that it's a pity it couldn't be taken to a classroom of one of the courses. It might be a good idea for a follow-up program to focus more on the dissemination of that discussion, cause instead of involving one group of scientists (which was already very refreshing), it could have been with a lot of students too - and that might improve the situation in the future.
What did I take away from this? I was reminded of how nice it can be to work in a group of scientists, but I was also strengthened in my belief that it's not for me. I like this intermediate way in which I can still visit labs and experience them, understand them and help them in my own way. I also realize now that it's worth getting to know your subjects - even though writing only one article about it makes that financially unfeasible. Too bad, actually, cause I could do this every month! And time will tell if this week will have been financially healthy, but if all the results of what I've been talking about last week are transferred into articles, I have no doubt that it will. In any case, with the support of the RELATE program I don't have to worry about that for now, and I can happily say that this experience was actually invaluable.
After 4500 words I'm going to say goodbye, and have one more unforgettable Bolognese dinner. Ciao!

Additional info:
Link to my website:
http://www.vanduinoutreach.nl/

My portfolio is also available here:
http://bibliotheek.vanduinoutreach.nl/#home

Universitá di Bologna - Bologna(ITALY)
//Adrijana Korovesovska
Macedonian
20.07.1987
andrijana.korovesovska@gmail.com

About me

Education and training:
University st." Cyril and Methodius" Skopje, Republic of Macedonia, Faculty of Law "Justinian Primus"- Journalism- Bachelor of Arts in Journalism, postgraduate student in media and communication, finishing my master theses, training in Training marketing media group(TMM) for communication skills

Professional experience:
media- radio, television, marketing, assistant teacher in 3rd year graduate students in journalism, subject printed and electronic media

Monday

22-11-2010

Today we had a very interested day at Bologna, first we all went to the labs near the center where we had a short brief on the thing that we are supposed to do while we're staying here. The presentation was mostly about our respectability including writhing a blog. It was quite interesting cause we had a chance to find out more about the other research scientists and the topics on their research.After the brief we all together went to the cafe place to drink cafe on a traditional way-standing by the table, and as I've promise my family I took a picture of all of us. Then Lorenzo, the researcher from the labs where we'll be working took us on a tour around the center of Bologna, to the museums, he showed us the other faculties like Biology, Mathematics etc.An interesting thing happened during the lunch break, Lorenzo and Stephan ordered ravioli and shnicl-we were laughing about that with Stephan, and I was like I don't eat those things, I couldn't find anything fresh like fruit and vegetables, and waiter brought me an apples, quite big ones and it was so funny cause they were brought in a big plate. At the afternoon, around 3 pm we went to the University of Bologna where we will be working in next 4 days, we met lots of people, researchers, scientists, they all shared theirs experiences with us, the took us to some of the labs where the do their research and we went to see our office. It was a great new experience, I'm honer to have the opportunity to work in this project. They all have different experiences in researching, tomorrow morning will be having a press conferences with the other professors that we couldn't meet today, and they we talk more about their work and scientific achievements. That should also help us choosing the topic for the article that we should do during our stay in Bologna.The University of Bologna is one of the oldest and the best University in Europe. Especially when it comes to journalism the Bologna University is definitely the best.

Tuesday

23-11-2010

This day was pretty funny actually,as I got up this morning feeling little bit cranky, I went to the University's labs. Yesterday the researchers arrange us a meeting with all the scientists that are working on the projects. We went to the conference room which was very nice and they put us on the head of the table, and we were talking about our agenda for the next 3 days.Every single minute is planed and organized with many activities, and as the researchers said they're not sure that we are going to have all that time to do everything. But we are happy to be full with new and interesting things to do.

One of the things that was in the agenda was visiting the Ozzano farm. Because the weather here is changing every day, we wasn't sure if it will be sunny the next days, so we all agree to visit this farm today cause it was such a beautiful but cold day anyway. The farm has to be visit in a sunny day cause it's impossible to go there if it is rainy. That is why we put Ozzano as a first activity to be explored. We went there with Lidna the agriculture researcher and she was showing us all 8 fields. The Ozzano farm is located south-east of Bologna and about 25 km from the College of Agriculture. It covers an area of about 200ha and it equipped with many experimental stations and devices including several weather stations, a field laboratory for erosion studies, TDR stations and greenhouses.The farm is located on a hill slopes with different slope. The farm lend is part of a watershed, which is used to investigate soil erosion and overland transport of nutrients and herbicides caused runoff at the plot, field and watershed scale.

After this beautiful walk threw the fields we went to lunch and then comes the interesting moment for me, we got back to the University's labs, Stephan stayed there little longer to talk with the other professors and I went to the big mall in the near to do the shopping. We were supposed to meet with Stephan because I didn't want to go to the hotel by my self and we couldn't find each other, he thought that I've left, I thought that he had left, and I started panicking because it was getting dark and I was all alone, I started asking people where's the bus station for number 20, but no one spoke English, and I hardly manage to understood with them, but the important thing is I manage to find my way to the hotel. Italian people are so polite, in fact I told that to most of them, they remind me of Macedonian people, we are so similar.

Tomorrow morning we should get up very early cause we have whole day planed with things to do.

Wednesday

24-11-2010

Who said that Bologna is rainy??? Today was a perfect day,even thought when I woke up in the morning was so Grey, cold and rainy, but by the afternoon the clouds were clear and the sun was shining. While we heated to the Cadriano farm we were joking with Giuseppe and Walter the the sun i hiding because it to embarrassed to come out. We went to the university's lab first and then we all went together to the Cadriano farm.

The Cadriano farm is located north-east of Bologna and about 5 km from the College of Agriculture. It covers an area of about 60 ha and it is equipped with many experimental stations and devices including a weather station, a phenological garden, warm and cold green houses, soil columns, refrigerated cells, various laboratories and growth rooms. Moreover, the farm is equipped with various agriculture machines. The farm is located on a flat area, the textual classification is loam and silty-loam, the water table is shallow with seasonal fluctuations. The soils are usually suited fro both winter and summer cereals (wheat and corn), as well as fruit trees. However, several crops have been studied over the years including sugar beat, soybean and several dedicated crops for bio-energy production.

Honestly, I thought today I'll be stuck with scientific researching all day long, but another sun shined for me at the end of the day, Lorenzo's girlfriend Cecilia took me around the city trough the shops and I started spending money for the first time. The feeling was amazing. it feels good to buy so many things for yourself and your loved ones. Funny thing that half of Bologna has the same shops as we in do in Macedonia. But the feeling that it is from Bologna is irrepressible. I had so much fun, Cecilia is very nice and sweet girl, we were talking, laughing, singing Italian songs from Laura Pauzini, then we saw this shop that it is the only shop who makes fresh juices. The waiter made me a very good fresh orange, apple and mandarin juice. I liked it a lot. To bad the I had to come back to the hotel. I have two more days to enjoy Bologna.

Tomorrow morning we'll be visiting the Cadriano farm again, including the labs.

Thursday

25-11-2010

I'm definitely starting to be worried about my self. Before I come to Bologna, I was sleeping for like 3-4 hours cause I was out all night long, and was getting up pretty early, but here, last night I went to bed so early, as I was joking I'm becoming an old lady. This morning was kind interesting, we visited the Cadriano farm again, but this time Alexandro took us to the labs where he is doing his experiments. To be honest I didn't understand much what was the thing that he was doing but I can tell you it was pretty interesting. He put some examples from the plant and I think he was trying to research the fermentation. He put the examples in a different cups which were so small but suitable for the machine. In the tubes were two types of water, a cold one and a hot one, who was supposed to start boiling and all that procedure lasted for an hour. It was all so confusing for me cause I've never studied this kind of thing, but it's interesting to be a part of some field that is totally new. I feel like a Alissa in the wonder land of scientists. I even put one of those glasses that the scientist usually put when they're doing their experiments. After the cups were done Alexandro took them off the machine but the results will be ready the next week. I hope that he well send us the results.

After that we went on a small tour around the farm to see the other offices with the big machines that are used for the fields. The lunch is always welcomed after a hard work. But who am I to talk about that right? I eat strawberry's. The were especially for me, from the women that worked in the Mensa. But I was happy ether way. When we got back to the labs at the University we talk little more with Lorenzo and Cecilia, and I finally took all the information that I would be needing to write my article for this amazing five days in Bologna.

Tomorrow it's our last day here so I hope we will used it maximum. Starting with the morning and ending with the nice evening with all of my nice colleagues.

Friday

26-11-2010

Officially, today was the last day in Bologna and in the research labs. I had so much fun in this beautiful city, even though it was cold and I was freezing most of the time but the whole city has a kind of magic that keeps your heart warm despite of all. I really enjoyed this 5 days with everyone. It was a great experience for me, I was honored to be a part in this Relate project and to have the opportunity to talk with all the scientist. I was skeptic at first when they were telling us what were they really doing, but I think I've learned a lot about the science and the most important thing-the connection between the journalists and the scientist. We had a great communication. Today when we were saying goodbye it was kind of sad and realized how much I'm going to miss Bologna and the University. To be honest I really liked this kind of life, getting up early in the morning, going to work, and you come back completed and full with energy, ready for the new day. I would almost quit the chance to be a journalist, but all of this wonderful experience gave me a straight to continue my path to researching.

Meeting Stephan, Micho, Daniela and Alison was one the best things that have happened to me. We exchange so much experience,and different point of view for some things, I learned many things about their country, about their life and culture. I think that this is a perfect way to connect all the countries to become one. On the dinner tonight we had so much fun and we were so much close which is very good for so little time. I had lucky that I was working with Stephan, he is great guy and he will be an excellent writer. I hope that we all going to meet again soon on another project.

I also wanna say that it was so great that we were here in this time of the year, cause I had no idea that Bologna is such a magical place before Christmas time. The city was glowing every night, decorated with lights, the Christmas shops were shining, It makes you feel like a little child. To bad that we didn't have a more time to see the rest of Bologna, but I hope that this big journey doesn't end here, I hope there will be more,and more places to be concord, researched and visited. it is beginning of a new world called Coming true world, where all of your dreams and wishes became reality and you finally have chance to do the thing that really want to do.

Universitá di Bologna - Bologna(ITALY)
// Daniela Bularda

About me

Education and training:
Faculty of Journalism and Mass Communication, University of Bucharest (2009-2012)

Professional experience:
since november 2009 - online and print editor at Ambition!, Precision Media;
since august 2010 - print editor at Vacante la Tara, ANTREC Romania

Monday

22-11-2010

The first day started with a big surprise – the rain has finally stopped. After the meeting to the reception hotel we (Hinano, Mico, Adrijana, Stephan and me) went to the University for the briefing. Fabiana (our coordinator) and other 3 researchers were waiting for us. With all the formalities finished, we proposed to have a little tour of sweet Bologna center. As the Italians use to say "Never start something without drinking a coffee", we went to a coffee place. Even if I'm used to make excess of coffee, that one (piccolo) was the strongest I have ever drunk.
During the tour, we succeeded to visit two museums and we walked around many streets (for me all seemed to be the same). For those who are attempting to study here, the Bolognians have a warning: if you pass under the portico, you will never graduate. I remember that I also heard this superstition in a Romanian city, Iasi. More than that, Bologna is built on seven hills. Probably isn't hard to imagine that Iasi has the same story…
Anyway, let's go to the serious topics. My joy from the beginning of the day has rapidly passed off – the rain recommenced while I was trying to find the bus station for my lab (ARCES - Advanced Research Center on Electronic Systems for Information and Communication). Hinano introduced me to the researchers and Anna continued to carry on me during all the afternoon. The lunch time was approaching and we commended pizza (I chose Margueritta, the most popular). So I took lunch with ~20 researchers. I can hereby remember three or four names, but I promised that I will try to know all the names until the end of the week.
And now the most interesting part of this afternoon to the lab – I had two interviews with two researchers, Fabio and Claudio about their work, some inside aspects of the lab, general issues, international programs and an introduction in discussion about microchip working. The topic will be reopening for sure in the next days. In the second part of the afternoon I participated to a seminar (Graphene for Beyond Scaled CMOS) moderated by the professor Guigi Colombo. I was lucky that it was in English. The main purpose of the graphene: high performance transparent conductive electrodes. The apogee of the evening: I tried to come back by foot. I got lost and I asked some people to indicate me the correct way (the map that I had wasn't sufficient). The people were normal Romanians, not beggars.

Tuesday

23-11-2010

I think that every day is programmed to be more awesome than the last one, for this week. Today I started my activities by having an interesting discussion with Massimo Bocchi, chief technology officer. The subject: the potential of human cells to fight against cancer. He explained me that his work is part of the project begun in 2006, Cell On CHIp bioSEnsor (COCHISE). The procedure of finding the cancer's killers is quiet complicated: two cells are put together in a micro-fluid platform being forced to interact by electric fields. If they are resting alive, the result is not successful. The imune cell should destroy as much as possible the tumor one. The "winner" will be extracted and the process will continue making clones of the killer cell. At least one of the clones will have (pretty) the same proprieties – to exterminate the cancer cells.
Mr Bocchi presented me the department where the cells are deposited (in an incubator) and examinated (in a kind of a huge microscope).



In the afternoon I continued to do research on the computer provided by the researchers for all this week (many thanks for their technical support). In the study room, I met a student who shared me his experience into the lab. He seemed to be more than satisfied after his two months of practice. After this, I had my first experiment into the lab. Andrea and Laura (researchers) made a new experiment with three cells (instead of two as usual) into a device.

I fallowed all their movements on the computer while Andrea and Laura were explaining me the entire process. At the end, all three cells were dead. For this time, it was good to be dead because they were leukemia cells.
Now I have no doubts that every evening has an apogee (at least far now). I don't know how, but I got lost again when I was quiet close to the hotel. Trying to find the good "via", I saw two police cars. I passed away and I saw a man lied in the middle of the street. Probably he tried to suicide. I like macabre things, but this one was too… real.

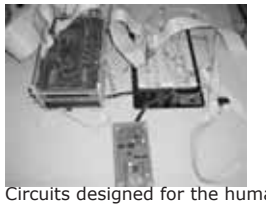
Wednesday

24-11-2010

This morning started with rain, what a pleasure! My work into the lab debuted today with Nicola (responsible for electronics lab and co-worker at the project I was talking yesterday – COCHISE) who presented me the electronics lab and some of his individual work. He made (and assure) the technical support for devices. Being more precisely, he uses platforms which connect the electric field to the device and the liquid (buffer) into microwells.


Marco and Nicola, into electronics lab

My questions started to be redirected to Marco who is working on brain activity imagine. He's work is focused on a project begun in March this year and which is planned to continue 2 more years. Practically, he made circuits designed for this project which can pick up the electric signals of the human brain. Furthermore, the circuits are connected to a computer and in this way some kind of pathologies can be better diagnosed (such as Parkinson, Alzheimer or Epilepsy) and you can detect which parts of the brain are mostly active to a specific moment.


Circuits designed for the human brain

At the end of the project, Marco will have clinical agreement for testing these new circuits. I was astonished to hear one of the targets using the human brain signals – doing something only by thinking. Let's imagine one situation: I'm in a wheelchair, I cannot move my legs and neither my hands but I have connected the circuits to my brain. If I'm only thinking to turn to the left, the wheelchair will start moving to the left grace of the signals brain used properly and the whole circuit system.


Screenshot on human brain

I continued by assisting Andrea to another experiment, this time with beads (instead of cells). Andrea said that this experiment isn't very difficult because the beads have plastic structure and they are not dying. This experiment was preliminary to a cells one. The beads are forced by the electric fields to go into the microwell. They do not have to be separated at the end of the experiment. Andrea's experiment was partially successful – two cells were together, while one didn't want to join them.


Andrea, during the experiment

During the lunch break I permitted myself to have a little extra activity. Even if it's forbidden for students (they will NEVER graduate), I climbed up the 498 steps of the highest tower of Bologna, Asinelli. I hope that the muscles of my legs will be better tonified.


Garisenda tower, the neighbor of Asinelli

I came back to the lab where Andrea and Laura were preparing a new experiment. This time they used KUL/05, immune cell which can secrete antibodies. They focused on the right electrical parameters for being sure that the "itinerary" of the cells to the microwell doesn't have any impediments. At one moment, Nicola joined us (he was verifying some technical stuff in the next room) and I was surprisingly impressed that he spoke fluently French. Probably I will terrify him for the next two days.
No apogee for this evening. I had only a long sleep and a dinner missed.

Thursday

25-11-2010

The fourth day started with Fabio Campi in newsroom. In the first day, I had a general discussion with him (and with Claudio too) but during the week, I became a little bit more interested in his areas of activity. So we established from the previous day the appointment. Well, INTEGRATED CIRCUITS! Mr. Campi knew that my background isn't a scientific one, so he tried to explain me his work in the simplest technical words.
For security reasons, I couldn't recorder him, so I tried to stock information as much as possible. His lab is mainly responsible for architecture and algorithms of digital signal processing and embedded microprocessors, but during the discussion we enlarged the topics with all activities derived from integrated circuits. As you probably now, an integrated circuit is that what we are call "chip" or IC and which has electric and electronics components, passive and active, situated on a semiconductor material (Silicon). "What are we doing here is due to the need of innovation. We can make thousands of chips enough for the next 20 years. But no, we have to come always with something new. It's all about efficiency in the shortest time!" concludes Mr. Campi.


I wanted to refresh my brain after such a complex discussion and I went for few minutes at Saragozza Porta. It's just 200 meters away to my lab. Well, I took some photos (like Japanese) and I came back to the lab.


Porta Saragozza

For the rest of the day, all researchers were quiet busy. In the biological lab, Nicola made the report of a project, Andrea and Laura repeated some experiments for being sure that the previous results were correct. At one moment, Andrea gave some materials (articles, photos, shot movies) about areas that I'm interested in. I decided to go in my study room and to disseminate them. It will be helpful for my final production.
While I was coming back to the hotel, I met the mass of students protesting against the government. For at least 500 m I became one funeral rebel because they were walking on the same way as mine going back to hotel. When I was finally in my room, I heard the tumult again. They turned somehow to the hotel street.

Friday

26-11-2010

Well, the last day. After a long research on my weekly computer, I had a meeting with Roberto Guerrieri, my "mentor" for these days, as Anna Ronchi too. Usually, I am not a sensitive person, but this time I was really impressed by Mr. Guerrieri' pieces of advice and tricks for a young journalist.


General conclusion of this week – I became more interested in science. I promised to myself to go in a Romanian lab research, not only to compare (Italian researchers work and Romanian one) but also for being more aware about Romanian science.
Many thanks to all researchers whom I interacted: Roberto, Anna, Eleonora, Andrea, Laura, Nicola, Massimo, Marco, Fabio, Claudio. I think I pointed one of my targets from the beginning of the week – I know most of the names now. It was for sure a worthy week, full of activities. I always thought that saying goodbye moments could be very funny. So it was: Well, good bye! No, see you soon! Where, when? Next holidays in Romania!
We had the first and the last hugs, new results for Andrea's experiments with cells, nice discussion with Nicola in French (not science this time) and promises that we will keep in touch.
As far as the other participants (Adrijana, Stephan and Mico), they are all great journalists and wonderful persons for interesting discussions while having healthy Italian dinner.


Last dinner in Donatello ristorante

RELATE project will be for sure on the top of the projects that I had taken part of. Many thanks for all the coordinators!

Universitá di Bologna - Bologna(ITALY)
//Mico Tatalovic

Croatian
1983
mico_tatalovic@hotmail.com

Monday

22-11-2010

Bologna, day 1

The day started, quite appropriately, with a coffee. The Italians love their coffee, and so do I. Most of the group had 'un caffè', I had a cappuccino – by the end of the day I was on a quadrupled my usual dose – when in Bologna, do as the Bolognese do.
A quick introduction to the course and the main researchers involved, and another quick cappuccino later, and we were already looking around the sites at the university, listening to some history and some popular beliefs – myths, really - students hold about all the things they shouldn't do if they ever want to graduate. There's a tower that shouldn't be climbed and a courtyard not to be crossed, and a square one must not cross diagonally. One of the researchers involved did all of those things and still graduated, proving the myths false, or so he hopes – he's been waiting for a while now to get his PhD approved!
I was surprised by a number of museums – it seemed like most faculties had a museum attached (museums of zoology, evolution, anatomy …) but most of them were closed on Monday so we couldn't see the 'exhibit of animals that do not exist' or the pickled bodies of two of the museum curators who donated their bodies for research.
The research briefing was interesting, from designing new, non-crop biofuels and antibiotics, through nanomedicine and the effects of global warming on Mediterranean corals. There's lots of research going on at this university, which, we were told, has some 3,000 professors and 85,000 students.
But, as I reported recently for Croatia, the Italian science system is also undergoing an uneasy and much needed reform – there's lots to gain and lose by different people.
Young scientists we talked to say there's no job security or funding for them under the current system. If it wasn't for highly competitive grants from the European Union, a lot of them would have nothing to do and no salary, they said. Even with this funding they can be in limbo for up to ten years before getting any permanent or secure place at a university.
They need a meritocratic system that rewards excellence and more funding for science from the government, they told me today. Let's hope they get it!

Tuesday

23-11-2010

Bologna, day 2

The day started with a trip to the physics department where I spoke to a mechanical science researcher who is collaborating on the CoralWarm project, which is otherwise based at the department of biology, at the University of Bologna.
The project is looking at the effects of climate change on Mediterranean corals, and is spread across two universities – Bologna and Bar-Ilan University, in Israel – and across several departments; in Bologna mainly the departments of biology, chemistry and physics.
Researchers and students from all the departments come together to discuss each other's work, every couple of months, which is good for the students, Luca Pasquini, a physicist, told me, as it encourages the students to see the bigger picture and place their research within the works of others.
With the EU grant, the department of physics was able to buy a high-tech machine that performs a 'nano-indentation technique'. This is used to test how strong the coral tissue is to inform the work of biologists who are looking at all sort of possible effects that warmer and more acidic seas of the future will have on corals.
This piece of equipment allows researchers to put a piece of coral tissue under a tiny diamond point which then applies a lot of pressure on one spot on the coral surface. The machine measures how much damage this pressure makes and so it allows to compare the strength of different corals. They might find that corals affected by warming have weaker structures, for example.
The machine is so high-tech you can put a coral in, tell it what to do and 'go out for coffee' until it does it, I was told. Italians love their coffee, and so do I, so after this I popped to a cafe for a quick cafe creme.
In the afternoon, I was guided through the process of measuring the reproductive ability of corals – this is another thing that could be affected by climate change, so scientists here in Bologna are looking at how reproductively successful corals are at different sites along the Italian coast.
The work is a bit less high tech – it involves a long process of cleaning and fixing corals with appropriate chemicals before slicing them in tiny slices that can be put on a microscope slide. Each slice of a coral – there can be more than 150 for just one tiny (5-10 centimetre long) coral, has to be inspected to count the number of embryos, their size and morphology – their looks. It takes a while, but it is rewarding work, I was told by the students. Each student specialises in one species, and they all seem to love their type of coral the best.
Science is not like other work, one PhD student from Madrid, who comes here to work occasionally because Bologna has a good reputation for research in this area. It's not a job just to have a job, it's a calling, where you really enjoy your work and do it because you love it, not because you have to, she said. I think science writing and journalism is similar.

Wednesday

24-11-2010

Bologna, day 3

It was a day of unrest in Bologna today. Students took to the streets – not as they usually do – to go to their classes but to protest against the new universities legislation that would, they say, pour public money into private research and make universities only accessible to the rich.
On my way to the chemistry department, through the mediaeval porticos, gate after gate, the university buildings were blocked and occupied by hordes of students. Leaflets were being dealt out at every corner, posters up on the walls and a sit-in was staged at one of the key squares at the university quarter. Surprisingly though there was almost no media or police presence.
Things got a bit heated up in the evening, with egging of the banks along one of the main streets and loud demonstrations accompanied by riot police with shields along the via Zamboni.
Undergraduate students at my department were not surprised by the protests. They said the science/university legislation has been ever changing over the last decade, but almost invariably towards the worse for the academics and students. Little prospects exist in Italy for young students and the best minds are emigrating, they told me. At the university of Bologna currently a postdoc position does not exist, they say.
This fits in with the wider theme of under-funded scientific research in Italy, which I talked about in my first blog. It also fits in with students' protests elsewhere in the world, such as UK last week and today, as new laws are introduced that would make studying really expensive and non-affordable for many.
Today I was shown around the different laboratories scattered around many floors and corners of the labyrinth-like department of chemistry, which is just across the road from the biology department, where I am based and which has a pretty cool, although old-fashioned evolution museum amazingly incorporated within the department building itself.
'Write something about how horrible and run-down the department is so we get more funding' the professor who was showing me around said half-jokingly. He also said the university has a policy to move most of the science departments into newer, purpose-designed buildings in the suburbs, but they might have to wait for another few years before the move.
I was then left in care of his very diligent PhD student, Patricia, who, in excellent English, told me all about their project. She is collaborating on the CoralWarm project with the biology department. Her work involves looking at macromolecules – large proteins and sacharides – that the coral secrets into its calcium carbonate skeleton. These molecules and their exact functions are still unknown, but they may hold the key to how corals control and adapt to their environment.
She does everything from cleaning and preparing the actual coral samples sent to her lab by biologists/divers who take the samples in the Tyrrhenian sea, to crystallising these molecules and then studying the properties of these crystals.
As with the rest of the project, work only started in July so there are still no concrete results to speak of but it is cutting edge basic research on one of the key species in the marine environments of the Mediterranean.
With so much lab work to do, chemists might not have as much time to pop out for coffee, so at the entrance to their department there are two (!) huge coffee machines with more options than I've seen in a while – Italians love their coffee, and so do I. So after a quick cappuccino at Terzi, an old-fashioned coffee house, one of the researcher's swears by, I head back to the biology department.
There I was introduced to some genetic studies that aim to learn population structure of one of corals that are endemic to the Mediterranean – they only live there and they may be inbreeding, reproducing with themselves, hence reducing biological diversity and potentially putting the whole species at risk.
A Spanish student is looking at another species of corals and trying to figure out whether our protected marine areas are actually good enough for protecting the corals as well as the fish, many say they do well. She's presenting her research at a biodiversity seminar on Friday so more about that then, though.
Towards the end of the day, just after my laptop battery ran out and I realised I hadn't brought my plug adapter with me today, I got to talk to a researcher who is just analysing some great data from a really cool experiment: this might be quite a nice news story, so I started looking for outlets for it today – I pitched a story idea to a magazine. This is the two stage process of science journalism: first find a story worth reporting on then find the best outlet/medium to present your story and researchers' work to the wider audience.
Very important to keep in mind though: you should only pitch your story to one magazine at a time, if they don't want it then you move on to the next one on the list, a bit like scientists submitting papers to a journal, they aim for the best one they think would take it, and then if rejected, move down the ladder.

Thursday

25-11-2010

Bologna, day 4

It's been another day of demonstrations in Bologna, where students and professors took to the streets with 'obituaries for the public university' opposing the new universities legislation that would see less funding from taxpayers for the public sector and some of it siphoned off into private universities' funds.
Protesters blocked traffic on the main street, and walked around the city in the 'funeral procession' for the public universities.
It seems sad to think demonstrating takes away time from their studies but it's good to see they are standing up for their rights and for the rights of the students in the future.

I was introduced to some cool crowd-sourcing biodiversity data project – STE or Scuba Tourism for the Environment. This project allows tourists and recreational divers to easily record biodiversity data after their dives and to contribute to scientific enterprise.
So far several projects have taken place, one in the Mediterranean showing that with the help of thousands of volunteers enough reliable data on marine biodiversity can be collected for meaningful analysis. In just a few years volunteers collected as much data as a single trained researcher would in 45 years and he/she would need almost 5 million euros, so the project saves huge amounts of time and money.
The results so far, since 2007, show that biodiversity is deteriorating across some sites in Mediterranean and for several different species.
Oh, and of course, today started with a quick cappuccino, this time it was Erik's treat at the chemistry department's coffee machines that I mentioned in my blog post yesterday. Pretty good. I'm on four-five coffees a day now! Up from one-a-day less than a week ago.

Friday

26-11-2010

Bologna, day 5

Here it is, a day late, day 5 of five great days in Bologna. It's been an eventful week. We've heard scientists' worries about the state of science in Italy – something that's been an issue for a while now, as I've learned reading a printout of a Nature editorial from 2008 that was put up at the entrance to the biology department. The editorial outlined some of the problems that scientists talked about this week: under-funding, lack of permanent positions at universities, etc…
Students in Bologna took to the streets this week in protest at the new Gelmini legislation which they see as an affront to the public university – further demonstrations are planned for weeks to come. TV news showed students protesting all over Italy, taking over the Colosseum in Rome and the Leaning Tower of Pisa, in, well, Pisa, for example.
Back in the UK, students also staged another demonstration to follow a recent one that was attended by over 50,000 people in London. They similarly protested against the UK government's moves to make university much more expensive, opening the doors to higher education becoming a privilege of rich elites. Countries around the world, including Finland and the Netherlands, show that universities don't have to be expensive, or that studying can even be free in a good and fair social state.
You can see some images of the protests in Bologna on the blog of my colleague, Stephan, and read about the experiences of Adrijana and Daniela, colleagues from Macedonia and Romania who were also in Bologna but went to different labs during the week. Stephan's blog has some interesting stuff, not only about cool science but also his thoughts on other issues that affect science and science communication in Europe today.
At dinner the other day my colleagues told me I should write about chocolate and ice-cream since it featured high on the agenda when we met up – there was a huge chocolate festival in Bologna this week. The city has some amazing chocolate shops including Majani (dating back to 1796), Roccati and Venchi. Phenomenal ice cream with fantastic flavours (a taster: white chocolate with saffron, pear with chocolate caviar, pumpkin with cinnamon…) at Venchi, Il Gelatauro and a few other places, like Grom.
So there, team, that's my chocolate round-up. With all the chocolate, daily ice-cream, several coffees a day and great pasta al ragu (bolognese) I'm now probably a couple of pounds heavier than I was a week ago, too!
I am working on three articles based on my experiences this week and will post these soon.
Thank you Bologna for a nice welcome, Bologna University and all the researchers and students at the university for showing me around and talking about their research, and thanks to Relate for a organising this event. Also thanks to Stephan, Andrijana and Daniela for some good conversations and a lot of fun after work!

Monday

22-11-2010

When I was selected to participate in the RELATE project, the first thing I knew was that I was going to participate in a project called Frisbee. Then I realized that FRISBEE stand for Food Refrigeration Innovation for Safety consumers' Benefit, Environmental Impact and Energy optimisation along the cold chain in Europe. Wow! It sounds quite challenging, especially if you have to start from the scratch when you are not an expert on cold chain processes, magnetic refrigeration or gas-free cooling techniques, as most of the journalists (normal citizens, after all!), I guess. So this is our main challenge here, to get involved in a pretty complex topic during one week, to be able to explain it to the whole society either in 5 minutes' video, 2 minutes' radio report or 600 words, as an example. Making things clear and understandable for people becomes more difficult when we are dealing with scientific matters as this one. As Howard Hudson (RELATE project's coordinator) explained today in his presentation, we can find a kind of vicious circle where scientific matters are not properly disseminated, either for not using the appropriate register or just because the main problems are too simplified. We cannot assume in advance that people is not going to understand. Are we, as journalists, smarter than them to deal with these matters and to assume then that they cannot understand? As a consequence of this fact, people are not well informed about these complex topics, either because they do not have enough information –consequently, they will never have a good knowledge about it- or because they do not understand articles that were not clearly enough written. The final result is a lack of interest on the scientific topics. Here we have our main task. Someone said once: (now I do not remember who the author of the quote was -maybe too much cold chain information!-) something like: "challenges are gifts that force us to search for a new centre of gravity. Don't fight them. Just find a different way to stand".
So this is what we have to do now. And this is what we are going to try to do this week. Today it has been the first day of our relate Project. We arrived yesterday in Paris and we are staying in a nice hotel, two metro stops from Eiffel Tower, which is great. In the morning we can eat freshly baked croissants from the bakery. We have to take the metro to go to the labs, and it takes about 40 minutes, but usually you can seat –not the same in Barcelona!- so it is not bad. I am working with Ines, a really enthusiastic and hard-working girl from Croatia, in Cemagref (Paris). I hope we will learn a lot from each other. As I said, we have to work on Frisbee, a European Union funded project that has the aim to provide new tools, concepts and solutions for improving refrigeration technologies along the European food cold chain. We were today with Graciela Alvarez, coordinator of the project, and she explained everything (not everything in fact, because it is impossible to understand everything just in one day, but the general idea of their work) and we had also a presentation about the cold chain in France by Eweline Derens. We guess that by the end of tomorrow we will have more information in order to focus a bit more on a specific aspect from the project and to decide in what way we want to put it. We have been working in the labs till 19.00, so I can say that today it has been quite a hard day! The dinner in the canteen, by the way, was great; good to know that we have some nice energy sources if we have to work hard this week!

Tuesday

23-11-2010

You don't have to cook fancy or complicated masterpieces - just good food from fresh ingredients.
Julia Child

It sounds weird but I would like to start my post today with this quote. Julia Child is an American chef who is known basically because she introduced the French cuisine to the American people. Of course, her sentence referred to food, but it can be easily used in other contexts. When we want to make something understandable for the rest of the people, first of all we have to understand the topic. It means clarifying all the elements involved to understand why and how they are implied and what are the consequences deriving from its implication. And then -and here we have the most difficult part!- it means to organize and set out them in a clear way –not complicated masterpieces, just good food from fresh ingredients-. After a hard monday (we finished our work in the labs at almost seven o'clock in the afternoon, and considering that we are at one hour distance from Paris centre we just had time to went to Eiffel Tower and eat something in Quartier Latin) today the real work has started. Yesterday was just an introduction to the project, but today Graciela Alvarez has given lots of information regarding the different stages on the project because we have some interviews tomorrow with the researchers and partners implied. Obviously you cannot know as much as the expert, knows about the topic, but of course you have to be well informed about the entire project in order to be able to interview someone. This has been today's challenge. Frisbee project is a research project in refrigeration and cold chain that will be done during four years. As it started just two months ago, we still cannot talk about any result, but we can study the actions that are being developed right now and the actions that will be developed in the future. Most of the actions developed in the last stages of the project are directly dependent on the results that they will obtain in the first stages of the investigation. The research is organized through five main steps, according to main objectives and expected results. In the benchmarking stage the aim is to develop a database of the cold chain around Europe and to identify the needs of improvement in the current refrigeration systems in the food industry. In a second stage, the objective of the research is to discover new tools to evaluate the energy consumption.

According to this information, the aim of the third stage is to improve the existing refrigeration technologies. The main difference between this stage and the next one is that in this stage the aim is to improve the existing technologies with some applications, while in the fourth stage the aim is to investigate possible emerging technologies in terms of food quality, energy use and environmental impact. All the results of the research will be disseminated to the food sector industry, academia and policy makers in the last stage of the research. This afternoon we had a presentation by the researcher Onrawee Laguerre about a study on domestic refrigerators, and then we interviewed her to know more about her research in the Frisbee project. We had the main information to interview her again in front of the camera on Friday. After preparing some information for the interviews tomorrow, the Finnish girl that was yesterday with us in the introductory meeting recommended us some interesting places to visit in Paris. As it was a bit late, we did not have time to go to the museums and we went through the Rue La Roquette –next to Place de la Bastille- to have a drink.

Wednesday

24-11-2010

Today we interviewed Denis Leducq. He is a research engineer working also in the Frisbee project. We will interview also other researchers, some of them face to face, others in skype, because they are working for partner organisations that are not located in France. I still have to think how I will manage to edit the video mixing the interviews in front of the camera and the ones through skype. I am not sure about the final results, but I will try to do my best. The interview was great, we asked Mr. Leducq to be brief and clear in the answers, trying to explain what we asked in an understandable way. Then we interviewed Petros Taoukis, through skype. He is developing the Work Package 2, as I explained yesterday they are trying to develop a database of the cold chain data from around Europe and identify refrigeration needs and available current technologies in the food industry. The interview was also great, of course it is also better to have the interviews with the people face to face, but we have the geographical limitation, so this is the only thing we can do. We will have more interviews through skype tomorrow, with other partners participating in the project located in different countries. Fortunately the audio quality was not bad at all… This afternoon we had to interview Didier Coulomb. He is director of the International Institute of Refrigeration, located in Paris, so this time we had the chance to interview him personally. We spend some time this morning to prepare the interview, but in fact it is almost impossible to find time for everything, because we also had to interview Graciela, Frisbee's Cordinator, and our interview with Mr. Taoukis was finally later than what we thought due to problems in his schedule… Things are going so fast and we are really busy all the time, it is being really difficult to find a moment to clarify ideas about all the information we are receiving this days. We had to interview also Mr. Coulomb in his office, so we had to leave a bit earlier the labs in order to arrive there on time. After some problems with the address, we arrived safe and sound to his office (it is freezing in Paris this week! –It was the main problem- and we were carrying all our stuff –laptops, camera, tripod…). When we finished the interview, he recommended us some places to visit in Paris. We went to Louvre museum (fortunately on Wednesday they open till 21.30!) and after that we went to the hotel because we were exhausted. Thursday will be a really busy day…

Thursday

25-11-2010

This morning we had some time to prepare the interviews with the researchers that we had to call during the afternoon. After that, we interviewed Graciela Alvarez. Although she has been giving all the information during these last days, she stated the main points in front of the camera. She was really confident and she spoke without any problem about the whole project, about the state of the research and also about the expectations. Then we interviewed Annemie Geeraerd, leader of the Work Package three, she explained us about the reference cold chains for different products, about food quality tools and energy consumption tools, and also about main diseases related to food conservation and breaking of the cold chain. Then we interviewed Judith Evans, she is in charge of Work Package 5 and the aim of this Work Package is to develop emerging refrigeration technologies. This is one of the most difficult aspects to understand because it implies more technical knowledge. Thus we put special emphasis on telling her to explain it in a really clear way, trying to put some practical examples to bring the topic closer to the citizen. She explained from a general point of view and in a clear way the different technologies they want to develop and their practical application, pointing out the ones that she considered the most convenient to develop in terms of food quality, consumer well being, energy efficiency, and environmental impact. We interviewed also Christophe Cotillon, leader of Work Package 8, in charge of dissemination. He explained the methods to reach larger public audience in order to disseminate innovative technologies, and the reasons why Frisbee can be interesting for food sector industry, academia and policy makers. Today we had a really really productive day. We did lots of things and we can say that we succeed in all of them. It was a bit hard, because as we do not sleep much during these days, we are starting to feel the tiredness. But luckily, it was compensated with a great dinner! Inés and me had a really nice dinner with Graciela, the coordinator of the project, and Denis Leduqc, one of the researchers in the lab. The fondue that we had was great, and also the company, which is more important. We have been really lucky with our coordinator, she is very nice. She is this kind of person that makes you feel comfortable because, even she knows more than you –of course she knows more!- she always make you feel that you can participate, that you can give your opinion, that you can say whatever you want without being afraid of making mistakes… After dinner, Graciela and Denis drove us around the city; it was a nice sightseeing! :)

Friday

26-11-2010

Now we can say that we have lots of material and we still have lots of work to do on it, lots of ideas to organize and still a planning task to see what is missing or what we still need to record, what idea maybe was not clear enough… Sometimes you feel that as more you learn, more ignorant you think you are. Now we know a lot about the topic, but we still have lots of questions. First of all because we were not familiarized with the topic –now we are experts in refrigeration processes-, second because the project is still getting start and we do not have any palpable results to analyze or to be critic about. Thus it is more difficult also to understand if you do not have any real thing to observe, if all is moving in the theoretical level. But anyway, we are learning a lot, we know about the different diseases provoked by the breaking of the cold chain, we know about the bad practises of people regarding food conservation, we know about innovation in refrigeration techniques… We also know that the stickers that we can find in our fridge –you know, this little stickers with a picture of meat, eggs, cheese, vegetables- are not there because fridge's manufacturer feels like suggesting where to put our food, it is because each place in our fridge registers a different temperature! ;) and the different food we eat need also different temperature for better conservation, this is the reason why usually in the fridges we have different places assigned for the different food. Our last day in the labs… We have a mixture of happiness for all the work that has been done, but we are also sad, because it has been a really intense week and it is also strange when you have to come again to your normal life after such a groundbreaking period! This morning we finished the shootings in the labs, and we had an interview with the Administrator of the project. We have been trying all the morning to think about what we still need to ask and what pictures we have to take, what materials we need from Graciela, what points we still have to check… This afternoon we had the final interview with Onrawee Laguerre, one of the researchers that was with us the first day. And then the moment to say bye arrived… We were really sad when we had to say goodbye to Graciela, after one week working together you realize that, in fact, you do not need much time to love the people… Of course I am also sad because I have to say goodbye to Inés… With Inés we have been sharing not just the time in the labs, it was 24 hours a day with her! And she is great. We have been working together, but also going out, seeing the city, meeting new people… I think that, despite some differences –we all have differences!- We have lots of things in common. And of course, I will see her again! As I am living in Brussels, we already spoke about spending the weekend of the meeting together, so we will keep in touch for sure.
It has been, without any shadow of doubt, a great experience!

CEMAGREF - Paris (France)
//Ines Jokos

Croatian
30.11.1985.
supines@gmail.com

About me

Education and training:
2008. University of Zagreb, Faculty of Political Science, Bachelors degree in Journalism, major in Television journalism and Public Relations

2008- until date, University of Zagreb, Faculty of Political Science, MA in Journalism, major in Public Relations and Political Communication
Co-author on workers' rights documentary titled "Tko radi (ne) boji se gladi", recorded at a workshop of documentary film in the organization of the Faculty of Political Science under the leadership of Professor LOIS BIANCHI from Queens College, New York.
I participated in „ School of Communication" organized by University of Zagreb, Faculty of Political Science and „Matica Hrvatska".

Professional experience:
Currently I am working as a cameraman for 24sata NEWS TV. I am responsible for recording events on a daily basis.
Worked as a researcher for the TV show "Mjenjačnica" and TV show "Slučajni turist" by director Robert Knjaz on RTL Television, Zagreb.
Worked quantitative analysis of television content for the "Media Net", agency specialized in media content analysis.
Writing articles for Croatian lifestyle magazine "Gradski puls".
Writing articles for Croatian daily newspaper "Jutarnji list".
Filmed and edited news for the Internet television "Smart TV".
Worked in the database for "American Chamber of Commerce" in Zagreb, Croatia.

Monday

22-11-2010

Yesterday I arrived in Paris. I met Laura, a girl from Spain who was on exchange in Bruxelles. She will be my colleague in RELATE project. We will research the problem of "cold chain" in Europe. There are some main topics that we will need to understand to make our video. 1. ENERGY: European context, where Europe requires the reduction of energy consumption in 2020 of 20%. 2. ENVIRONMENT: The idea is to speak also of the demands of Europe to reduce the impact of technology on the environment, reduction of consumption of refrigerants (HFC) of 20% in 2020. 3. CONSUMER HEALTH SAFETY: The importance of keeping the products at the right temperature throughout the cold chain from production to the consumer's home. After Laura and I exchanged first impressions, we went to dinner with Howard Hudson, coordinator of the project. The dinner was wonderful. Today in the morning we all three went to the Cemagref, the institution in which we will spend the next 5 days. Of course on the way to the institute, we ate croissants that were perfect.Dear Mrs. Graciela Alvarez, coordinator of FRISBEE (Food Refrigeration Innovations for Safety, consumers' Benefit, Environmental impact and Energy optimisation along the cold chain in Europe), welcomed us in Cemagref. After meeting with researchers, we listened to lectures on the cold chain. At first I did not know whether I will fail to understand all the details about the project. However, Mrs. Alvarez has really good approach to students. She tries to explain all aspects of the cold chain in a way that we can understand her (she is professor as well so it is clear that she knows to work with students). Currently I am still a little bit confused because I do not know exactly how I'll make a video (what approach and angle I will take). I am sure that I want to make a video that will be understandable and interesting for people who do not know much about scientific researches and the cold chain in general. I hope I will succeed in this intention.
P.S. In the evening, Laura and I went to Quartier latin (Latin neighborhood) for a drink and meal and of course to the Eiffel Tower. We had great time.

Tuesday

23-11-2010

Today I wake up at 7:00 am and went with metro to Cemagref. Laura and I had more time to prepare all the materials and to think about our point of view. Dr.Onrawee Laguerre, researcher at Cemagref showed us the lab and explained how do they explore cold chain in practice. I used my camera and recorded some of the visual elements that I will need in my video. In the afternoon Dr. Laguerre made a presentation about a study on domestic refrigerators. She explained us some test results of air temperature evolution in a domestic refrigerator and how does product position in refrigerators influence on product temperature. These examples were to show us what are the possibilities of breaking the cold chain. In one point of view consumers are not properly using refrigerators and they are not aware of the consequences. More then 25 % people in France have the refrigerator temperature more then 8 degrees and it is perfect temperature for bacterial reproduction. Consumers' beliefs and behaviour are one that should be changed but it is not the only factor that can break cold chain.

Cold chain is the process that starts when the product is produced and ends in consumers households and during the whole process people should be aware that there is possibility to break the cold chain, in another word to change the products temperature. For example, if the product is exposed to higher temperature during the transporting and delivering, its quality is reduced. Researches, here in Cemagref , with the help of 26 project partners are trying to find a solution of this problem of breaking the cold chain. They want to make a refrigerator which does not contain any refrigerants which are harmful to the environment, consumes almost no energy, and maintains foods safe and in excellent quality. I am really interested in consumer health safety, so maybe this will be my point of view. Tomorrow we are going to have lots of interview so Dr. Alvarez explained us everything about the rolls of these people so we can prepare ourselves. In the evening Laura and I went to the street Rue La Roquette to have a drink. It was a quite long but interesting day.

Wednesday

24-11-2010

Today I am going to write more about FRISBEE project in particular. Why? Because I want to make clear what is this project about and it is important also to understand the researchers that we interviewed today. FRISBEE is the acronym for Food Refrigeration Innovation for Safety consumers' Benefit, Environmental Impact and Energy optimisation along the cold chain in Europe. It is 4 year project that European Union funded with 6 million euros. It is an integrated project that has 26 partners and it is constructed around 8 work packages dealing with cold chain and refrigeration. Dr. Graciela Alvarez is a coordinator of the whole project so we are lucky that she is our mentor. In short these 8 work packages include developing database of the cold chain data from around Europe, developing new tools and improving existing technologies in terms of food quality, energy use and environmental impact, developing refrigeration technologies at laboratory and in the end demonstration of innovative technologies and communication with larger public audience. This last phase will be introduced in the end of the project so I will not be able to write about the results of the project because it started just 2 months ago. Cemagref institute is a leader of "Improvement of existing refrigeration technologies" so we will be able to learn more about this issue from firsthand. Today in the morning we had interview with Denis Leducq, research engineer that work in Frisbee project in Cemagref. We recorded the interview in which he explained us in short how they are planning to improve existing refrigeration technologies. Dr. Alvarez explained us in advance that some of the researchers evolved in the FRISBEE project are not in Cemagref and that we will need to interview them with Skype so we did it. We interviewed Prof. Petros Taoukis, who teaches food chemistry, microbiology and engineering. In FRISBEE he is involved in developing a comprehensive database of the cold chain in Europe, identifying refrigeration needs and available current technologies in the food industry and investigating consumer needs and expectations with respect to the food cold chain. I was focused more about database and I think this will be part of my video. We had arranged interview with Dr. Alvarez but we agreed that we will moved it to the next day because we did not have enough time. In the afternoon we went to interview Didier Coulomb, director of the International Institute of Refrigeration (IIR) in Paris. IIR is intergovernmental organization devoted to refrigeration technology and air conditioning and it is great that we had a chance to speak to him "face to face" and recored it. Visual elements are really important to make a good video so I hope we will have enough time to dedicate ourselves to that part as well as we did with interviews.
In the evening laura and I went to Louvre museum. We were really lucky because it was opened till 9:30 pm so we managed to see some of the exhibitions :) Usually it is is opened till 6 pm.
This day was really productive.

Thursday

25-11-2010

Today we had skype interviews with Annemie Geeraerd, Judith Evans and Christophe Cotillon, "face to face" interview with Dr. Alvarez but let's start from the beginning :) In the morning we did some research about the people that we will be interviewing through skype. We prepared the questions and talked with Dr.Alvarez about what we are going to do today. First we had interview with Dr. Graciela Alvarez, our host, and she explained us what are the main problems in the cold chain that people should be aware (this part is important for my video) and what they want to achieve with FRISBEE. She answered on all of our questions and I can say this interview was really useful for the video that I am going to do later. After Dr. Alvarez, we had skype interview with Dr. Annemie Geeraerd from Katholieke Universiteit Leuven, and she is dealing with providing evaluation tools for FRISBEE project. Some of our questions were: In what stage are you for developing new tools for evaluation of energy consumption? Can you tell us something about food quality models, what is it, how do you measure that?
After Dr. Geeraerd we interviewed Judith Evans. She is dealing with Emerging refrigeration technologies. We read that the aim is to develop emerging refrigeration technologies at the laboratory scale. This was the part of project that I was not so familiar with so I wanted to get as more information as I can in order to understand better problems and objectives of the project. She explained us that technologies are divided on those that are are based on food and on those that are based on existing technologies. They want to develop superchilling and supercooling technologies which will give them chance to control food temperature in order to provide food quality. After Dr. Evans explained all the aspects of Work Package 5, that she is part of, we interviewed Dr. Christophe Cotillon, he s dealing with dissemination of the project. So he told us something about how they will disseminate the main innovative project results and the main innovative findings to consumers, industry, academia and policy makers.

As the dissemination is in the end of the project, we were more interested about the challenge and problems that they need to face with and also why do they think that this project is important for the consumers. This last question is actually the question that I am asking myself every day in Cemagref because I think this is the most important for the audience. So, what are the benefits for consumers, for larger audience, why would the topic "cold chain" be so interesting for them. I think I found the answers but to make it sure I need to do evaluation of everything I learned in Cemagref. Today, we also visited the labs. I took my camera and recorded researcher that did some experiment and also laboratory equipment. I was so happy because i finally had some visual elements of the lab but Dr. Alvarez told us that tomorrow we will have chance to do all the shooting in the other labs too. Juhuhu :) In the evening Laura and I went for a dinner with Dr.Alvarez and Dr.Leducq in a really nice restaurant in Quartier latin. We ate fondue, typical cheese one, but also chocolate fondue and both of them were delicious. We spoke about informal things and spent great time. After dinner we had the opportunity to see most of the city from a car…yes, Dr. Alvarez and Dr. Leducq drove us with a car for sightseeing. Thank you very much Graciela and Denis for everything you did for us :)

Friday

26-11-2010

Today was my last day in Cemagref. In the morning Laura and I wrote down everything that we need to do by the end of the day and the list was quite long. First of all we went with Dr. Alvarez to the labs to shoot all the materials that we need. After that we had a skype interview with the Administrator of the project. The main thing that we were interested in was financial background of the project and he explained us what are the difficulties that he is dealing with. After the interview, Dr. Alvarez gave us some pictures of the experiments that may be useful for our video. We also checked names and roles of all people that we interviewed. We interviewed Dr. Laguerre once again, but this time for the camera. She summarized in few sentence everything she spoke about on Tuesday. So what did I learn about cold chain and FRISBEE project? Dr. Alavrez said that Laura and I will become an experts till the end of the week :) I can not say I am an expert but I can say I learned a lot and now I need to be skillful enough to make a good approach to the audience, so they can understand what I am saying. Maybe this will be the hardest part of the RELATE: to make a video that will be understandable for people that are not scientists. I learned that there are many ways of breaking the cold chain, sometimes people are those who are blameworthy, sometimes it is environment and sometimes it is both. How do people behave in this process is one big topic. They are not aware that maybe because of their unintentionally bad behavior, for example leaving fridge too long opened or putting some food outside of the fridge for a long time, they could have serious health problems. Well, peoples behavior is just part of cold chain problem. I also learned about production, industrial storage, transport, display cabinets, domestic refrigeration, temperature control and energy consumption and I need to decide what will I put in my video…After I come home in Croatia, I will need to study once again all the information that laura and I collected during this week. I need to mention that Dr. Alvarez was every day with us and she was always ready to help us as much as she could. I am thankful that I had the opportunity to meet her and that she was my mentor. She is kind person and great expert. It was pretty hard to say goodbye to Graciela and Laura. Laura was a great colleague. If I had to choose someone to stay with me for a week in Cemagref, I would certainly choose Laura. She is not only a great colleague than a person with whom I enjoyed spending my free time in Paris. We met lots of people, danced and talked a lot. I am sure we will meet each other again, in Croatia, Bruxelles, Spain or Paris :)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