4. PUBLISHABLE SUMMARY

Moduli spaces are basic and central objects that emerge in the most natural classification problems in geometry. Their importance has been emphasized over the years due to the relation of these spaces with areas of mathematics so diverse as algebraic geometry, differential geometry, topology, arithmetic geometry, algebra, global analysis and, perhaps more surprisingly, with theoretical physics.

The main objective of MODULI project is to establish new collaborations and reinforce existing collaborations between Europe and India in the field of moduli spaces, as well as training young researches. This will be done through the exchange of both experienced and early stage researchers, and the organization of conferences, specialized workshops and schools.

The project is a Marie Curie International Research Staff Exchange Scheme (IRSES) project in the 7th European Framework Program, with project nº 612534. It will run from January 1, 2014 until December 31, 2017. There are four European partners involved: Consejo Superior de Investigaciones Científicas (Madrid, Spain), University of Oxford (Oxford, UK), Université Pierre et Marie Curie (Paris, France) and Aarhus Universitet (Aarhus, Denmark); and four Indian partners: Tata Institute for Fundamental Research (Mumbai, India), Chennai Mathematical Institute (Chennai, India), Institute of Mathematical Sciences (Chennai, India) and Indian Institute of Science (Bangalore, India).

The project is structured around the following areas of this field:

- moduli spaces and geometric structures.
- moduli spaces and physics.
- moduli spaces and arithmetic geometry.

At the end of the first 2 years, the project progress positively in most aspects.

- The exchanges among European and Indian partners represent 98’86 researcher-months that means that the 28.86% of planned secondments have been executed.
- 69 researchers have participated in the project so far.
- As result of the MODULI research, during the first 24 months, 32 papers have been produced to be published on high impact journals, such as Annals of Mathematics, Inventiones Mathematicae, Journals of the London Mathematical Society (LMS) and the International Mathematics Research Notices. Many of the papers have been published in Q1 mathematics journals.
- The MODULI partners have organized many research and training activities including workshops, schools, courses, working groups, discussion meetings,... More concretely, during the first 2 years of the project, the MODULI partners have organized 3 conferences, 8 Workshops, 5 Schools, 6 Courses. In addition to these activities, every researcher (including young researchers) doing a secondment gives at least a research talk at the visiting institution.
- Two major activities can be singled out: a School and conference organized in October 2015 in Chennai to celebrate the 50 years of the Narasimhan-Seshadri Theorem; and a big event

to celebrate the 70th birthday of Nigel Hitchin. This event will be structured in 3 consecutive conferences at Aarhus University, Oxford and ICMAT Madrid, taking place in September 2016.