

# Correctness by Construction: Publications

PIRSES-GA-2013-612638

February 26, 2016

## References

### Books and Journal Articles

- [1] [Universität Siegen] Vasco Brattka, Hannes Diener, and Dieter Spreen, eds., *Logic, Computation, Hierarchies*, vol. 4 of *Ontos Mathematical Logic*, De Gruyter, Boston, Massachusetts, USA and Berlin, Germany, 2014
- [2] [Universität Siegen] Dieter Spreen, *An isomorphism theorem for partial numberings*, in Brattka et al. [1], pp. 340–381, 2014
- [3] [Universität Siegen] Dieter Spreen, *The life and work of Victor L. Selivanov*, in Brattka et al. [1], pp. 1–8, 2014
- [4] [Universität Siegen] Dieter Spreen, *Partial numberings and precompleteness*, in Brattka et al. [1], pp. 325–340, 2014
- [5] [Università degli Studi dell’Insubria] Federico Gobbo and Marco Benini, *The minimal levels of abstraction in the history of modern computing*, *Philosophy and Technology*, 27(3), pp. 327–343, 2014
- [6] [Università degli Studi dell’Insubria] Federico Gobbo and Marco Benini, *What can we know of computational information? Measuring, quantity, and quality at work in programmable artifacts*, *Topoi*, pp. 1–10, 2014. ISSN 0167-7411. doi:10.1007/s11245-014-9248-5, PDF <http://corconintranet.files.wordpress.com/2014/04/2014-benini-topoi.pdf>
- [7] [Università degli Studi di Padova, Università degli Studi di Genova] Maria Emilia Maietti and Giuseppe Rosolini, *Quotient completion for the foundation of constructive mathematics*, *Logica Universalis*, 7, pp. 371–402, 2014
- [8] [Università degli Studi di Genova] Anna Bucalo and Giuseppe Rosolini, *Sobriety for equilogical spaces*, *Theoretical Computer Science*, 546, pp. 93–98, 2014

- [9] [**Università degli Studi di Genova**] Anna Bucalo and Giuseppe Rosolini, *Topologies and free constructions*, Logic and Logical Philosophy, 22, pp. 327–346, 2014
- [10] [**University of Canterbury**] Douglas S. Bridges, *Locating  $Ax$  where  $A$  is a subspace of  $B(H)$* , Logical Methods in Computer Science, 10(2:9), pp. 1–10, 2014. doi:10.2168/LMCS-10(2:9)2014
- [11] [**University of Canterbury**] Douglas S. Bridges, James E. Dent, and Maarten McKubre-Jordens, *Constructive connections between anti-Specker, positivity, and fan-theoretic properties*, New Zealand Journal of Mathematics, 44, pp. 21–33, 2014. URL [http://nzjm.math.auckland.ac.nz/index.php/Volume\\_44\\_2014](http://nzjm.math.auckland.ac.nz/index.php/Volume_44_2014)
- [12] [**University of Leeds, The Institute of Mathematical Sciences Chennai Society**] Olaf Beyersdorff, Leroy Chew, Meena Mahajan, and Anil Shukla, *Feasible interpolation for QBF resolution calculi*, Electronic Colloquium on Computational Complexity (ECCC), 22, p. 59, 2015. URL <http://eccc.hpi-web.de/report/2015/059>
- [13] [**University of Leeds**] Jeroen Van der Meeren, Michael Rathjen, and Andreas Weiermann, *Well-partial-orderings and the big Veblen number*, Archive for Mathematical Logic, 54(1), pp. 193–230, 2015. doi:10.1007/s00153-014-0408-5
- [14] [**Swansea University**] Ulrich Berger, Alison Jones, and Monika Seisenberger, *Program extraction applied to monadic parsing*, Journal of Logic and Computation, 2015
- [15] [**Swansea University**] Ulrich Berger, Andrew Lawrence, Fredrik Nordvall Forsberg, and Monika Seisenberger, *Extracting verified decision procedures: DPLL and Resolution*, Logical Methods in Computer Science, 11(1:6), pp. 1–18, 2015
- [16] [**Swansea University**] Anton Setzer, *The use of trustworthy principles in a revised Hilbert’s program*, in Reinhard Kahle and Michael Rathjen, eds., *Gentzen’s Centenary*, pp. 45–60, Springer International Publishing, ISBN 978-3-319-10102-6, 2015. doi:10.1007/978-3-319-10103-3\_3
- [17] [**Ludwig-Maximilians Universität**] Kenji Miyamoto and Helmut Schwichtenberg, *Program extraction in exact real arithmetic*, Mathematical Structures in Computer Science, 25, pp. 1692–1704, 2015
- [18] [**Università degli Studi dell’Insubria**] Federico Gobbo and Marco Benini, *Why zombies can’t write significant source code: The knowledge game and the art of computer programming*, Journal of Experimental and Theoretical Artificial Intelligence, 27(1), pp. 37–50, 2015

- [19] [Universit  degli Studi di Padova, Universit  degli Studi di Genova] Maria Emilia Maietti and Giuseppe Rosolini, *Unifying exact completions*, Applied Categorical Structures, 23, pp. 43–52, 2015. doi: 10.1007/s10485-013-9360-5
- [20] [Universit  degli Studi di Padova] Samuele Maschio, *On the distinction between sets and classes: a categorical perspective*, in Gabriele Lolli, Marco Panza, and Giorgio Venturi, eds., *From Logic to Practice. Italian Studies in Philosophy of Mathematics*, vol. 308 of *Boston Studies in the Philosophy and History of Science*, pp. 185–199, Springer, ISBN 978-3-319-10433-1, 2015. doi:10.1007/978-3-319-10434-8\_10
- [21] [Universit  degli Studi di Padova] Samuele Maschio and Thomas Streicher, *Models of intuitionistic set theory in subtoposes of nested realizability toposes*, Annals of Pure and Applied Logic, 166(6), pp. 729–739, 2015
- [22] [University of Leeds] Olaf Beyersdorff, Leroy Chew, and Mikolas Janota, *Extension variables in QBF resolution*, Electronic Colloquium on Computational Complexity (ECCC), 23, p. 5, 2016. URL <http://eccc.hpi-web.de/report/2016/005>
- [23] [Swansea University] Karim Kanso and Anton Setzer, *A light-weight integration of automated and interactive theorem proving*, Mathematical Structures in Computer Science, 26(special issue 1), pp. 129–153, 2016. ISSN 1469-8072. doi:10.1017/S0960129514000140, URL [http://journals.cambridge.org/article\\_S0960129514000140](http://journals.cambridge.org/article_S0960129514000140)

## Conference Articles

- [24] [University of Leeds, Swansea University] Olaf Beyersdorff and Oliver Kullmann, *Unified characterisations of resolution hardness measures*, in C. Sinz and U. Egly, eds., *SAT 2014*, vol. 8561 of *Lecture Notes in Computer Science*, pp. 170–187, Springer, 2014
- [25] [University of Leeds] Olaf Beyersdorff and Leroy Chew, *The complexity of theorem proving in circumscription and minimal entailment*, in S. Demri, D. Kapur, and C. Weidenbach, eds., *IJCAR 2014*, vol. 8562 of *Lecture Notes in Artificial Intelligence*, pp. 403–417, Springer, 2014
- [26] [University of Leeds] Olaf Beyersdorff, Leroy Chew, and Mikol  Janota, *On unification of QBF resolution-based calculi*, in *MFCS 2014*, vol. 8635 of *Lecture Notes in Computer Science*, pp. 81–93, Springer, 2014
- [27] [Swansea University] Ulrich Berger and Tie Hou, *Uniform schemata for proof rules*, in Arnold Beckmann, Erseb t Csuhaj-Varj , and Klaus Meer, eds., *Language, Life, Limits*, vol. 8493 of *Lecture Notes in Computer Science*, pp. 53–62, Springer, ISBN 978-3-319-08018-5, 2014. Contributed paper at the international conference *Computability in Europe*

2014 (CiE 2014), 23–27 June 2014, Budapest, Hungary. doi:10.1007/978-3-319-08019-2\_4

- [28] [Swansea University] Ulrich Berger, Monika Seisenberger, and Gregory J.M. Woods, *Extracting imperative programs from proofs: In-place Quicksort*, in Ralph Matthes and Aleksy Schubert, eds., *19th International Conference on Types for Proofs and Programs (TYPES 2013)*, vol. 26 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pp. 84–106, Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, ISBN 978-3-939897-72-9, ISSN 1868-8969, 2014. doi:<http://dx.doi.org/10.4230/LIPIcs.TYPES.2013.84>, URL <http://drops.dagstuhl.de/opus/volltexte/2014/4627>
- [29] [Swansea University] Phillip James, Andy Lawrence, Faron Moller, Markus Roggenbach, Monika Seisenberger, Anton Setzer, Karim Kanso, and Simon Chadwick, *Verification of solid state interlocking programs*, in Steve Counsell and Manuel Núñez, eds., *Software Engineering and Formal Methods*, Lecture Notes in Computer Science, pp. 253–268, Springer International Publishing, ISBN 978-3-319-05031-7, 2014. doi:10.1007/978-3-319-05032-4\_19
- [30] [Swansea University] Anton Setzer, Andreas Abel, Brigitte Pientka, and David Thibodeau, *Unnesting of copatterns*, in Gilles Dowek, ed., *Rewriting and Typed Lambda Calculi*, vol. 8560 of *Lecture Notes in Computer Science*, pp. 31–45, Springer International Publishing, ISBN 978-3-319-08917-1, 2014. doi:10.1007/978-3-319-08918-8\_3
- [31] [Università degli Studi dell’Insubria] Marco Benini and Federico Gobbo, *Algorithms and their explanations*, in Arnold Beckmann, Ersebét Csuhaj-Varjú, and Klaus Meer, eds., *Language, Life, Limits*, vol. 8493 of *Lecture Notes in Computer Science*, pp. 32–41, Springer, ISBN 978-3-319-08018-5, 2014. Invited talk in the special session *History and Philosophy of Computing* of the international conference *Computability in Europe 2014* (CiE 2014), 23–27 June 2014, Budapest, Hungary. doi:10.1007/978-3-319-08019-2\_4, PDF <http://corconintranet.files.wordpress.com/2014/04/2014-benini-cie.pdf>
- [32] [University of Leeds, The Institute of Mathematical Sciences Chennai Society] Olaf Beyersdorff, Leroy Chew, and Karteek Sreenivasiah, *A game characterisation of tree-like Q-resolution size*, in *LATA 2015*, Lecture Notes in Computer Science, Springer, 2015
- [33] [University of Leeds] Olaf Beyersdorff, Leroy Chew, and Mikoláš Janota, *Proof complexity of resolution-based QBF calculi*, in Ernst W. Mayr and Nicolas Ollinger, eds., *32<sup>nd</sup> International Symposium on Theoretical Aspects of Computer Science*, vol. 30, LIPIcs, ISBN 978-3-939897-78-1, 2015

- [34] [Universit  degli Studi di Padova] Maria Emilia Maietti and Samuele Maschio, *An extensional Kleene realizability semantics for the minimalist foundation*, in *20th International Conference on Types for Proofs and Programs (TYPES 2014)*, vol. 39 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pp. 162–186, 2015
- [35] [University of Leeds, The Institute of Mathematical Sciences Chennai Society] Olaf Beyersdorff, Leroy Chew, Meena Mahajan, and Anil Shukla, *Are short proofs narrow? QBF resolution is not simple*, in *33<sup>rd</sup> Symposium on Theoretical Aspects of Computer Science, STACS 2016, February 17-20, 2016, Orl ans, France*, pp. 15:1–15:14, 2016. doi: <http://dx.doi.org/10.4230/LIPIcs.STACS.2016.15>
- [36] [University of Leeds] Olaf Beyersdorff, Ilario Bonacina, and Leroy Chew, *Lower bounds: From circuits to QBF proof systems*, in *Proceedings of the 2016 ACM Conference on Innovations in Theoretical Computer Science, Cambridge, MA, USA, January 14-16, 2016*, pp. 249–260, 2016. doi: <http://dx.doi.org/10.1145/2840728.2840740>
- [37] [Ludwig-Maximilians Universit t] Iosif Petrakis, *The Urysohn extension theorem for Bishop spaces*, in Sergei Artemov and Anil Nerode, eds., *Logical Foundations of Computer Science*, vol. 9537 of *Lecture Notes in Computer Science*, pp. 299–316, Springer International Publishing, ISBN 978-3-319-27682-3, 2016. doi:10.1007/978-3-319-27683-0\_21

## Talks and Seminars

- [38] [University of Leeds, Swansea University] Olaf Beyersdorff and Oliver Kullmann, Talk: *Unified characterisations of resolution hardness measures*, 17<sup>th</sup> International Conference on Theory and Applications of Satisfiability Testing, Vienna, Austria, 14–17 July 2014
- [39] [University of Leeds] Olaf Beyersdorff, Talk: *How difficult is it to verify proofs?*, Universit  degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/05/beyersdorff.pdf>
- [40] [University of Leeds] Michael Rathjen, Talk: *Indefiniteness of mathematical problems?*, Universit  degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014)
- [41] [University of Leeds] Peter Schuster, Seminar: *Ueber die Metamathematik kommutativer Ringe (d’apres Scarpellini)*, Ludwig-Maximilians Universit t, M nchen, Germany, 14 May 2014

- [42] [University of Leeds] John Stell, Seminar: *Bi-intuitionistic modal logic and hypergraphs*, Japan Advanced Institute of Science and Technology, Nomi, Japan, 27 June 2014
- [43] [University of Strathclyde] Neil Ghani, Seminar: *An algebraic approach to parametricity*, University of Leeds, Leeds, UK, 29 October 2014
- [44] [University of Strathclyde] Neil Ghani, Talk: *Parametricity — what’s it all about*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/ghani.pdf>
- [45] [Swansea University, Universität Siegen] Ulrich Berger and Dieter Spreen, Talk: *A coinductive approach to computing with compact sets*, University of Ljubljana—Associated partner, 15–19 September 2014. International workshop *Continuity, Computability, Constructivity: From Logic to Algorithms*. URL <http://ccc2014.fmf.uni-lj.si/wp-content/uploads/2014/04/ccc2014booklet.pdf>
- [46] [Swansea University] Ulrich Berger, Talk: *Logical representations of partial, mutable and reusable data*, Oberwolfach, Germany, 16–22 November 2014. International Workshop, Mathematical Logic: Proof theory, Constructive Mathematics, Mathematisches Forschungsinstitut Oberwolfach
- [47] [Swansea University] Ulrich Berger, Talk: *Program extraction for Church’s simple theory of types*, University of South Africa, Pretoria, South Africa, 5 May 2014. Swansea-Pretoria Workshop
- [48] [Swansea University] Ulrich Berger, Invited talk: *Program extraction in Church’s simple theory of types*, Vienna Summer of Logic, Vienna, Austria, 17–18 July 2014. International workshop *Proof, Structure and Computation* (PSC 2014)
- [49] [Swansea University] Ulrich Berger, Talk: *Uniform schemata for proof rules*, Budapest, Hungary, 23 June 2014. International conference *Computability in Europe 2014* (CiE 2014), 23–27 June 2014
- [50] [Swansea University] Ulrich Berger, Alison Jones, and Monika Seisenberger, Talk: *Program extraction and natural language processing*, University of South Africa, Pretoria, South Africa, 5 May 2014. Swansea-Pretoria Workshop
- [51] [Swansea University] Ulrich Berger, Alison Jones, and Monika Seisenberger, Talk: *Program extraction applied to monadic parsing*, Vienna Summer of Logic, Vienna, Austria, 17–18 July 2014. International workshop *Proof, Structure and Computation* (PSC 2014)

- [52] **[Swansea University]** Ulrich Berger and Seisenberger Monika, Invited talk: *Program extraction from proofs*, Ludwig-Maximilians Universität, Fraueninsel (Chiemsee), Germany, 21–25 July 2014. *Proof, Truth, Computation: Summer School on the Interactions between Modern Foundations of Mathematics and Contemporary Philosophy*
- [53] **[Swansea University]** Ulrich Berger and Dieter Spreen, Talk: *A coincident approach to computing with compact sets*, Ljubljana, Slovenia, 15 September 2014. Talk at the international workshop *Continuity, Computability, Constructivity — From Logic to Algorithms*
- [54] **[Swansea University]** Jens Blanck, Talk: *Computability and mathematics*, University of Canterbury, Christchurch, New Zealand, 29 July 2014
- [55] **[Swansea University]** Jens Blanck, Talk: *Computing with exact real numbers*, University of South Africa, Pretoria, South Africa, 9–10 January 2014
- [56] **[Swansea University]** Jens Blanck, Talk: *Implementation of exact real arithmetic*, University of South Africa, Pretoria, South Africa, 24 April 2014
- [57] **[Swansea University]** Reinhard Kahle and Anton Setzer, Talk: *The limits of the Curry-Howard isomorphism*, University of Tübingen, Tübingen, Germany, 21–23 February 2014. Workshop *Functions, Proofs, Concepts (FPC)*
- [58] **[Swansea University]** Andrew Lawrence, Talk: *Formal methods and their application in the railway domain*, University of South Africa, Pretoria, South Africa, 5 May 2014. Swansea-Pretoria Workshop
- [59] **[Swansea University]** Monika Seisenberger, Talk: *Application of logic to the verification of railway control systems*, Oberwolfach, Germany, 16–22 November 2014. Talk at the international Workshop, Mathematical Logic: Proof theory, Constructive Mathematics, Mathematisches Forschungsinstitut Oberwolfach
- [60] **[Swansea University]** Monika Seisenberger, Talk: *Modelling and Analyzing the European Rail Traffic Management System in Real-Time Maude*, Luxembourg, 6 November 2014. Third International Workshop on Formal Techniques for Safety-Critical Systems (FTSCS 2014)
- [61] **[Swansea University]** Monika Seisenberger, Talk: *Program extraction*, University of South Africa, Pretoria, South Africa, 5 May 2014. Swansea-Pretoria Workshop
- [62] **[Swansea University]** Monika Seisenberger, Talk: *Program extraction with infinite data*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014*

(CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/05/seisenberger.pdf>

- [63] [Swansea University] Anton Setzer, Andreas Abel, Brigitte Pientka, and David Thibodeau, Talk: *Unnesting of copatterns*, Vienna, Austria, 14–17 July 2014. Conference *Rewriting Techniques and Applications* (RTA 2014)—*Typed Lambda Calculi and Applications* (TLCA 2014)
- [64] [Swansea University] Gregory Woods, Talk: *Extracting imperative programs from proofs: In-place Quicksort*, University of South Africa, Pretoria, South Africa, 5 May 2014. Swansea-Pretoria Workshop
- [65] [Universität Siegen] Hannes Diener, Talk: *BD-N*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/diener.pdf>
- [66] [Universität Siegen] Dieter Spreen, Talk: *Information frames*, Université Paris Diderot, Paris, France, 8–10 September 2014. International workshop *Domains XI*. URL [http://www.pps.univ-paris-diderot.fr/~varacca/domains/Domains\\_XI/Programme\\_files/infoframes-domains11.pdf](http://www.pps.univ-paris-diderot.fr/~varacca/domains/Domains_XI/Programme_files/infoframes-domains11.pdf)
- [67] [Universität Siegen] Dieter Spreen, Talk: *Information frames*, Inter-University Centre Dubrovnik, Dubrovnik, Croatia, 22–25 September 2014. International workshop *Logic and Applications*. URL [http://imft.ftn.uns.ac.rs/math/cms/uploads/LAP2014/spreen\\_2014.pdf](http://imft.ftn.uns.ac.rs/math/cms/uploads/LAP2014/spreen_2014.pdf)
- [68] [Universität Siegen] Dieter Spreen, Seminar: *Information frames*, Swansea University, Swansea, UK, March 2014
- [69] [Universität Siegen] Dieter Spreen, Talk: *Information frames and L-domains*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/spreen.pdf>
- [70] [Ludwig-Maximilians Universität] Iosif Petrakis, Talk: *Limit spaces with approximations*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/petrakis1.pdf>
- [71] [Ludwig-Maximilians Universität] Sam Sanders, Talk: *Higher-order reverse mathematics of Brouwer’s continuity theorem and related principles*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014)

- [72] [**Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Talk: *An approach to constructive mathematics*, Philosophy of Mathematics and Logic, Keio University, Tokyo, Japan, 27 February 2014
- [73] [**Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Seminar: *Computational content of proofs*, JAIST Logic Workshop, Japan Advanced Institute of Science and Technology, Nomi, Japan, 5–7 March 2014
- [74] [**Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Seminar: *Computational content of proofs involving coinduction*, Kyoto University—Associated partner, 19 March 2014
- [75] [**Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Seminar: *Decorating proofs*, Australian National University, Canberra, Australia, 24 October 2014
- [76] [**Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Talk: *Realizability*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014)
- [77] [**Università degli Studi dell’Insubria**] Marco Benini, Invited talk: *Algorithms and their explanations*, special session *History and Philosophy of Computing* of the international conference *Computability in Europe 2014* (CiE 2014), Budapest, Hungary, 23–27 June 2014
- [78] [**Università degli Studi dell’Insubria**] Marco Benini, Talk: *Does programming really need data structures?*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/benini.pdf>
- [79] [**Università degli Studi dell’Insubria**] Marco Benini, Seminar: *Point-free foundations of mathematics*, Japan Advanced Institute of Science and Technology, Nomi, Japan, 22 May 2014. URL <http://www.slideshare.net/marcobenini9/main-34978451>
- [80] [**Università degli Studi dell’Insubria**] Marco Benini, Seminar: *Programming modulo representations*, Japan Advanced Institute of Science and Technology, Nomi, Japan, 5 June 2014. URL <http://www.slideshare.net/marcobenini9/programming-modulo-representations>
- [81] [**Università degli Studi dell’Insubria**] Marco Benini, Seminar: *Programming modulo representations*, University of Leeds, Leeds, UK, 1 October 2014. URL <http://www.slideshare.net/marcobenini9/programming-modulo-representations-40481419>

- [82] [Università degli Studi di Padova] Francesco Ciraulo, Talk: *Closed subspaces in pointfree topology*, Scuola Normale di Pisa, Pisa, Italy, 17–14 April 2014. XXV incontro dell’Associazione Italiana di Logica e sue Applicazioni
- [83] [Università degli Studi di Padova] Francesco Ciraulo, Talk: *Positivity relations and localic suplattices*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/ciraulo.pdf>
- [84] [Università degli Studi di Padova] Maria Emilia Maietti, Talk: *Categorical structures for the foundation of constructive mathematics*, Università degli Studi di Palermo, Palermo, Italy, 11–12 October 2014. 96<sup>th</sup> Peripatetic Seminar on Sheaves and Logic (Celebrating the 60<sup>th</sup> birthday of Pino Rosolini)
- [85] [Università degli Studi di Padova] Maria Emilia Maietti, Talk: *Computation by construction in the minimalist foundation*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/maietti.pdf>
- [86] [Università degli Studi di Padova] Maria Emilia Maietti, Invited talk: *What is a constructive and predicative foundation for mathematics?*, Ludwig-Maximilians Universität, Fraueninsel (Chiemsee), Germany, 21–25 July 2014. *Proof, Truth, Computation: Summer School on the Interactions between Modern Foundations of Mathematics and Contemporary Philosophy*
- [87] [Università degli Studi di Padova] Maria Emilia Maietti, Seminar: *Why topology must be point free*, Logic Seminar, Australian National University, Canberra, Australia, 4 February 2014
- [88] [Università degli Studi di Padova] Samuele Maschio, Talk: *A Kleene realizability model for the minimalist foundation*, Scuola Normale di Pisa, Pisa, Italy, 14–17 April 2014. XXV incontro dell’Associazione Italiana di Logica e sue Applicazioni
- [89] [Università degli Studi di Padova] Samuele Maschio, Talk: *A kleene realizability semantics for the minimalist foundation*, Institut Henri Poincaré, Paris, France, 12–15 May 2014. TYPES for Proofs and Programs
- [90] [Università degli Studi di Padova] Samuele Maschio, Talk: *A model of intuitionist set theory in subtoposes of nested realizability toposes*, Centre for Mathematical Sciences, Cambridge, UK, 29 June–5 July 2014. International Category Theory Conference 2014

- [91] [**Università degli Studi di Padova**] Samuele Maschio, Talk: *A model of IZF in subtoposes of nested realizability toposes*, Università degli Studi di Palermo, Palermo, Italy, 11–12 October 2014. 96th Peripatetic Seminar in Sheaves and Logic
- [92] [**Università degli Studi di Padova**] Giovanni Sambin, Invited talk: *Benefits of a minimalist approach to mathematics*, Ludwig-Maximilians Universität, Fraueninsel (Chiemsee), Germany, 21–25 July 2014. *Proof, Truth, Computation: Summer School on the Interactions between Modern Foundations of Mathematics and Contemporary Philosophy*
- [93] [**Università degli Studi di Padova**] Giovanni Sambin, Invited talk: *Constructive mathematics*, Scuola Normale di Pisa, Pisa, Italy, 14–17 April 2014. Special session *Le direzioni della ricerca logica in Italia*, XXV incontro dell’Associazione Italiana di Logica e sue Applicazioni (AILA)
- [94] [**Università degli Studi di Padova**] Giovanni Sambin, Talk: *On the so-called Axiom of Unique Choice*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/sambin.pdf>
- [95] [**Università degli Studi di Padova**] Giovanni Sambin, Seminar: *Streams in a minimalist foundation*, Australian National University, Canberra, Australia, 23 January 2014
- [96] [**Università degli Studi di Padova**] Giovanni Sambin, Seminar: *Towards a rigorous foundation for Bishop’s constructive analysis*, Departmental Seminar, University of Canterbury, Christchurch, New Zealand, 13 March 2014
- [97] [**Università degli Studi di Genova**] Eugenio Moggi, Talk: *Categories for collection types*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/moggi.pdf>
- [98] [**Università degli Studi di Genova**] Eugenio Moggi, *Categories for collection types*, Scuola Normale di Pisa, Pisa, Italy, 14–17 April 2014. XXV incontro dell’Associazione Italiana di Logica e sue Applicazioni
- [99] [**Università degli Studi di Genova**] Giuseppe Rosolini, *Equivocal frames*, Institut Henri Poincaré, Paris, France, 10–13 June 2014. IHP Workshop on Semantics of Proofs and Programs
- [100] [**Università degli Studi di Genova**] Giuseppe Rosolini, Talk: *Frames as equilogical spaces*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/rosolini.pdf>

- [101] [**Università degli Studi di Genova**] Giuseppe Rosolini, *Frames as equi-logical spaces*, University of Cambridge, Cambridge, UK, 2014. International Conference in Category Theory
- [102] [**Japan Advanced Institute of Science and Technology**] Hajime Ishihara, Talk: *A monad in the combinatory algebras*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/03/ishihara.pdf>
- [103] [**Japan Advanced Institute of Science and Technology**] Tatsuji Kawai, Talk: *Point-free characterisation of Bishop compact metric spaces*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/kawai.pdf>
- [104] [**Japan Advanced Institute of Science and Technology**] Takayuki Kihara, Talk: *Arboreal forcings over admissible sets*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014)
- [105] [**Japan Advanced Institute of Science and Technology**] Takako Nemoto, Talk: *Interpretation of set theory into theory of operators*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/nemoto.pdf>
- [106] [**Japan Advanced Institute of Science and Technology**] Mizuhito Ogawa, Talk: *Satisfiability of arithmetic constraints and its applications on verification*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/ogawa.pdf>
- [107] [**Japan Advanced Institute of Science and Technology**] Katsuhiko Sano, Talk: *Topological semantics for Visser’s propositional logics*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/05/sano.pdf>
- [108] [**Japan Advanced Institute of Science and Technology**] Satoshi Tojo, Talk: *Who knows what at which time? — from viewpoint of dynamic epistemic logic*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/tojo.pdf>
- [109] [**Japan Advanced Institute of Science and Technology**] Keita Yokoyama, Talk: *The strength of Ramsey’s theorem from several different*

*view points*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/yokoyama.pdf>

- [110] [**University of Canterbury**] Douglas S. Bridges, Seminar: *Morse set theory as a foundation for constructive mathematics*, Ludwig-Maximilians Universität, München, Germany, 2014
- [111] [**University of Canterbury**] Douglas S. Bridges, Seminar: *Morse set theory as a foundation for constructive mathematics*, Stockholms Universitet, Stockholms, Sweden, 2014
- [112] [**University of Canterbury**] Douglas S. Bridges, Seminar: *Operators, singly, in bunches, and constructively*, Ludwig-Maximilians Universität, München, Germany, 4 June 2014
- [113] [**University of Canterbury**] Maarten McKubre-Jordens, Seminar: *Analysis of three different flavours. a story of examples, counterexamples, and viewpoints*, Ludwig-Maximilians Universität, München, Germany, 28 May 2014
- [114] [**Australian National University**] Dirk Pattinson, Seminar: *Continuous functions on non-wellfounded types*, Ludwig-Maximilians Universität, München, Germany, 9 July 2014
- [115] [**Hankyong National University**] Gyesik Lee, Talk: *The big five systems of reverse mathematics and their computational interpretation*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). URL <http://corcon2014.files.wordpress.com/2014/04/lee.pdf>
- [116] [**Kyoto University—Associated partner**] Hideki Tsuiki, Talk: *Dyadic subbases derived from dynamical systems*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014)
- [117] [**External contributor**] Gianluigi Bellin and Alessandro Menti, Talk: *Bi-intuitionism as dialogue chirality*, Università degli Studi di Genova, Genova, Italy, 24–27 March 2014. International workshop *Correctness by Construction 2014* (CORCON 2014). Authors from Università degli Studi di Verona, Verona, Italy. URL <http://corcon2014.files.wordpress.com/2014/03/bellinmenti.pdf>
- [118] [**University of Leeds, The Institute of Mathematical Sciences Chennai Society**] Olaf Beyersdorff, Leroy Chew, and Karteek Sreenivasaiyah, Talk: *A game characterisation of tree-like  $Q$ -resolution size*, 9<sup>th</sup> International Conference on Language and Automata Theory and Applications, Nice, France, 2–6 March 2015

- [119] [**University of Leeds**] Olaf Beyersdorff, Invited talk: *Lower bounds: From circuits to QBF proof systems*, Dagstuhl Seminar “Circuits, Logic and Games”, Schloss Dagstuhl, Germany, September 2015
- [120] [**University of Leeds**] Olaf Beyersdorff, Lecture: *Proof complexity*, European Summer School of Logic, Language and Information, ESSLLI 2015, Barcelona, Spain, August 2015
- [121] [**University of Leeds**] Olaf Beyersdorff, Invited talk: *Proof complexity*, Indo-UK workshop on Computational Complexity Theory, Chennai, India, January 2015
- [122] [**University of Leeds**] Olaf Beyersdorff, Invited talk: *QBF proof complexity*, 16<sup>th</sup> International Workshop on Logic and Computational Complexity (LCC’15), Kyoto, Japan, July 2015
- [123] [**University of Leeds**] Olaf Beyersdorff, Invited talk: *QBF proof complexity*, International Workshop on Quantification (QUANTIFY’15), Berlin, Germany, August 2015
- [124] [**University of Leeds**] Olaf Beyersdorff, Invited talk: *QBF proofs*, Dagstuhl Seminar “Theory and Practice of SAT Solving”, Schloss Dagstuhl, Germany, April 2015
- [125] [**University of Leeds**] Olaf Beyersdorff, Leroy Chew, and Mikoláš Janota, Talk: *Proof complexity of resolution-based QBF calculi*, 32<sup>nd</sup> International Symposium on Theoretical Aspects of Computer Science, Munich, Germany, 4–7 March 2015
- [126] [**Università degli Studi dell’Insubria**] Marco Benini, Invited talk: *Numerical analysis and epistemology of information*, workshop Philosophical Aspects of Computer Science, European Centre for Living Technology, University “Ca’ Foscari”, Venice, Italy, 6 March 2015
- [127] [**Università degli Studi dell’Insubria**] Marco Benini, Seminar: *Point-free foundation of mathematics*, Logic seminar at the Yonsei University, Seoul, Republic of Korea, 21 July 2015
- [128] [**Università degli Studi dell’Insubria**] Marco Benini, Invited talk: *Proof-theoretic semantics: Point-free meaning of first-order systems*, Trends in Proof Theory workshop at Jahrestagung der Deutschen Mathematiker-Vereinigung, Hamburg, Germany, 20–21 September 2015
- [129] [**Università degli Studi dell’Insubria**] Marco Benini, Invited talk: *Well quasi orders in a categorical setting*, Well-quasiorderings: From Theory to Applications, symposium at Jahrestagung der Deutschen Mathematiker-Vereinigung, Hamburg, Germany, 21–25 September 2015

- [130] [**Università degli Studi di Padova**] Maria Emilia Maietti, Talk: *Why developing mathematics in a two-level foundation*, Workshop on Mathematical Logic and Its Applications, at , Japan Advanced Institute of Science and Technology, Nomi, Japan, 12 March 2015
- [131] [**Università degli Studi di Padova**] Maria Emilia Maietti, Seminar: *Why developing mathematics in a two-level foundation*, Research Institute for Mathematical Sciences, Kyoto University, Kyoto, Japan, 13 March 2015
- [132] [**Università degli Studi di Padova**] Samuele Maschio, Talk: *Consistency of the minimalist foundation with Church thesis*, Constructivism and Computability, JAIST Logic Workshop Series, Kanazawa, Japan, 3 March 2015
- [133] [**Università degli Studi di Padova**] Giovanni Sambin, Seminar: *A new foundation of constructive mathematics 50 years after Bishop's FCA*, Research Institute for Mathematical Sciences, Kyoto University, Kyoto, Japan, 13 March 2015
- [134] [**Università degli Studi di Padova**] Giovanni Sambin, Seminar: *Realizability interpretation of topology*, National Institute of Informatics, Tokyo, Japan, 23 March 2015
- [135] [**Università degli Studi di Padova**] Giovanni Sambin, Talk: *A single system for a plurality of logics*, Workshop on Logic and Philosophy of Logic, Keio University, Tokyo, Japan, 19 March 2015
- [136] [**Università degli Studi di Padova**] Giovanni Sambin, Talk: *A view on constructive mathematics (almost) 50 years after Bishop's FCA*, Constructivism and Computability, JAIST Logic Workshop Series, Kanazawa, Japan, 2 March 2015
- [137] [**The Institute of Mathematical Sciences Chennai Society**] Anil Shukla, Talk: *Are short proofs narrow? QBF resolution is not simple*, 33<sup>rd</sup> Symposium on Theoretical Aspects of Computer Science, STACS, Orléans, France, 17–20 February 2016

### Other Publications

- [138] [**Swansea University, Universität Siegen**] Ulrich Berger and Dieter Spreen, *A coinductive approach to computing with compact sets*. In preparation
- [139] [**University of Leeds, Università degli Studi di Padova**] Davide Rinaldi, Peter Schuster, and Giovanni Sambin, *The basic Zariski topology*, 2014. Submitted

- [140] [University of Leeds, The Institute of Mathematical Sciences Chennai Society] Olaf Beyersdorff, Leroy Chew, and Karteek Sreenivasiah, *A game characterisation of tree-like Q-resolution size*, *Tech. Rep. 131*, Electronic Colloquium on Computational Complexity, 2014
- [141] [University of Leeds] Olaf Beyersdorff, Leroy Chew, and Mikoláš Janota, *On unification of QBF resolution-based calculi*, *Tech. Rep. 36*, Electronic Colloquium on Computational Complexity, 2014. Revision 1
- [142] [University of Leeds] Olaf Beyersdorff, Leroy Chew, and Mikoláš Janota, *Proof complexity of resolution-based QBF calculi*, *Tech. Rep. 120*, Electronic Colloquium on Computational Complexity, 2014
- [143] [Swansea University] Ulrich Berger, Andrew Lawrence, Fredrik Nordvall Forsberg, and Monika Seisenberger, *Extracting verified decision procedures: DPLL and Resolution*, *Tech. rep.*, arXiv.org, 2014. URL <http://arxiv.org/abs/1502.02131>
- [144] [Università degli Studi dell’Insubria] Marco Benini, *Cartesian closed categories are distributive*, *Tech. rep.*, arXiv.org, 2014. URL <http://arxiv.org/abs/1406.0961>
- [145] [Università degli Studi dell’Insubria] Marco Benini, *Review of Homotopy Type Theory. Univalent Foundations of Mathematics*, Zentralblatt MATH, 2014. URL <https://www.zbmath.org/?q=an:06303354>
- [146] [Università degli Studi dell’Insubria] Marco Benini, *A simplified definition of logically distributive categories*, *Tech. rep.*, arXiv.org, 2014. URL <http://arxiv.org/abs/1406.1251>
- [147] [Università degli Studi di Genova] Giulia Frosoni, *Conuclear images of substructural logics*, 2014. Submitted to Mathematical Logic Quarterly
- [148] [Università degli Studi di Genova] Ruggero Pagnan, *Concrete fibrations*, 2014. Submitted to Notre Dame Journal of Formal Logic
- [149] [Università degli Studi di Genova] Ruggero Pagnan, *On the local versus global structural behavior of logic*, 2014. Submitted to Bulletin of Symbolic Logic
- [150] [University of Leeds, Carnegie Mellon University] Steve Awodey, Nicola Gambino, and Kristina Sojakova, *Homotopy-initial algebras in type theory*, *Tech. rep.*, arXiv.org, 2015. URL <http://arxiv.org/abs/1504.05531>
- [151] [University of Leeds] Nicola Gambino and André Joyal, *On operads, bimodules and analytic functors*, *Tech. rep.*, arXiv.org, 2015. URL <http://arxiv.org/abs/1405.7270>

- [152] [**University of Leeds**] Nicola Gambino and Christian Sattler, *Uniform fibrations and the Frobenius condition*, *Tech. rep.*, arXiv.org, 2015. URL <http://arxiv.org/abs/1510.00669>
- [153] [**University of Leeds**] Davide Rinaldi and Peter Schuster, *A universal Krull–Lindenbaum theorem*, 2015. Submitted
- [154] [**University of Leeds**] Jeroen Van der Meeren, Michael Rathjen, and Andreas Weiermann, *An order-theoretic characterization of the Howard–Bachmann-hierarchy*, *Tech. rep.*, arXiv.org, 2015. URL <http://arxiv.org/abs/1411.4481>
- [155] [**Università degli Studi di Padova**] Francesco Ciraulo and Steve Vickers, *Positivity relations on a locale*, 2015 to appear
- [156] [**University of Leeds, Università degli Studi di Padova**] Francesco Ciraulo, Davide Rinaldi, and Peter Schuster, *Lindenbaum’s lemma via open induction*, 2016 to appear
- [157] [**University of Leeds**] Nicola Gambino and André Joyal, *On operads, bimodules and analytic functors*, 2016 to appear
- [158] [**University of Leeds**] Michael Rathjen, *Remarks on Barr’s theorem: Proofs in geometric theories*, 2016 to appear
- [159] [**Swansea University, Ludwig-Maximilians Universität, Kyoto University—Associated partner**] Ulrich Berger, Kenji Miyamoto, Helmut Schwichtenberg, and Hideki Tsuiki, *Logic for Gray-code computation*, 2016 to appear
- [160] [**Swansea University, Ludwig-Maximilians Universität**] Helmut Schwichtenberg, Monika Seisenberger, and Franziskus Wiesnet, *Higman’s lemma and its computational content*, 2016 to appear
- [161] [**Stockholms Universitet, University of Canterbury**] Douglas S. Bridges, Matthew Hendtlass, and Erik Palmgren, *A constructive examination of rectifiability*, 2016 to appear
- [162] [**Stockholms Universitet, University of Canterbury**] Maarten McKubre-Jordens, Peter LeFanu Lumsdaine, and Hakōn Robbestad-Gylterud, *Proof normalization and paradoxes in type theory*, 2016 to appear
- [163] [**Ludwig-Maximilians Universität, University of Canterbury**] Maarten McKubre-Jordens and Iosif Petrakis, *Constructive concepts of continuity*, 2016 to appear
- [164] [**Ludwig-Maximilians Universität**] Iosif Petrakis, *Limit spaces with approximations*, 2016 to appear

- [165] [**Università degli Studi dell’Insubria**] Marco Benini, *Proof-oriented categorical semantics*, 2016 to appear
- [166] [**Università degli Studi di Padova**] Francesco Ciraulo and Giovanni Sambin, *Reducibility, a constructive dual to spatiality*, 2016 to appear
- [167] [**Università degli Studi di Padova**] Maria Emilia Maietti and Giuseppe Rosolini, *Relating quotient completions via categorical logic*, 2016 to appear
- [168] [**Università degli Studi di Padova**] Giovanni Sambin, *Matematica costruttiva*, 2016 to appear
- [169] [**Japan Advanced Institute of Science and Technology, Ludwig-Maximilians Universität**] Hajime Ishihara and Helmut Schwichtenberg, *Embedding classical in minimal implicational logic*, 2016 to appear. *Mathematical Logic Quarterly*
- [170] [**University of Canterbury**] Douglas S. Bridges, *Apartness spaces and uniform neighbourhood structures*, 2016 to appear
- [171] [**University of Canterbury**] Douglas S. Bridges, *The continuum hypothesis implies excluded middle*, 2016 to appear
- [172] [**University of Canterbury**] Douglas S. Bridges and R.A. Alps, *Morse set theory as a foundation for constructive mathematics*, 2016 to appear
- [173] [**University of Canterbury**] Douglas S. Bridges, James E. Dent, Dent, and Maarten McKubre-Jordens, *Zero stability in constructive analysis*, 2016 to appear
- [174] [**University of Canterbury**] Hannes Diener and Matthew Hendtlass, *Bishop’s lemma*, 2016 to appear
- [175] [**University of Canterbury**] Matthew Hendtlass, *Topological models of IZF*, 2016 to appear
- [176] [**University of Canterbury**] Matthew Hendtlass, Vasco Brattka, and A.P. Kreuzer, *On the uniform computational content of computability theory*, 2016 to appear
- [177] [**University of Canterbury**] Matthew Hendtlass, Vasco Brattka, and A.P. Kreuzer, *On the uniform computational content of the baire category theorem*, 2016 to appear