Curriculum Vitae

Dr. Moritz Müller, Privatdoz.

08/2017

Personal Data

Family name:	Müller.
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Citizenship:	German.

Scientific Career

1998 - 2001.	Studies in Mathematics and Philosophy at the Eberhard Karls Universität Tübingen, Germany.
2001 - 2004.	Studies in Mathematics and Philosophy at the Albert Ludwigs Universität Freiburg i.Br., Germany.
04/2004.	Diploma in Mathematics at the University of Freiburg.
04/2004 – 10/2004.	PhD student within the Graduiertenkolleg *Mathematical Logic and Applications* at the University of Freiburg.
10/2004 - 08/2009.	Scientific Assistant of Jörg Flum at the University of Freiburg, Faculty of Mathematics and Physics,
11/2008.	Completion of the PhD Thesis *Parameterized Randomization* advisor Jörg Flum, graded *Magna Cum Laude.*
03/2009.	Defense of the PhD Thesis graded *Summa Cum Laude.*
09/2009 - 09/2011.	Postdoc at the Centre de Recerca Matemàtica in Barcelona, Spain, within the Infinity Project lead by Sy-David Friedman.
10/2011 - present	Employment at the Kurt Gödel Research Center in Vienna, Austria: – 10/2011 - 01/2012 within an FWF project of K. Fokina – 02/2012 - 09/2012 Karenzvertretung of J. Kellner at the KGRC – 10/2012 - 09/2013 within an FWF project of S.-D. Friedman – 10/2014 - 01/2017 Assistent – since 01/2017 FWF Project leader
06/2016	Habilitation in Mathematics, Thesis *Proofs and Constraints.*
07/2014 - present	Vice director of the Kurt Gödel Research Center,

What, when and from whom I learned

As a student in Tübingen I learned much from Peter Schröder-Heister concerning structural proof theory and the philosophy of language and science. Further, I took various courses in set theory by Ulrich Felgner. In Freiburg then I learned about finite model theory and complexity theory from Jörg Flum and Hans-Dieter Ebbinghaus and about stability theory from Martin Ziegler. Apart from mathematical logic I put special emphasis on probability theory. It was Jörg Flum who focussed my interests to complexity theory.

As a PhD student in Freiburg I mainly studied parameterzed complexity theory for my thesis to be written under the supervision of Jörg Flum. I retained some active interest in model theory and also philosophy. My PhD defense included an examination in Stability theory. In Freiburg I also met Yijia Chen. I continue to work with him as well as with Jörg Flum on various topics in complexity theory to date.

In 2006 it were Mike Fellows and Francis Rosamond who teached me much about parameterized complexity theory. They also passed me the contact to Iris van Rooij who showed me some interesting problems in cognitive science. Working with her, I gathered some valuable experience doing applied mathematics on research level.

As a postdoc under Sy- David Friedman at the Centre de Recerca Matemàtica in Barcelona, I switched topics and started to study proof complexity and bounded arithmetic, in particular, methods of forcing against weak arithmetics. I owe much to Albert Atserias, we started to collaborate on topics in proof complexity.

I also met Hubie Chen. From him I learned much about constraint satisfaction and, especially, we started an enduring collaboration on the parameterized complexity of homomorphism problems. I continue to work with both of them to date.

Since 2011 I am working at the Kurt Gödel Research Center in Vienna. Here I became a student of set theory again. As for new collaborations, I did some work together with Stefan Szeider from the TU Vienna on proof complexity of weak proof systems.

Following an advice of Sy-David Friedman, I did some work with Andràs Pongràcz in topological dynamics and Ramsey theory.

I got involved in a larger project initiated by Sy-David Friedman and joint with Arnold Beckmann, Sam Buss and Neil Thapen on notions of polynomial time computable functions on arbitrary sets and weak set theories.

Research Areas

Mathematical Logic, Complexity Theory, Parameterized Complexity Theory, Propositional Proof Complexity, Bounded Arithmetic, Constraint Satisfaction, Ramsey Theory.

Languages

Fluently *German, English, Spanish, Catalan.* Basic *French.*

Grants

Project leader FWF stand alone project P 28699 *Complexity theory in feasible mathematics*. Starts 09/2016.

September 2012 to October 2013 I have been supported by FWF Grant P24654-N25 at the Kurt Gödel Research Center in Vienna.

From October 2011 to February 2012 I have been supported by FWF Grant P23989-N13 at the Kurt Gödel Research Center in Vienna.

From September 2009 to September 2011 I have been supported by grant #13152, *The Myriad Aspects of Infinity*, of the John Templeton Foundation within the Infinity Project hosted at the CRM and lead by Sy-David Friedman.

From April 2004 to October 2004 I have been supported by the Graduiertenkolleg GRK 806/2, *Mathematical Logic and Applications*, of the Deutsche Forschungsgemeinschaft (DFG) at the University of Freiburg.

Theses

Habilitation Thesis: *Proofs and Constraints*, 2016.

PhD Thesis: *Parameterized Randomization*, 2009.

URN: urn:nbn:de:bsz:25-opus-64017
URL: http://www.freidok.uni-freiburg.de/volltexte/6401/

Diploma Thesis: *Construction Problems in Model-Checking* (in german), 2004.

The PhD and Diploma theses have been supervised by

Prof. Dr. Jörg Flum
Albert Ludwigs Universität Freiburg i.Br.
Fakultät für Mathematik und Physik,
Institut für Mathematik, Abteilung für Mathematische Logik

Full papers

J. Maly, M. Müller.
Pseudo proof systems and hard instances of SAT.
Submitted.

Y. Chen, M. Elberfeld, M. Müller.
The parameterized space complexity of model-checking bounded variable first-order logic.
Submitted.

A. Beckmann, S. Buss, S.-D. Friedman, M. Müller, N. Thapen.
Subset-bounded recursion and a circuit model for Cobham recursive set functions.
Submitted.

H. Chen, M. Müller.
One hierarchy spawns another: graph deconstructions and the complexity classification of conjunctive queries.
Submitted.

H. Chen, M. Müller.
The parameterized space complexity of embedding along a path.
Theory of Computing Systems 61 (3): 851-870, 2017.

A. Beckmann, S. Buss, S.-D. Friedman, M. Müller, N. Thapen.
Cobham recursive set functions and weak set theories.
Sets and Computations, Lecture Notes Series 33, Institute for Mathematical Sciences, National University of Singapore, World Scientific, Chapter 5, pp. 55-116, 2017.

M. Müller, S. Szeider.
The treewidth of proofs.
Information and Computation 255 (1): 147-164, 2017.

A. Beckmann, S. Buss, S.-D. Friedman, M. Müller, N. Thapen.
Cobham recursive set functions.
Annals of Pure and Applied Logic 167 (3): 335-369, 2016.

A. Atserias, M. Müller, S. Oliva.
Lower bounds for DNF-refutations of a relativized weak pigeonhole principle.
The Journal of Symbolic Logic 80 (2): 450-476, 2015.

H. Chen, M. Müller.
The fine classification of conjunctive queries and parameterized logarithmic space complexity.
ACM Transactions on Computation Theory 7 (2): Article No. 7, 2015.

M. Müller, Andras Pongracz.
Topological dynamics of unordered Ramsey structures.
Fundamenta Mathematicae 230 (1): 77-98, 2015.

A. Atserias, M. Müller.
Partially definable forcing and bounded arithmetic.
Archive for Mathematical Logic 54 (1): 1-33, 2015..

Y. Chen, J. Flum, M. Müller.
Hard instances of algorithms and proof systems.
ACM Transactions on Computation Theory 6(2): Article No. 7, 2014.

Y. Chen, J. Flum, M. Müller.
Consistency, optimality and incompleteness.
Annals of Pure and Applied Logic 164 (12): 1224-1235, 2013.

H. Chen, M. Müller.
An algebraic preservation theorem for Aleph_0 categorical quantified constraint satisfaction.
Logical Methods in Computer Science 9 (1:15), 2013.

J.-A. Montoya, M. Müller.
Parameterized random complexity.
Theory of Computing Systems 52 (2): 221-270, 2013.

S. Buss, Y. Chen, J. Flum, S.-D. Friedman, M. Müller.
Strong isomorphism reductions in complexity theory.
The Journal of Symbolic Logic 76(4): 1381-1402, 2011.

Y. Chen, J. Flum, M. Müller.
Lower bounds for kernelizations and other preprocessing procedures.
Theory of Computing Systems 48 (4): 803-839, 2011.

M. Fellows, J. Flum, D. Hermelin, M. Müller, F. Rosamond.
W-hierarchies defined by symmetric gates.
Theory of Computing Systems 46(2): 311-339, 2010.

Extended abstracts

Y. Chen, M. Müller
B*ounded variable logic, parameterized logarithmic space and Savitch's theorem*
39th Mathematical Foundations of Computer Science (MFCS), LNCS 8634: 183-195, 2014.

H. Chen, M. Müller
One hierarchy spawns another: graph deconstructions and the complexity classification of conjunctive queries.
Joint 23rd EACSL Computer Science Logic and 29th ACM/IEEE Symposium Logic in Computer Science (CSL-LICS), Article No. 32, 2014.

M. Müller, S. Szeider.
Revisiting space in proof complexity: treewidth and pathwidth.
38th Mathematical Foundations of Computer Science (MFCS), LNCS 8087: 704-716. 2013.

H. Chen, M. Müller.
The fine classification of conjunctive queries and parameterized logarithmic space complexity.
32th ACM Symposium on Principles of Database Systems (PODS), pp. 309-320, 2013.

A. Atserias, M. Müller, S. Oliva.
Lower bounds for DNF-refutations of a relativized weak pigeonhole principle.
28th IEEE Conf. on Computational Complexity (CCC), IEEE Comp. Soc., pp. 109-120, 2013.

J. Flum, M. Müller.
Some definitorial suggestions for parameterized proof complexity.
7th Int. Symp. on Parameterized and Exact Computation (IPEC), LNCS 7535: 73-84, 2012.

H. Chen, M. Müller.
An algebraic preservation theorem for Aleph_0 categorical quantified constraint satisfaction.

27th ACM/IEEE Symposium on Logic in Computer Science (LICS), pp. 215-224, 2012.

Y. Chen, J. Flum, M. Müller.
Hard instances of algorithms and proof systems.
8th Computability in Europe (CiE), LNCS 7318:118-128, 2012.

Y. Chen, J. Flum, M. Müller.
Consistency and optimality.
7th Computability in Europe (CiE), LNCS 6735: 61-70, 2011.

Y. Chen, J. Flum, M. Müller.
On optimal probabilistic algorithms for SAT.
Logical Approaches to Barriers in Computing and Complexity, Greifswald, 2010.

Y. Chen, J. Flum, M. Müller.
Lower bounds for kernelizations and other preprocessing procedures.
5th Computability in Europe (CiE), LNCS 5635: 118-128, 2009.
M. Müller, I. van Rooij, T. Wareham.
Similarity as tractable transformation.
31st Annual Conference of the Cognitive Science Society (CogSci), 2009.

I. van Rooij, T. Wareham, M. Müller.
Identifying sources of intractability in cognitive models.
30st Annual Conference of the Cognitive Science Society (CogSci), 2008.

I. van Rooij, T. Wareham, M. Müller.
Computational complexity analysis can help, but first we need a theory.
Behavioral and Brain Sciences 31(4): 399-400, 2008.

M. Fellows, D. Hermelin, M. Müller, F. Rosamond.
A purely democratic characterization of W[1].
3rd Int. Workshop on Parameterized and Exact Comp. (IWPEC), LNCS 5018: 103-114, 2008.

M. Müller.
Parameterized derandomization.
3rd Int. Workshop on Parameterized and Exact Comp. (IWPEC), LNCS 5018: 148-159, 2008.

M. Müller.
Randomized approximations of parameterized counting problems.
2nd Int. Workshop on Parameterized and Exact Comp. (IWPEC), LNCS 4169: 50-59, 2006.

Others (not peer-reviewed)

M. Müller.
Parameterized logarithmic space and fine structure of FPT.
FPT News: The Parameterized Complexity Newsletter, Vol. 10, No. 2, September 2014.

M. Müller.
A comparison of two aesthetic principles (in german).
In F. Bomski, S. Suhr (eds.), Fiktum versus Faktum? Erich Schmidt Verlag, 2011.

M. Müller.
Valiant-Vazirani lemmata for various logics.
Electronic Colloquium on Computational Complexity, TR08-063, 2008.

M. Müller, I. Razgon, F. Rosamond and S. Saurabh.
New results.
FPT News: The Parameterized Complexity Newsletter Vol. 3, May 2008.

M. Fellows, J. Flum, D. Hermelin, M. Müller, F. Rosamond.
Parameterized complexity via combinatorial circuits.
3rd Alg. and Compl. in Durham (ACiD), Texts in Algorithmics 9, College Publ., London, 2007.

Editing

S.D. Friedman, M. Koerwien, M. Müller (eds.).
The Infinity Project, A 2009-2011 Research Programme.
CRM Documents 11, 2012.
ISSN 2014-2323 (printed ed), ISSN 2014-2331 (electronic de.), ISBN 978-84-616-3307-4

Teaching experience

As a student both at the University of Tübingen and the University of Freiburg, from my fourth semester onwards, I regularly jobbed as a tutor for introductory logic courses for students of mathematics, of philosophy and of computer science.

As a PhD student I have been contracted as a scientific assistant of J. Flum at the faculty of Mathematics, University of Freiburg. The usual teaching duties of scientific assistants include the organization of seminars and exercises for lectures. It is unusual in Freiburg, and Germany in general, that assistants give lectures on their own. Nevertheless, I got the possibility once in Winter 2006 and lectured an introductory course in logic for philosophers (Proseminar below). The table below summarizes the teaching experience I gathered as part of my job as a scientific assistant in Freiburg. I had no teaching duties in the academic year 2008. The last entry stems from my last semester in Freiburg, after the defense of my PhD Thesis.

Winter 04/05	Exercises *Mathematical Logic* (lecture by J. Flum).
Summer 05	Exercises *Model Theory* (lecture by J. Flum).
Summer 06	Exercises *Model Theory* (lecture by J. Flum), Seminar *Logic and Complexity* (with J. Flum).
Winter 06/07	Exercises *Set Theory* (lecture by H.-D. Ebbinghaus). Seminar *Logic and Complexity* (with J. Flum).
Summer 07	Working group *Logic and Complexity* (with J.Flum), A working group is kind of a graduate seminar.

Winter 07/08	Proseminar *Formal Logic for Philosophers,* Exercises *Logic for Computer Scientists* (lecture by J. Flum), Working group *Logic and Complexity* (with J. Flum).
Summer 09	Exercises *Nonstandard Analysis* (lecture by J. Flum).

Apart from my job as a scientific assistant I engaged in the following teaching activities at the University of Freiburg:

Summer 05	M. Prunescu allowed me to co-lecture, under his supervision, significant parts of his advanced course on *Algorithmic Information Theory*.
April 06	Tutorial for an advanced course on Finite Model Theory (given by J. Flum) as part of the MODNET Summer School.
July 08	Seminar logic and paradoxes during the *VII. Freiburger Mathematik Tage*, an annual program of "appetizer" seminars adressing scholar students.
July 07	Seminar on logic and paradoxes during the *Schnupperstudium für Schülerinnen 2007*, as above but exclusively for female scholar students.
July 08	Seminar during the *Schnupperstudium für Schülerinnen 2008.*

As a postdoc at the CRM in Barcleona I had no possibility to teach. Arriving at the KGRC in Vienna I was happy to find teaching possibilities. I have given the following courses. The course *Basic Concepts on Mathematical Logic* is part of the Bachelor curriculum in mathematics. All other courses are part of the Master curriculum in mathematics,

Summer 12	Exercises *Basic Concepts of Mathematical Logic*, Lecture *Introduction to Theoretical Computer Science*.
Winter 12/13	Lecture *Forcing with Random Variables.* (Advanced course giving an introduction into J. Krajíček's green book.)
Summer 13	Lecture *Introduction to Theoretical Computer Science.* (Introductory course in classical complexity theory.)
Winter 13/14	Lecture *Introduction to Theoretical Computer Science.* Proseminar *Introduction to Mathematical Logic.*
Summer 14	Lecture *Basic Concepts of Mathematical Logic.* Lecture *Computability and Complexity.* (Advanced course on the theory of optimal algorithms and proof systems.)
Winter 14/15	Lecture *Introduction to Theoretical Computer Science.* Proseminar *Introduction to Mathematical Logic.*
Summer 15	Lecture *Basic Concepts of Mathematical Logic.* Lecture *Computability and Complexity.* (Advanced course on feasible set functions & weak set theories.)

Winter 15/16	Lecture *Introduction to Theoretical Computer Science.* Proseminar *Introduction to Mathematical Logic.*
Summer 16	Lecture *Basic Concepts of Mathematical Logic.* Lecture *Model theory.*
Winter 16/17	Lecture *Introduction to Theoretical Computer Science.* Lecture *Topics in Computability* (Advanced course on forcing with random variables)

Teaching evaluations

Lectures at the university of Vienna are regularly evaluated by the students. All my lectures got very positive grades. The evaluations are publicly available from my web page.

Student supervision

Winter 12/13	M. Konutgan	*Der ungetypte Lambda Kalkül*	Bachelor
Winter 13/14	A. Zivny	*Streng minimale Theorien*	Bachelor
Winter 14/15	A. Rappberger	*Quantorenelimination*	Bachelor
Summer 15	M. Wieländer	*Definierbarkeit in der Logik erster Stufe - Die Sätze von Fraïssé, Hanf und Gaifman*	Bachelor
Winter 15	T. Imre	*Semantic methods in bounded arithmetic*	Master
Summer 16	J. Maly	*Krajicek's forcing constructions and pseudo-proof systems*	Master
Summer 16	E. Arndt	*MSO-logic and omega-automata*	Bachelor

Teaching statement

Generally speaking, I would like to suggest that there are two distinguishing, general skills to be gained when studying mathematics:

- first, the ability to capture intuitive concepts by formal definitions,
- second, the ability to argue and analyse a problem axiomatically.

Obviously, both skills are valuable in many respects and contexts. Concerning student supervision and examination the first item is addressed by demanding a high level of formal rigor. The item is best taught by including historical and philosophical discussions concerning

the key concepts and problems introduced and detailed discussion of formal aspects of a definition. Teaching Mathematical Logic is apted to this approach due to its historical roots in philosophy. For example, I made good experiences with the following procedure:

1st step: formulate in intuitive terms what concept is called for by the problem under consideration.
2nd step: ask the class for proposals of a formal definition. Discuss the proposals.
3rd step: give the definition and explain how it overcomes difficulties noted in the 2nd step.

This is not the only point where interaction of the lecturer and the class can and should naturally occur. Another point are mistakes – it is not only a saying that one learns through trial and error. For example, I made good experiences with the following procedure:

1st step: announce to be about to give a mistaken argument,
2nd step: ask the class to detect the mistake,
3rd step: correct the proof.

I think this procedure is a natural approach to directly adress the second ability above, but as a student I rarely saw it applied.

Research Talks

03/2017 *Cobham recursive set functions.* Barcelona Set Theory Seminar, Universitat de Barcelona, Spain.

09/2016 *Proof complexity I* and *Proof complexity II,* Departamento de Lenguajes y Sistemas Informaticos, Fac. de Informatica, UPV-EHU, San-Sebastian (Donostia), Spain.

05/2016 Habilitationsvortrag *Proof complexity*, University of Vienna, Austria.

10/2015 *Cobham recursive set functions and weak set theories.* Kurt Gödel Research Center, University of Vienna, Austria.

09/2015 *Cobham recursive set functions.* Dpto de Lenguajes y Sistemas Informáticos, Facultad de Informática UPV-EHU, San-Sebastian (Donostia), Spain.

07/2015 *Cobham recursive set functions.* BASICS 2015 Summer School, Logic Summer School in China 2015, Zhejiang Normal University, Jinhua, China.

02/2015 *Forcing against weak arithmetics.* University of Freiburg, Germany.

05/2014 *Topological dynamics of unordered Ramsey structures.* Kurt Gödel Research Center, University of Vienna, Austria.

02/2014 *About homomorphism problems.* Algorithmic Model Theory, University of Kassel, Germany.

08/2013 *Revisiting space in proof complexity: treewidth and pathwidth.* 38th Mathematical Foundations of Computer Science, IST Austria, Klosterneuburg, Austria.

03/2013 *Weak pigeonhole principles.* Kurt Gödel Research Center, University of Vienna, Austria.

02/2013 *Graph invariants in proof complexity.* Algorithmic Model Theory, TU Berlin, Germany.

02/2013 *Graph invariants in proof complexity.* École Polytechnique, Laboratoire d'Informatique, Paris, France.

02/2013 *Forcing against weak arithmetics.* Séminaire Complexité Logique et Informatique, Université Paris 7, France.

09/2012 *Some definitorial suggestions for parameterized proof complexity*, 7th International Symposium of Parameterized and Exact Computation, Ljubljana, Slovenia.

06/2012 *Hard instances for algorithms and proof systems*, 8th Computability in Europe, Turing Centenary Conference, Cambridge, UK.

06/2012 *Parameterizations of strong proof systems*, Logic, Proofs and Algorithms, Vienna Center for Logic and Algorithms, Austria.

04/2012 *Refutation complexity of relativized spectra,* Kurt Gödel Research Center, University of Vienna, Austria.

02/2012 *On the refutation complexity of relativized spectra,* Algorithmic Model Theory, University of Ilmenau, Germany.

01/2012 *On lower bounds for Res(k),* Vienna Center of Logic and Algorithms, Vienna, Austria.

10/2011 *Positive Horn definability in Aleph0-categorical structures,* Kurt Gödel Research Center. University of Vienna, Austria.

10/2011 *Some definitorial suggestions for parameterized proof complexity*, Proof Complexity workshop, Banff International Research Station, Canada.

07/2011 *Partially definable forcing and bounded arithmetic,* Infinity Conference, Centre de Recerca Matematica, Bellaterra, Spain.

06/2011 *Consistency and optimality,* 7th Computability in Europe, Sofia, Bulgaria.

02/2011 *Partially definable forcing,* Algorithmic Model Theory, University of Leipzig, Germany.

09/2010 *Undefinable forcing in bounded arithmetic*, Mathematical Institute, Academy of Sciences, Prague, Czech Republic.

02/2010 *Probabilistic algorithmic optimality,* Logical Approaches to Barriers in Computing, Greifswald, Germany,

02/2009 *Kernelization theory.* International Workshop on Kernelization, University of Bergen, Norway.

04/2009 *Effective Hausdorff dimension,* Escuela de Matematicas, Universidad Industrial de

Santander, Colombia.

03/2009 *Aesthetics in the work of E. A. Poe and Kolmogorov Complexity,* Faktum versus Fiktum, mathematics in literature, Freiburg, Germany,

06/2008 *Parameterized intractability,* Mini-Symposium on Cognitive Modelling, Radboud University of Nijmegen, The Netherlands.

05/2008 *Parameterized derandomization*, 3rd International Workshop on Parameterized and Exact Computation, Victoria, Canada.

02/2008 *Kernelization lower bounds.* Algorithmic Model Theory, University of Freiburg, Germany.

06/2007 *Weighted satisfiability problems for circuits with weird gates.* Department of Technology Management, University of Eindhoven, The Netherlands.

06/2007 *The parameterized complexity of uniqueness promisses.* Informatics Department, University of Bergen, Norway.

09/2006 *Randomized approximations of parameterized counting problems*, 2nd International Workshop on Parameterized and Exact Computation, Zürich, Switzerland.

02/2006 *Approximation of parameterized counting problems.* Algorithmic Model Theory, RWTH Aachen, Germany.

Workshops and Conferences

04/2016 Workshop on Low Depth Complexity, Special Semester Program on Complexity Theory, Chebyshev Laboratory, St. Petersburg State University, Russia.

04/2016 Proof Complexity Workshop, Special Semester Program on Complexity Theory, Chebyshev Laboratory, St. Petersburg State university, Russia.

07/2015 BASICS 2015 Summer School, Logic Summer School in China 2015, Zhejiang Normal University, Jinhua, China.

04/2015 Sets and Computations, Institute of Mathematical Sciences, National University of Singapore.

10/2014 Optimal Algorithms and Proofs, Seminar 14421, Schloss Dagstuhl, Leibniz Zentrum für Informatik, Germany.

07/2014 Joint 23rd Computer Science Logic and 29th ACM/IEEE Symposium Logic in Computer Science (CSL-LICS), VSL, TU Vienna, Austria.

07/2014 15th Workshop on Logic and Computational Complexity and Immermann Fest, VSL, TU Vienna, Austria.

07/2014 QUANTIFY- 1st Int. Workshop on Quantification, VSL, TU Vienna, Austria.

07/2014 FLoC Workshop on Proof Complexity, VSL, TU Vienna, Austria.

07/2014 Infinity Workshop, Vienna Summer of Logic (VSL), VSL, KGRC, Vienna, Austria.

03/2014 Mini-Workshop on Quantification Theory, TU Vienna, Austria.

02/2014 Algorithmic Model Theory, University of Kassel, Germany.

08/2013 8th Mathematical Foundations of Computer Science, IST Austria, Klosterneuburg, Austria.

07/2013 Sy-David Friedman's 60th Birthday Conference, KGRC, Vienna, Austria.

05/2013 First Symposium on Structure in Hard Combinatorial Problems, Vienna Center for Logic and Algorithms, Austria.

02/2013 Algorithmic Model Theory, TU Berlin, Germany.

09/2012 Limits on Theorem Proving, Workshop at the Sapienza University of Rome, Italy.

09/2012 7th International Symposium of Parameterized and Exact Computation, Ljubljana, Slovenia.

06/2012 8th Computability in Europe, Turing Centenary Conference, Cambridge University, UK.

06/2012 Mini Workshop on Logic, Proofs and Algorithms,Vienna Center for Logic and Algorithms, Austria,

02/2012 Algorithmic Model Theory, TU Ilmenau, Germany.

10/2011 Proof Complexity. Workshop at Banff International Research Station, Canada.

07/2011 Infinity Conference, Centre de Recerca Matemàtica, Bellaterra, Spain.

07/2011 Workshop on Computability Theory 2011, part 2, Centre de Recerca Matemàtica, Bellaterra, Spain.

07/2011 Logic Colloquium, University of Barcelona (UB), Spain.

06/2011 7th Computability in Europe, University of Sofia, Bulgaria.

02/2011 Algorithmic Model Theory, University of Leipzig, Germany.

09/2010 Fall School of Logic and Complexity, Charles University of Prague, Czech Republic.

02/2010 Algorithmic Model Theory, Goethe University of Frankfurt, Germany.

02/2010 Logical Approaches to Barriers in Computing, Greifswald, Germany.

09/2009 Probabilistic Techniques in Computer Science, Centre de Recerca Matemàtica, Bellaterra, Spain.

09/2009 International Workshop on Kernels, University of Bergen, Norway.

07/2009 5th Computability in Europe, Heidelberg, Germany.

05/2009 Faktum versus Fiktum, an interdisciplinary conference on mathematics in literature, Freiburg, Germany.

02/2009 Algorithmic Model Theory, TU Dortmund, Germany.

06/2008 Intractability and Cognitive Modelling, Radboud University Nijmegen, The Netherlands.

05/2008 3rd International Workshop on Parameterized and Exact Computation, Victoria, Canada.

02/2008 Algorithmic Model Theory, University of Freiburg, Germany.

07/2007 Structure Theory and FPT algorithmics for Graphs, Digraphs and Hypergraphs, Seminar 07281, Schloss Dagstuhl, Leibniz Zentrum für Informatik, Germany.

12/2006 1st International Workshop on Computational Social Choice, Amsterdam, The Netherlands.

06/2006 MODNET Training Workshop Université Claude Bernard Lyon 1, France.

04/2006 MODNET Summer School, University of Freiburg, Germany.

02/2006 Algorithmic Model Theory, RWTH Aachen, Germany.

07/2005 Exact algorithms and fixed-parameter tractability, Seminar 05301, Schloss Dagstuhl, Leibniz Zentrum für Informatik, Germany.

02/2005 Algorithmic Model Theory, University of Darmstadt, Germany.

Research visits

Date	*Duration*	*Host*
09/2016	1 week	Hubie Chen. Departamento de Lenguajes y Sistemas Informaticos, Facultad de Informatica UPV-EHU, San-Sebastian (Donostia), Spain.
09/2015	4 days	Neil Thapen, Mathematical Institute, Academy of Sciences, Prague, Czech Republic.
09/2015	1 week	Hubie Chen. Departamento de Lenguajes y Sistemas Informaticos, Facultad de Informatica UPV-EHU, San-Sebastian (Donostia), Spain.
07/2015	2 weeks	Yijia Chen, Fudan University, Shanghai, China.
06/2015	2 days	Meeting with Neil Thapen and Arnold Beckman, Mathematical Institute, Academy of Sciences, Prague, Czech Republic.

09/2014	2 weeks	Yijia Chen, Department of Computer Science and Engineering, Jiao Tong University of Shanghai, China.
02/2013	1 week	Manuel Bodirsky, Laboratoire d'Informatique de l'École Polytechnique, Paris, France.
11/2010	1 week	Prague logic group, Mathematical Institute, Academy of Sciences, Prague, Czech Republic.
08/2009	1 month	Rahul Santhanam at the Laboratory for Foundations of Computer Science, School of Informatics, University of Edinburgh, Scotland, UK.
04/2009	2 weeks	Juan-Andres Montoya, Escuela de Matematicas, Universidad Industrial de Santander, Bucaramanga, Colombia.
06/2008	3 weeks	Yijia Chen, Department of Computer Science and Engineering, Jiao Tong University of Shanghai, China.
06/2008	3 days	Meeting with Iris van Rooij and Todd Wareham, at the Radboud University in Nijmegen, Netherlands.
06/2007	1 week	Mike Fellows and Frances Rosamond, themselves visiting the Department of Informatics, University of Bergen, Norway.
03/2007	3 days	Meeting with Iris van Rooij, Mike Fellows and Frances Rosamond, Amsterdam, Netherlands.
09/2007	4 weeks	Yijia Chen, Department of Computer Science and Engineering, Jiao Tong University of Shanghai, China.
10/2006	1 month	Mike Fellows and Frances Rosamond, Parameterized Complexity Research Unit (PCRU), Coolangatta, Australia.

O**ther Activities**

Host for a 2 weeks research visit of Hubie Chen at the KGRC, Vienna, Austria, October 2015,

Program committee 6th International Workshop on Logic and Computational Complexity (LCC 2015), Kyoto, Japan, July 2015.

Reviewer for Mathematical Reviews since December 2014

Local organizer Infinity Workshop at the Vienna Summer of Logic, Vienna, Austria, July 2014.

Host for a 2 weeks research visit of Hubie Chen at the KGRC, Vienna, Austria, April 2014,

Host for a 2 weeks research visit of Yijia Chen at the KGRC, Vienna, Austria, August 2013,

Local organizer Sy-David Friedman's 60th Birthday Conference, KGRC Vienna, July 2013.

Host for a 2 weeks research visit of Hubie Chen at the KGRC, Vienna, Austria, May 2013,

Local organizer of the CRM Thematic Day, Workshop on Computability Theory 2011, part 2, Bellaterra, (Barcelona), Spain, July 2011.

Local Organizer of the annual meeting on Algorithmic Model Theory (AlMoTh), University of Freiburg, Germany, February 2008.