

# Dr. Manuel Bodirsky

## Curriculum Vitae

Born December 30, 1976, in Freiburg im Breisgau, Germany.

German citizenship.

Two children with Michaela Metzger:

Lewin Bodirsky, born April 25, 2006.

Otto Paul Xaver Bodirsky, born November 30, 2007.

Affiliation:       École Polytechnique, Laboratoire d'Informatique (LIX),  
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## RESEARCH INTERESTS

- Constraint satisfaction: computational complexity, the algebraic approach, efficient algorithms. Applications of constraint satisfaction in computational linguistics.
- Finite and infinite model theory, infinite permutation groups, Ramsey theory, universal algebra.
- Efficient random sampling algorithms. Exact and asymptotic combinatorial enumeration and generating functions. Planar and random planar structures.

## SCIENTIFIC EMPLOYMENT

Feb. 2008 - now: CR1 (permanent research position of the CNRS) at the *École Polytechnique*, Laboratoire d'Informatique (LIX), Algorithms and Optimization Team, Paris-Palaiseau.

Sep.-Oct. 2007: Visiting Professor at the Université Pierre et Marie Curie, LIP6, Paris.

2005 - 2007: Researcher at the Department *Algorithms and Complexity*, Institut für Informatik, Humboldt-Universität zu Berlin.

2004 - 2005: Postdoc in the research group *Algorithms, Structure, Randomness* of the *Deutsche Forschungsgemeinschaft*, Berlin.

2001 - 2004: PhD student of the European Graduate Program *Combinatorics, Geometry and Computation* supported by the *Deutsche Forschungsgemeinschaft*.

- 1998 - 2000: Research assistant for the project *Chorus (Semantic Processing with Concurrent Constraints)*, Sonderforschungsbereich 378 *Resourcenadaptive Kognitive Prozesse*.
- 1997 - 1998: Research assistant at the *DFKI Saarbrücken*, project *Flag (A Flexible Language and Grammar Checker)*, Prof. Hans Uszkoreit.

## EDUCATION

- 2001 - 2004: Dissertation in Computer Science, *Humboldt-Universität zu Berlin* with the title “Constraint Satisfaction with Infinite Domains” under the supervision of Prof. Dr. Hans Jürgen Prömel.
- 2002 - 2003: Six-month research stay at *KAM-ITI, Charles University Prague*.
- 1997 - 2001: Diplom in Computer Science, *Universität des Saarlandes* (Thesis with the title “Beta Reduction Constraints” under the supervision of Prof. Gert Smolka and Dr. Joachim Niehren; best possible grade 1.0).
- 1996 - 1997: Social service (Zivildienst), *Institut für medizinische Informatik*, Freiburg.
- 1996: Abitur (grade 1.2 on a scale from 1.0 to 6.0), *Martin Schongauer Gymnasium*, Breisach.

## GRANTS AND SCHOLARSHIPS

- 1997 - 2001: Supported by the *National German Merit Foundation (Studienstiftung des deutschen Volkes)*.
- 2001 - 2004: Member of the PhD-program *Combinatorics, Geometry, and Computation*, supported by the DFG.

## AWARDS

- 2001: *Günter Hotz Medaille*, for the best diploma in computer science, Universität des Saarlandes.
- 1996: Winner of the *14th Bundeswettbewerb Informatik* (German junior competition in computer science).

## TEACHING

- Fall 2009: *L’algorithmique et complexité de CSP*, course at the MPRI (advanced master program Paris), with Mikki Herrman, partially in English.
- Fall 2008: *L’algorithmique et complexité de CSP*, course at the MPRI (advanced master program Paris), with Mikki Herrman, partially in English.
- Fall 2007: *Graphen und Algorithmen 1*, Humboldt Universität zu Berlin, tutorial and exercises, in German.  
*Theoretische Informatik 2*, Humboldt Universität zu Berlin, tutorial, in German.

- Summer 2007: *Complexity of Constraint Satisfaction*, Course at the 19th European Summer School in Logic, Language and Information (**ESSLLI'07**), with Hubie Chen, in English.
- Spring 2007: *Graphen und Algorithmen II*, Humboldt Universität zu Berlin, lecture, in German.
- Fall 2006: *Theoretische Informatik II*, Humboldt Universität zu Berlin, tutorial and exercises, in German.
- Spring 2006: *Constraint Satisfaction*, Humboldt Universität zu Berlin, seminar, in German.  
*Theoretische Informatik III*, Humboldt Universität zu Berlin, tutorial, in German.
- Fall 2005: *Theoretische Informatik II*, Humboldt Universität zu Berlin, tutorial, in German.
- Spring 2005: *Combinatorics and its Applications*, Humboldt Universität zu Berlin, lecture, with Mihyun Kang, in English.
- Fall 2004: *Graphen und Algorithmen I*, Humboldt Universität zu Berlin, tutorial and exercises, in German.
- Spring 2004: *Enumerative Combinatorics and Generating Functions*, Humboldt Universität zu Berlin, seminar, with Mihyun Kang, in English.
- Spring 2003: *The Strange Logic of Random Graphs*, Humboldt Universität zu Berlin, seminar, with Mihyun Kang, in English.
- Fall 2000: Teaching assistant for *Algorithmen und Datenstrukturen*, Prof. Dr. Kurt Mehlhorn, Universität des Saarlandes.
- Spring 2000: Teaching assistant for *Logik, Semantik und Verifikation*, Prof. Dr. Gert Smolka, Universität des Saarlandes.
- Fall 1999: Teaching assistant for *Formal languages*, Prof. Dr. Günter Hotz, Universität des Saarlandes.
- Spring 1999: Teaching assistant for *Algorithmen und Datenstrukturen*, Prof. Dr. Raimund Seidel, Universität des Saarlandes.

## PUBLICATIONS

Preprints and Postprints are available at  
<http://www.lix.polytechnique.fr/~bodirsky/publications.html>

## ARTICLES IN JOURNALS (IN REVERSE CHRONOLOGICAL ORDER)

1. “The Complexity of Temporal Constraint Satisfaction Problems” (with Jan Kára). Accepted for publication in the *Journal of the ACM (JACM)*, 57(2), 2010.
2. “The Reducts of Equality (up to primitive positive inter-definability)” (with Hubie Chen and Michael Pinsker). Accepted for publication in the *Journal of Symbolic Logic (JSL)*, 2010.
3. “ $\aleph_0$ -categorical structures: Endomorphisms and Interpretations (with Markus Junker),

accepted for publication in *Algebra Universalis*, 2010. ArXiv:0907.2925.

4. “Peek Arc Consistency” (with Hubie Chen). *Theoretical Computer Science (TCS)*, 411(2): 445-453, 2010.
5. “Maximal Infinite-valued Constraint Satisfaction Problems” (with Jan Kára, Hubie Chen, and Timo von Oertzen), *Theoretical Computer Science (TCS)* 410, pages 1684-1693, 2009.
6. “Relatively quantified constraint satisfaction” (with Hubie Chen), *Constraints*, Volume 14, Issue 1, 2009.
7. “Integer Programming with 2-variable equalities and 1-variable inequalities” (with Gustav Nordh and Timo von Oertzen), *Information Processing Letters*, 109(11), pages 572-575, 2009.
8. “A Fast Algorithm and Datalog Inexpressibility for Temporal Reasoning” (with Jan Kára), accepted for publication in *ACM Transactions on Computational Logic (TOCL)*, preprint at arXiv:0805.1473, 2009.
9. “Qualitative Temporal and Spatial Reasoning Revisited” (with Hubie Chen). *Journal of Logic and Computation (JLC)*, 19(6):1359-1383, 2009.
10. “The Complexity of Equality Constraint Languages” (with Jan Kára). *Theory of Computing Systems (TOCS)*, 43(2): 136-158, 2008. DOI 10.1007/s00224-007-9083-9.
11. “Generating Unlabeled Cubic Planar Graphs Uniformly at Random” (with Clemens Gröpl and Mihyun Kang). *Random Structures and Algorithms (RSA)*, 34: 157-180, 2008.
12. “Determining the Consistency of Partial Tree Descriptions” (with Martin Kutz), *Artificial Intelligence (AI)*, 171: 185-196, 2007.
13. “Cores of Countably Categorical Structures”. *Logical Methods in Computer Science (LMCS)*, 2007. DOI: 10.2168/LMCS-3(1:2).
14. “Random Cubic Planar Graphs” (with Mihyun Kang, Mike Löffler and Colin McDiarmid). *Random Structures and Algorithms (RSA)*, 30: 78-94, 2007.
15. “Enumeration and limit laws of series-parallel graphs” (with Omer Giménez, Mihyun Kang and Marc Noy), *European Journal on Combinatorics*, 28: 2091-2105, 2007. DOI:10.1016/j.ejc.2007.04.011
16. “Oligomorphic Clones” (with Hubie Chen). *Algebra Universalis*, 57(1):109-125, 2007.
17. “A Direct Decomposition of 3-connected Planar Graphs” (joint work with Clemens Gröpl, Daniel Johannsen, and Mihyun Kang). *Séminaire Lotharingien de Combinatoire (SLC)*, 54A: article B54Ak, 2007.
18. “Generating Labeled Planar Graphs Uniformly at Random” (with Clemens Gröpl and Mihyun Kang). *Theoretical Computer Science (TCS)*, 379(3): 377-386, 2007.

19. “Enumeration of Unlabeled Outerplanar Graphs” (with Éric Fusy, Mihyun Kang and Stefan Vigerske), *Electronic Journal of Combinatorics*, 14, R66, 2007.
20. “Constraint Satisfaction with Countable Homogeneous Templates” (with Jaroslav Nešetřil), *Journal of Logic and Computation (JLC)*, 16(3): 359-373, 2006.
21. “Generating Outerplanar Graphs Uniformly at Random” (with Mihyun Kang), *Combinatorics, Probability and Computing (CPC)*, 15: 333-343, 2006.

ARTICLES IN REFEREED CONFERENCE PROCEEDINGS (IN REVERSE CHRONOLOGICAL ORDER)

1. “The Complexity of Rooted Phylogeny Problems” (with Jens Müller). Accepted for publication in the *Proceedings of the 13th International Conference on Database Theory (ICDT’10)*, 2009.
2. “Semi-linear program feasibility” (with Peter Jonsson, Timo von Oertzen). In the *Proceedings of the 36th International Colloquium on Automata, Languages and Programming (ICALP’09)*, pages 79-90, Rhodos, 2009.
3. “The complexity of existential positive first-order logic” (with Miki Herrman, Florian Richoux), accepted for publication in the *Proceedings of Computing in Europe (CiE’09)*, Heidelberg, 2009.
4. “Integer Programming with 2-variable equalities and 1-variable inequalities” (with Gustav Nordh and Timo von Oertzen), extended abstract presented at the Cologne-Twente Workshop on Graphs and Combinatorial Optimization (**CTW’09**), Paris, 2009.
5. “The Complexity of Temporal Constraint Satisfaction Problems” (with Jan Kára). In the *Proceedings of 40th Annual ACM Symposium on Theory of Computing (STOC’08)*, pages 29-38, Victoria, 2008.
6. “Non-dichotomies in Constraint Satisfaction Complexity” (with Martin Grohe). In the *Proceedings of the 35th International Colloquium on Automata, Languages and Programming (ICALP’08)*, pages 184-196, Reykjavik, 2008.
7. “Qualitative Temporal and Spatial Reasoning Revisited” (with Hubie Chen). In the *Proceedings of the 16th EACSL Annual Conference on Computer Science and Logic (CSL’07)*, pages 194-207, Lausanne, 2007.
8. “Maximal Infinite-valued Constraint Satisfaction Problems” (with Jan Kára, Hubie Chen, and Timo von Oertzen), in the *Proceedings of the International Colloquium on Automata, Languages and Programming (ICALP’07)*, pages 546-557, Wroclaw, 2007.
9. “Quantified Equality Constraints” (with Hubie Chen), in the *proceedings of the Symposium on Logic in Computer Science (LICS’07)*, pages 203-212, Wroclav, 2007.
10. “An unbiased pointing operator for unlabeled structures, with applications to counting and sampling” (with Éric Fusy and Mihyun Kang and Stefan Vigerske). *Proceedings of the Symposium on Discrete Algorithms (SODA’07)*, pages 356-365, New Orleans, 2007.

11. “Collapsibility in Infinite-Domain Quantified Constraint Satisfaction” (with Hubie Chen), *Proceedings of the 15th EACSL Annual Conference on Computer Science Logic (CSL’06)*, pages 197-211, Szeged, 2006.
12. “Datalog and Constraint Satisfaction with Infinite Templates” (with Víctor Dalmau). *Proceedings of the 23rd International Symposium on Theoretical Aspects of Computer Science (STACS’06)*, Marseille, LNCS 3884, Springer Verlag, pages 646-659, 2006.
13. “The Complexity of Equality Constraint Languages” (joint work with Jan Kára), *Proceedings of the International Computer Science Symposium in Russia (CSR’06)*, LNCS 3967, Springer Verlag, pages 114-126, 2006.
14. “The Core of a Countably Categorical Structure”, *Proceedings of the 21th Annual Symposium on Theoretical Aspects of Computer Science (STACS’05)*, Springer LNCS 3404, pages 110–120, Stuttgart, 2005.
15. “On the Number of Series-parallel and Outerplanar graphs” (joint work with Omer Giménez, Mihyun Kang and Marc Noy), *Proceedings of the European Conference on Combinatorics, Graph Theory, and Applications (EUROCOMB’05)*, *DMTCS Proceedings Series AE*.
16. “Sampling Unlabeled Biconnected Planar Graphs” (joint work with Clemens Gröpl and Mihyun Kang), *Proceedings of the 16th Annual International Symposium on Algorithms and Computation (ISAAC’05)*, Springer Verlag, 2005.
17. “Locally Consistent Constraint Satisfaction Problems with Binary Constraints” (joint work with Daniel Král), *Proceedings of the 31st International Workshop on Graph-Theoretic Concepts in Computer Science (WG’05)*, Springer Verlag, 2005.
18. “Well-nested Drawings as Models of Syntactic Structure” (jointly with Marco Kuhlmann and Matthias Möhl), *Proceedings of the 10th conference on Formal Grammar and the 9th Meeting on Mathematics of Language (FG-MOL’05)*, 2005.
19. “A Direct Decomposition of 3-connected Planar Graphs” (joint work with Clemens Gröpl, Daniel Johannsen, and Mihyun Kang), *17th Annual International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC’05)*, Taormina.
20. “Representing Series-parallel Graphs as Intersection Graphs of Line Segments in Three Directions” (jointly with Jan Kára and Cornelia Dangelmayr), *Asian Applied Computing Conference (AACC’05)*, 2005.
21. “A New Algorithm for Normal Dominance Constraints” (joint work with Denys Duchier, Joachim Niehren, and Sebastian Miele), *Proceedings of the Symposium on Discrete Algorithms (SODA’04)*, pages 59-67, New Orleans, 2004.
22. “Efficiently Computing the Density of Regular Languages” (joint work with Tobias Gärtner, Timo von Oertzen and Jan Schwinghammer), *Proceedings of Latin American Theoretical INformatics (LATIN’04)*, Buenos Aires, Springer LNCS 2976, pages 262-270, 2004.

23. “Constraint Satisfaction with Countable Homogeneous Templates” (joint work with Jaroslav Nešetřil), *Proceedings of Computer Science Logic (CSL’03)*, Vienna, Springer LNCS 2803, pages 44-57, 2003.
24. “Generating Unlabeled Cubic Planar Graphs Uniformly at Random” (joint work with Clemens Gröpl and Mihyun Kang). *European conference on Combinatorics, Graph Theory and Applications (EUROCOMB’03)*, Prague, 2003.
25. “Generating Labeled Planar Graphs Uniformly at Random” (joint work with Clemens Gröpl and Mihyun Kang), *Thirtieth International Colloquium on Automata, Languages and Programming (ICALP’03)*, Springer LNCS 2719, pages 1095-1107, Eindhoven, 2003.
26. “Generating Random Outerplanar Graphs” (joint work with Mihyun Kang). Presented at the *1st workshop on Algorithms for Listing, Counting, and Enumeration (ALICE’03)*, Baltimore, 2003.
27. “Pure Dominance Constraints” (joint work with Martin Kutz), *Proceedings of the 19th Annual Symposium on Theoretical Aspects of Computer Science (STACS’02)*, Antibes - Juan le Pins, Springer LNCS 2285, pages 287–298, 2002.
28. “Underspecified Beta Reduction” (joint work with Katrin Erk, Alexander Koller, and Joachim Niehren), *Proceedings of the 39th Annual Meeting of the Association for Computational Linguistics (ACL’01)*, pages 74-81, Toulouse, 2001.
29. “Beta Reduction Constraints” (joint work with Katrin Erk, Alexander Koller, and Joachim Niehren), *Proceedings of the 12th International Conference on Rewriting Techniques and Applications (RTA’01)*, pages 31-46, Utrecht, 2001.

#### BOOK CHAPTERS

1. “Constraint Satisfaction Problems with Infinite Templates” (Survey), in LNCS 5250, *Complexity of Constraints - An Overview of Current Research Themes*, Creignou, N., Kolaitis, P.G., Vollmer, H. (Eds.), pages 196-228, 2008, ISBN 978-3-540-92799-0.

#### PREPRINTS

1. “Quantified Equality Constraints” (with Hubie Chen). Journal version, submitted.
2. “Locally Consistent Constraint Satisfaction Problems” (with Daniel Král). Journal version, submitted.
3. “Datalog and Constraint Satisfaction with Infinite Templates” (with Víctor Dalmau). Journal version, submitted, arXiv:0809.2386.
4. “On the complexity of MMSNP” (with Hubie Chen, Tomas Feder), submitted.
5. “On the scope of the universal-algebraic approach to constraint satisfaction” (with Barnaby Martin and Martin Hils), submitted, arXiv:0909.5097.

6. “All Reducts of the Random Graph are Model-Complete” (with Michael Pinsker), unpublished, arXiv:0903.2553.
7. “Quantified temporal constraint: A ménage à trois of tractable languages” (with Hubie Chen, Michal Wrona), submitted.
8. “Finite Trees are Ramsey under Topological Embeddings” (with Diana Piguet), unpublished.
9. “Distance Constraint Satisfaction Problems” (with Michael Pinsker, Barnaby Martin, Victor Dalmau), preprint.
10. “Minimal Operations over the Random Graph and the Product Ramsey Theorem” (with Michael Pinsker), in preparation.
11. “Boltzmann Samplers, Polya Theory, and Cycle Pointing” (with Éric Fusy, Mihyun Kang and Stefan Vigerske), journal version, in preparation.

#### CO-AUTHORS

Hubie Chen, Víctor Dalmau, Cornelia Dangelmayr, Denys Duchier, Katrin Erk, Tomas Feder, Éric Fusy, Tobias Gärtner, Omer Giménez, Martin Grohe, Clemens Gröpl, Miki Hermann, Martin Hils, Daniel Johannsen, Peter Jonsson, Markus Junker, Mihyun Kang, Jan Kára, Alexander Koller, Daniel Král, Marco Kuhlmann, Martin Kutz, Barnaby Martin, Colin McDiarmid, Sebastian Miele, Mathias Möhl, Jens Müller, Jaroslav Nešetřil, Joachim Niehren, Gustav Nordh, Marc Noy, Florian Richoux, Timo von Oertzen, Diana Piguet, Michael Pinsker, Jan Schwinghammer, Stefan Vigerske, Michal Wrona.

#### TALKS

(excluding internal talks and contributing talks at conferences for the papers listed above)

- Feb. 2010: “Computational Complexity of Constraint Satisfaction Problems”, talk in the seminar of the *Laboratoire de Spécification et de Vérification (LSV)*, ENS Cachan.
- Jan. 2010: “Constraint Satisfaction Problems over the Real Numbers”, talk in the group *Reelle Geometrie und Algebra*, Fachbereich Mathematik und Statistik, Universität Konstanz.
- Nov. 2009: “Structures definable in  $(\mathbb{Q}, <)$  up to primitive positive interdefinability”, in the *Séminaires et Groupes de Travail Mathématiques*, Institut Camille Jordan - UMR 5208, Lyon, France.
- Nov. 2009: “Constraint Satisfaction Problems in Temporal and Spatial Reasoning”, in the seminar of the group *Theoretische Informatik und Logik*, TU Wien.
- Oct. 2009: “Constraint Satisfaction Problems over the Real Numbers”, at the Dagstuhl Seminar 09441, *The Constraint Satisfaction Problem: Complexity and Approximability*.

- Oct. 2009: “All reducts of the Random Graph are model-complete”, in the *Séminaire Général de Logique*, University Paris VII, UFR de Mathématiques.
- Sep. 2009: “On the scope of the universal-algebraic approach to constraint satisfaction”, lecture for the *Wroclaw Information Technology Initiative* at Wroclaw University of Technology and Wroclaw University.
- Aug. 2009: “Introduction to Constraint Satisfaction Complexity and Applications in Spatial and Temporal Reasoning”, lecture for the *Wroclaw Information Technology Initiative* at Wroclaw University of Technology and Wroclaw University.
- June 2009: “On the scope of the universal-algebraic approach to constraint satisfaction”, at the *Journées CMF/ENUM/VERAP*, Paris.
- Apr. 2009: “Introduction to Constraint Satisfaction Complexity and Applications in Spatial and Temporal Reasoning”, Seminar of the *Division of Software and Systems (SaS)*, Linköping, Sweden.
- Feb. 2009: “Constraint Satisfaction Complexity in Temporal and Spatial Reasoning”, *Colloquium SFB Spatial Cognition*, Freiburg, Germany.
- June 2008: “The Product Ramsey Theorem in Constraint Satisfaction Complexity”, at the Berlin-Poznan-Workshop in Combinatorics, *Humboldt-University*, Berlin, Germany.
- May 2008: “Non-dichotomies in Constraint Satisfaction Complexity”, at the seminar of the *Laboratoire Laic*, Département Informatique, Clermont-Ferrand, France.
- Oct. 2007: “Boltzmann Samplers, Polya Theory, and Cycle Pointing”, at the seminar of *LIP6*, University Paris VI, Paris, France.
- Oct. 2007: “Enumerating Well-Nested Dependency Trees”, at the seminar of *Spiral*, University Paris VI, Paris, France.
- Oct. 2007: “10 Steps to Counting Unlabeled Planar Graphs – 20 Years Later”, at the seminar of Gilles Schaeffer at the *École Polytechnique*, Cedex Palaiseau, France.
- Oct. 2007: “The reducts of some famous  $\omega$ -categorical structures up to primitive positive interdefinability – and applications in complexity theory”, at the seminar of the *Équipe de Logique Mathématique*, University Paris VII, France.
- Oct. 2007: “10 Steps to Counting Unlabeled Planar Graphs – 20 Years Later”, at *Séminaires ALGO*, Inria-Rocquencourt, France.
- June 2007: “Algebraic Tractability Criteria for Infinite-Domain Constraint Satisfaction Problems”, invited talk at the workshop on *Universal Algebra and the Constraint Satisfaction Problem*, Nashville, US.
- May 2007: “Algebraic Tractability Criteria for Infinite-Domain Constraint Satisfaction Problems”, at the seminar *Complexité, Logique et Informatique* of the *Équipe de Logique Mathématique*, University Paris VII, France.

- May 2007: “Constraint Satisfaction over Infinite Domains: Finite Model Theory meets Classical Model Theory”, workshop *Modèles de calcul, Modèles finis et Complexité*, Nancy, France.
- Apr. 2007: “Complexity Classification for Constraint Satisfaction with  $\omega$ -categorical Templates”, at the logic department of *Albrecht-Ludwigs Universität Freiburg*, Germany.
- Oct. 2006: “Algorithms for Temporal Constraint Satisfaction Problems”, workshop *Algorithms for the SAT problem, Humboldt-Universität zu Berlin*, Germany.
- Oct. 2006: “Complexity of Temporal Constraint Satisfaction”, workshop *Complexity of Constraints*, Dagstuhl, Germany.
- Sep. 2006: “The Complexity of Temporal Constraint Satisfaction, and the Product Ramsey Theorem”, workshop *Logic and Combinatorics*, Szeged, Hungary.
- Mar. 2006: “Datalog and Constraint Satisfaction With Infinite Templates”, invited talk at the workshop *Mathematics of Constraint Satisfaction: Algebra, Logic and Graph Theory*, St Anne’s College, University of Oxford (satellite meeting of the Newton Institute Programme *Logic and Algorithms*), England.
- Feb. 2006: “The locally closed clones over a countable set that contain all permutations”, *Arbeitstagung Allgemeine Algebra 71*, Bedlewo, Poland.
- Jan. 2006: “The Algebraic Approach to Infinite-valued Constraint Satisfaction”, invited talk at the *Workshop on Finite and Algorithmic Model Theory*, University of Durham (satellite meeting of the Newton Institute Programme *Logic and Algorithms*), England.
- Sep. 2005: “Maximal Infinite-Valued Constraint Languages”, invited talk at the *Workshop on Graphs, Morphisms and Applications* at the *Centre de Recerca Matemàtica, Campus de la Universitat Autònoma de Barcelona*, Bellaterra, Spain.
- Dec. 2004: “Constraint Satisfaction with Infinite Domains”, invited talk at the *Winter Meeting of the Canadian Mathematical Society*, at the *Universal Algebra and Complexity Session*, Montreal, Canada.

#### PROGRAM COMMITTEE MEMBER OF

Fundamentals of Computation Theory 2009 (FCT’09), Computer Science Logic (CSL’10)

#### REFEREE FOR JOURNALS

Mathematical Reviews, Logical Methods in Computer Science (LMCS), Transactions on Algorithms (TALG), Journal of Logic and Computation (JLC), Artificial Intelligence (AI), Journal of Computer and System Sciences (JCSS), Theory of Computing Systems (TOCS), Discrete Mathematics (DM), Journal of Artificial Intelligence Research (JAIR), Information Processing Letters (IPL)

## REFEREE FOR CONFERENCES

Symposium on Foundations of Computer Science (FOCS), International Colloquium on Automata, Languages and Programming (ICALP), Symposium on Theoretical Aspects of Computer Science (STACS), Symposium on Discrete Algorithms (SODA), Logic in Computer Science (LICS), European Symposium on Algorithms (ESA), Computer Science Logic (CSL), Mathematical Foundations of Computer Science (MFCS), International Workshop on Randomization and Computation (RANDOM), Principles and Practice of Constraint Programming (CP), Fundamentals of Computation Theory (FCT), International Conference on Rewriting Techniques and Applications (RTA), International Symposium on Multiple-Valued Logic (ISMVL), International Conference on Logic for Programming, Artificial Intelligence, and Reasoning (LPAR), Symposium on Logical Foundations of Computer Science (LFCS), Conference on Artificial Intelligence (AAAI)

## LANGUAGES

German (native), English (fluent), French (intermediate),  
Czech (6 semester), Tuerkish (5 semester), Russian (6 semester), Latin (großes Latinum)