CURRICULUM VITAE: Prof. Dr. Laura Ildikó Kovács

Last updated in August 2019

PROFESSOR

Formal Methods in Systems Engineering – FORSYTE Group
Faculty of Informatics
Vienna University of Technology – TU Wien
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PERSONAL DATA

Date of birth:	April 26, 1980
Citizenship:	Hungarian and Romanian
Family status :	Married, two children
Languages spoken:	Hungarian, Romanian, English, German, basic French, basic Swedish

RESEARCH INTERESTS

Formal software verification, especially assertion synthesis and static analysis.
Symbolic computation, especially computer algebra and algorithmic combinatorics.
Automated reasoning, especially automated first-order theorem proving.

EDUCATION

November 2012	Habilitation in Computer Science	Vienna University of Technology (TU Wien) Austria
October 2007	Ph.D. in Computer Science with highest distinction	Research Institute for Symbolic Computation (RISC-Linz), Johannes Kepler University Linz, Austria
February 2004	M.Sc. in Computer Science	West University of Timişoara, Romania
July 2002	B.Sc. in Math and Computer Science	West University of Timişoara, Romania

CAREER HISTORY

2016-now	Full professor Head of the FORSYTE Group	TU Wien, Austria (since 07/2017)
	and	
	Adjunct professor	Chalmers University of Technology, Sweden
2013-2016	Associate professor and	Chalmers University of Technology, Sweden
	Adjunct associate professor	TU Wien, Austria
2010-2013	Hertha-Firnberg research fellow Assistant Professor	TU Wien, Austria
2009-2010	Postdoctoral scientist	ETH Zürich, Switzerland Programming Methodology group of Prof. Peter Müller
2007-2009	Postdoctoral scientist	EPFL Lausanne, Switzerland MTC group of Prof. Thomas A. Henzinger

2003-2007	Ph.D. researcher	RISC-Linz, Austria
September 2007	Research visitor	SCORE group, Tsukuba University, Japan
2003-2007	Teaching assistant	West University of Timişoara, Romania

CAREER BREAKS

Maternity leaves during 2014-2015 and 2017.

PRIZES, HONORS, AND DISTINCTIONS

2019 April	Wien Live Look! Business Awards Nominee One of the top 3 nominees of the Viennesse look! magazine
2018 December	ERC Proof of Concept European Research Council
2014 December	Wallenberg Academy Fellowship Knut and Alice Wallenberg Foundation, Sweden Sweden's largest private investement in young researchers
2014 November	ERC Starting Grant European Research Council Europe's most competitive research program for young researchers
2013 November	Swedish Research Council - VR grant for Junior Researchers, Sweden Competitive grant: 769 applications, 64 approved
2012 June	Visiting professorship at the University Joseph Fourier, Grenoble, France
2011	FESTO Austria Prize for Young Researchers and Scientists FESTO IT company in process automation, Austria 22nd DAAAM International World Symposium, Vienna, Austria
2010 - 2013	FWF Hertha-Firnberg Fellowship, Austria Competitive fellowship: 53 applications, 13 approved
2008	Best paper award in application track 3rd International Computer Science Symposium in Russia (CSR), Moscow, Russia
2007 September	Japan Society for the Promotion of Science (JSPS) fellowship Tsukuba University, Japan (Host: Prof. Tetsuo Ida)
2005	Best student presentation award 2nd South-East European Workshop on Formal Methods (SEEFM), Ohrid FYR of Macedonia

UNIVERSITY TEACHING EXPERIENCE (only lecture courses)

2019 Lecturer of "Automated Deduction", TU Wien.
Master course, 34 enrolled students.

2019 Lecturer of "Formal Methods in Computer Science", TU Wien.
Master course, 140 enrolled students.

2018 Lecturer of “Automated Deduction”, TU Wien.
Master course, 21 enrolled students.

2018 Lecturer of “Formal Methods in Computer Science”, TU Wien.
Master course, 140 enrolled students.

2016 Lecturer of “Automated Deduction”, TU Wien.
Master course, 10 enrolled students.

2015 Lecturer of “First-Order Theorem Proving and Vampire”, Chalmers & University of Gothenburg.
PhD course, 7 enrolled students.

2015 Lecturer of “The Computer Scientist in Society”, Chalmers & University of Gothenburg.
Master course, 78 enrolled students.

2015 Lecturer of “Automated Reasoning and Program Verification”, TU Wien.
Master Course, 13 enrolled students.

2015 Lecturer of “Chalmers Computing Lab Tech Talks”, Chalmers & University of Gothenburg.
PhD Course, 20 enrolled students.

2014 Lecturer of “Automated Reasoning and Program Verification”, TU Wien.
Master Course, 5 enrolled students.

2013 Lecturer of “Automated Reasoning for Program Verification”, Chalmers & University of Gothenburg.
Master Course, 19 enrolled students.

2013 Lecturer of “Automated Reasoning and Program Verification”, TU Wien.
Master Course, 7 enrolled students.

2012 Lecturer of “Advanced Topics in Theoretical Computer Science”, TU Wien.
Master Course, 9 enrolled students.

2012 Lecturer of “Automated Reasoning and Program Verification”, TU Wien.
Master Course, 13 enrolled students.

2011 Lecturer of “Advanced Theoretical Computer Science”, TU Wien.
Bachelor Course, 11 enrolled students.

2010 Lecturer of “Advanced Theoretical Computer Science”, TU Wien.
Bachelor Course, 10 enrolled students.

2009 Lecturer of “Foundations of Computer Science 1”, University of Zürich.
Bachelor Course, 120 enrolled students.

2009 Lecturer of “Software Engineering Seminar”, ETH Zürich.
Bachelor and Master Seminar, 13 enrolled students.

2009 Lecturer of “Advanced Theoretical Computer Science”, EPFL.
Bachelor Course, 34 enrolled students.

2008 Teaching assistant of “Basic and Advanced Theoretical Computer Science”, EPFL.
Bachelor Courses, 80 and respectively 40 enrolled students.

2006 Teaching assistant of “Mathematical Basis of Computer Science”, West University of Timişoara.
Bachelor Course, 60 enrolled students.

STUDENT SUPERVISION

Current

PhD main supervisor at TU Wien for MSc. Miroslav Stankovic, 2018-2022.

PhD main supervisor at TU Wien for Dipl.Ing. Bernhard Gleiss, 2016-2020.

PhD main supervisor at TU Wien for Dipl.Ing. Andreas Humenberger, 2016-2020.

PhD co-supervisor at Chalmers for MSc. Yuting Chen, 2016-2021. – Licentiate degree completed in August 2018.

Master thesis supervisor at TU Wien for David Demastani, 2018–2019.

Master thesis supervisor at TU Wien for Jakob Rath, 2018–2019.

Master thesis supervisor at TU Wien for Pamina Georgiou, 2018-2019.

Bachelor thesis supervsior at TU Wien for Lena Schnedlitz, 2018-2019.

Completed

PhD main supervisor at Chalmers for MSc. Simon Robillard (now postdoc IMT Atlantique, U. Nantes, France), 2014-2019. Thesis title: *Deductive Program Analysis with First-Order Theorem Provers*.

PhD main supervisor at Chalmers for MSc. Evgenii Kotelnikov (now scientific developer at Ericsson, Sweden), 2013-2018. Thesis title: *Automated Theorem Proving with Extensions of First-Order Logic*

PhD main supervisor at TU Wien for MSc. Ioan Drãgan (now researcher at eAustria Institute Timişoara), 2011-2015. Thesis title: *First-order Theorem Proving for Program Analysis and Theory Reasoning*

PhD main supervisor at TU Wien for Dipl.-Ing. Jakob Zwirchmayr (now senior scientist at TTech Austria), 2010-2013. Co-supervisor: Prof. Jens Knoop. Thesis title: *Symbolic Methods for the Timing Analysis of Programs*

Master thesis supervisor at TU Wien for Romana Jezek, Summer 2018- Summer 2019. Thesis title: *Formalization of Group Theory Problems for Automated Theorem Proving*

Master thesis supervisor at Chalmers for Yuting Chen (now PhD student at Chalmers), Fall 2015-Summer 2016. Thesis title: *Theory-Specific Reasoning about Loops with Arrays using Vampire*

Master thesis supervisor at TU Wien for Bernhard Gleiss (now PhD student at TU Wien), Fall 2015-Summer 2016. Thesis title: *Interpolation and Local Proofs*

Master thesis supervisor at TU Wien for Bernhard Kragl (now PhD student at IST Austria), Fall 2013-Spring 2014. Thesis title: *Reasoning in First-Order Theories with Extensionality*

Master thesis supervisor at TU Wien for Ioana Jucu, Fall 2011-Fall 2013. Thesis title: *An Evaluation of Symbol Elimination for Generating First-Order Loop Invariants*

Master thesis supervisor at EPFL for Thibaud Hotellier (now PhD student at University of Berkeley), Fall 2008-Spring 2009. Thesis topic: *Invariants for Arrays and Matrices*. Co-supervisor: Prof. Thomas A. Henzinger.

Bachelor thesis supervisor at TU Wien for Bernhard Kragl, Spring 2012. Co-supervisor: Prof. Gernot Salzer. Thesis title: *Loop Invariants in Deductive Verification*

Internship supervisor at TU Wien for Régis Blanc, Summer 2012. Project topic: *Tree Interpolants in Vampire*

Semester project supervisor at TU Wien for Csaba Vaczula, Fall 2011. Project topic: *Warships*.

Semester project supervisor at TU Wien for Csaba Vaczula, Spring 2011. Project topic: *Wordplay 2*.

Semester project supervisor at EPFL for Régis Blanc (now researcher at Google Zürich), Spring 2009. Project topic: *ABC: Analyzing Bound and Complexity of Loops*. Co-supervisor: Prof. Thomas A. Henzinger.

Semester project supervisor at EPFL for Papa Ly Alioune, Fall 2008. Project topic: *Case Study: Polynomial Invariant Generation*. Co-supervisor: Prof. Thomas A. Henzinger.

Semester project supervisor at EPFL for Thibaud Hotellier (now PhD student at University of Berkeley), Spring 2008. Project topic: *VALIGATOR: A Verification tool with Bound and Invariant Generation*. Co-supervisor: Prof. Thomas A. Henzinger.

UNIVERSITY COMMITTEES

HIRING COMMITTEES

Hiring committee member of the "Computer Engineering – Technischen Informatik" professorship at U. Salzburg, Austriam 2018-2019.

Hiring committee member of the "Computer Aided Verification" professorship at TU Wien, 2017-2018.

PHD EXAMINATION AND REVIEWING COMMITTEES

PhD thesis reviewer and examination committee member of Sylvia Grewe, TU Darmstadt, Germany, July 2019.

PhD examination committee member of Philipp.Schillinger, KTH Stockholm, Sweden, June 2019.

PhD thesis reviewer of Michael Roman Färber, University of Innsbruck, Austria, November 2018.

PhD thesis reviewer and examination committee member of Roberto Blanco, University of Paris-Saclay, France, November 2017.

PhD thesis reviewer and examination committee member of Thorsten Tarrach, IST Austria, June 2016.

PhD examination committee member of Alexander Gustaffson, Mälardalen University, Västeras, Sweden, May 2016.

PhD thesis reviewer and examination committee member of Nathan Daniel Wasser, Technische Universität Darmstadt, Germany, February 2016 .

PhD/Licentiate thesis examiner of Abdullah Mamun, Chalmers University of Technology, Gothenburg, Sweden, Fall 2015.

PhD thesis reviewer of Daniel Larraz, Universitat Politecnica de Catalunya (UPC), Barcelona, Spain, Spring 2015.

PhD/Licentiate examination committee member for Leo Hatvani, Mälardalen University, Sweden, Fall 2014.

PhD examination committee member for Ramona Enache at the University of Gothenburg, Fall 2013.

PhD examination committee member of PhD qualification exam for Thorsten Tarrach (now PhD student at IST Austria), at the Institute of Science and Technology (IST), Austria, Fall 2013.

PhD examination committee member and thesis examiner for Tejfel Máté (now Assoc.Prof. at ELTE Hungary), at Eötvös Lóránt University, Hungary, Fall 2008.

HABILITATION COMMITTEES

Habilitation committee chair and member for Dr. Igor Konnov, TU Wien, Spring-Fall 2019.

Habilitation committee member for Dr. Ezio Bartocci, TU Wien, Spring 2019.

Habilitation thesis referee for Dr. Cezary Kaliszyk, Univeristy of Innsbruck, Austria, Fall 2015.

Habilitation thesis referee for Dr. Harald Zankl, Univeristy of Innsbruck, Austria, Spring 2015.

UNDERGRADUATE EVALUATION COMMITTEES

Jury member of "EPIPLOG - Best Master Thesis" Committee at the Faculty of Informatics, TU Wien, June 2018.

EDUCATIONAL COMMITTEES

Computer Science Curriculum Committee member at TU Wien, 2011-2013 and 2016-now.

OTHER COMMITTEES

Committee member of the "Faculty Model" Committee of the Faculty of Informatics, TU Wien, 2017-now.

Committee member of the Jubilee Committee on"100 Years of Women Studying at the TU Wien" , 2018-2019.

Committee member of the "Code of Conduct" Committee of the Faculty of Informatics, TU Wien, 2016.

Committee member of the "Bachelor with Honors" program of the Faculty of Informatics, TU Wien, 2016-2018.

Faculty Senate member at Chalmers, 2013-2014.

SOFTWARE

ALIGATOR
`http://mtc.epfl.ch/software-tools/Aligator/`
a software package for generating loop invariants of programs over scalars and arrays (since 2007).

VAMPIRE
`http://vprover.org/`
developing program analysis and theory reasoning in the Vampire theorem prover (since 2009).

R-TUBOUND
`http://www.complang.tuwien.ac.at/jakob/tubound/`
a static analysis tool for the WCET analysis of programs (since 2010).

VALIGATOR
`http://mtc.epfl.ch/software-tools/Aligator/Valigator/`
a verification tool with invariant and bound inference (2008).

ABC
`http://mtc.epfl.ch/software-tools/ABC`
a software tool for computing upper bounds on loop iterations (2009).

PROFESSIONAL ACTIVITIES

PC CHAIR

Int. Conference on Concurrency Theory (CONCUR), 2020 (co-chair);

Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2015;

Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing - Logic and Programming track (SYNASC), 2019, 2018, 2017, 2016, 2014, 2013, and 2012;

Deduction Mentoring Workshop, 2019;

Automated New-era Deductive Reasoning Event in Iberia (ANDREI-60), 2019 – honoring the 60th birthday of Andrei Voronkov;

Verification and Deduction Mentoring Workshop, 2018;

Third Workshop on Automated Inductive Theorem-Proving (WAIT), 2016;

Int. Workshop on Computational Origami and Applications (COA), 2016;

The Vampire Workshop, 2019, 2018, 2017, 2016, 2015 and 2014;

Int. Workshop on Interpolation: from Proofs to Applications (iPrA), 2015, 2014 and 2013;

Int. Symposium on Symbolic Computation in Software Science (SCSS), 2013;

Int. Workshop on Automated Specification and Verification of Web Systems (WWV), 2011 and 2010;

Int. Workshop on Invariant Generation (WING), 2010 and 2009.

WORKSHOP AND TUTORIAL CHAIR

Workshop chair at Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2012.

Workshop chair at Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2013, 2012, 2010 and 2008;

Tutorial chair at Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2011 and 2009;

MEMBER OF PROGRAM COMMITTEES

Int. Conference on Computer Aided Verification (CAV), 2020;

Int. Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2020;

Int. Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2020;

ACM/IEEE Symposium on Logic in Computer Science (LICS), 2019;

Int. Conference on Automated Deduction (CADE), 2019;

Int. Conference on Computer Aided Verification (CAV), 2019;

Int. Symposium on Formal Methods (FM), 2019;

Int. Conference on integrated Formal Methods (iFM), 2019;

Int. Conference on Software Technology and Cyber Security (STCS), 2019;

Asian Symposium on Programming Languages and Systems (APLAS), 2019;

Eleventh NASA Formal Methods Symposium (NFM), 2019;

Int. Conference on Perspectives of System Informatics - Ershov Informatics Conference (PSI), 2019;

Int. Conference on Intelligent Computer Mathematics (CICM), 2019;

Int. Conference on Tests and Proofs (TAP), 2019;

Int. Workshop on Automated Reasoning: Challenges, Applications, Directions, Examplary Achievements (ARCADE), 2019;

Int. Workshop on Symbolic Computation and Satisfiability Checking (SC^2), 2019;

Int. Workshop on Proof eXchange for Theorem Proving (PxTP), 2019;

ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL), 2018;

Int. Joint Conference on Automated Reasoning (IJCAR), 2018;

Int. Conference on Computer Aided Verification (CAV), 2018;

Int. Symposium on Symbolic and Algebraic Computation (ISSAC), 2018;

Int. Symposium on Formal Methods (FM), 2018;

Int. Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2018;

Int. Conference on integrated Formal Methods (iFM), 2018;

Int. Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2018;

Int. Symposium on Theoretical Aspects of Software Engineering (TASE), 2018;

Int. Conference on Intelligent Computer Mathematics (CICM) - Systems& Projects Track, 2018;

Int. Conference on Tests and Proofs (TAP), 2018;

Tenth NASA Formal Methods Symposium (NFM), 2018;

2018 IEEE Int. Conference on Future IoT Technologies (Future IoT), 2018;

Int. Workshop on Formal Techniques for Java-like Programs (FTfJP), 2018;

Int. Workshop on Practical Aspects of Automated Reasoning (PAAR), 2018;

Int. Conference on Automated Deduction (CADE-26), 2017;

Int. Static Analysis Symposium (SAS), 2017;

Int. Conference on integrated Formal Methods (iFM), 2017;

PhD Symposium at iFM'17 on Formal Methods: Algorithms, Tools and Applications, 2017;

Int. Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2017;

Int. Conference on Distributed Computing and Internet Technology (ICDCIT), 2017;

Int. Conference on Perspectives of System Informatics - Ershov Informatics Conference (PSI), 2017;

Int. Symposium on Symbolic Computation in Software Science (SCSS), 2017;

Int. Conference on Intelligent Computer Mathematics (CICM) - Systems& Projects Track, 2017;

Int. Conference on Tests and Proofs (TAP), 2017;

Int. Symposium on Theoretical Aspects of Software Engineering (TASE), 2017;

Int. Conference on Mathematical Aspects of Computer and Information Sciences (MACIS), 2017;

Int. ARCADE Workshop on Automated Reasoning: Challenges, Applications, Directions, Exemplary Achievements (ARCADE), 2017;

Int. Workshop on Tools for Automatic Program Analysis (TAPAS), 2017;

ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL), 2016;

Int. Conference on Computer Aided Verification (CAV), 2016;

Int. Symposium on Formal Methods (FM), 2016;

Int. Conference on Computer Science Logic (CSL), 2016;

Int. Conference on Certified Programs and Proofs (CPP), 2016;

Int. Symposium on Theoretical Aspects of Software Engineering (TASE), 2016;

The Haifa Verification Conference (HVC), 2016;

Int. Conference on Distributed Computing and Internet Technology (ICDCIT), 2016;

Int. Conference on Intelligent Computer Mathematics (CICM) - Calculemus Track, 2016;

Int. Workshop on Practical Aspects of Automated Reasoning (PAAR), 2016;

Int. Workshop on Automated Specification and Verification of Web Systems (WWV), 2016;

Int. Conferences on Logic in Computer Science (LICS), 2015;

Int. Conference on Automated Deduction (CADE-25), 2015;

Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2015;

Int. Symposium on Formal Methods (FM), 2015;

The Haifa Verification Conference (HVC), 2015;

Int. Conference on Perspectives of System Informatics - Ershov Informatics Conference (PSI), 2015;

Int. Workshop on Tools for Automatic Program Analysis (TAPAS), 2015;

Int. Workshop on Automated Specification and Verification of Web Systems (WWV), 2015;

Int. Workshop on Quantification (QUANTIFY), 2015;

Int. Conference on Computer Aided Verification (CAV), 2014;

Int. Conference on Computer Science Logic (CSL) and Logic in Computer Science (LICS), 2014;

Int. Static Analysis Symposium (SAS), 2014;

Int. Symposium on Symbolic Computation in Software Science (SCSS), 2014;

The Haifa Verification Conference (HVC), 2014;

Int. Conference on integrated Formal Methods (iFM), 2014;

Int. Conferencs on Intelligent Computer Mathematics (CICM), 2014;

Int. Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2014;

Int. Conference on Perspectives of System Informatics - Ershov Informatics Conference (PSI), 2014;

Int. Workshop on Invariant Generation (WING), 2014;

Int. Workshop on Quantification (QUANTIFY), 2014;

Int. Workshop on Automated Specification and Verification of Web Systems (WWV), 2014;

Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2013;

Int. Conference on Mathematical Aspects of Computer and Information Sciences (MACIS), 2013;

The Formal Techniques for Java-like Programs Workshop, 2013;

Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2012;

The Alan Turing Centenary Conference, 2012;

Int. Workshop on Tools for Automatic Program Analysis (TAPAS), 2012;

Int. Conference on Certified Programs and Proofs (CPP), 2012;

Int. Conference on Computer Science Logic (CSL), 2012;

Int. Workshop on Invariant Generation (WING), 2012;

Int. Conference on Perspectives of System Informatics - Ershov Informatics Conference (PSI), 2011;

Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2011;

Int. Conference on Formal Engineering Methods (ICFEM), 2011;

Int. Conference on on Algebraic Informatics (CAI), 2011;

Int. Conference on Mathematical Aspects of Computer and Information Sciences (MACIS), 2011;

Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2010;

Int. Symposium on Symbolic and Algebraic Computation (ISSAC), 2010;

Int. Workshop on Symbolic Computation in Software Science (SCSS), 2010;

Int. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR), 2009;

Int. Computer Science Symposium in Russia (CSR) - Application Track, 2007;

Symposium on the Integration of Symbolic Computation and Mechanized Reasoning (CALCULEMUS), 2007.

JOURNAL/BOOK REFEREE

J. of Symbolic Computation, 2019, 2011, and 2010;

J. of Automated Reasoning, 2015;

J. on Satisfiability, Boolean Modeling and Computation, 2015;

Information Processing Letters, 2014;

J. of Formal Methods in System Design, 2013;

J. of Foundations of Computer Science, 2013;

J. of Formal Aspects of Computing, 2013;

J. of Science of Computer Programming, 2013;

Handbook of Model Checking, 2013;

J. of Theoretical Computer Science, 2012;

J. of Science of Computer Programming - special issue on Invariant Generation, Expert reviewer, 2012;

ACM Transactions on Programming Languages and Systems, 2011 and 2012;

J. of Applied Logic, 2012;

The Computer Journal, 2011;

Information Processing Letters, 2010;

J. of AI Communications, 2008;

J. of Software Tools for Technology, 2006.

CONFERENCE (SUB)REFEREE

Int. European Symposium on Programming (ESOP), 2013;

Int. Conference on Computer Aided Verification (CAV), 2013;

Int. Conference on Formal Methods in Computer-Aided Design (FMCAD), 2013;

Int. Symposium on Symbolic and Algebraic Computation (ISSAC), 2012;

Int. Workshop on Satisfiability Modulo Theories (SMT), 2011;

Int. Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), 2011;

Int. Conference on Programming Language Design and Implementation (PLDI), 2010 and 2009;

Int. Conference on Computer Aided Verification (CAV), 2009;

Int. Conference on Static Analysis Symposium (SAS), 2009;

Int. SPIN Workshop on Model Checking of Software (SPIN), 2009;

Int. Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2008.

SCIENTIFIC REFERENT FOR FUNDING AGENCIES

Czech Science Foundation, 2019;

Deutsche Forschungsgemeinschaft - German Research Foundation, 2019;

The Icelandic Research Fund, 2016;

European Reasearch Council, 2016;

Polish National Science Center - Funding scheme OPUS, 2015.

EDITORSHIP

Guest editor of the Special Issue of the Annals of Mathematics and Artificial Intelligence (AMAI) on "Formalization of Geometry, Automated and Interactive Geometric Reasoning", 2017/2019. Co-editors: Pascal Schreck and Tetsuo Ida.

Editor of the Dagstuhl Report on Dasgtuhl Seminar 12461 "Games and Decisions for Rigorous Systems Engineering", 2013. Co-editors: Nikolaj Bjørner, Krishnendu Chatterjee, and Rupak M. Majumdar.

Guest editor of the Special Issue of the J. of Symbolic Computation on "Symbolic Computation in Software Science", 2013/2015. Co-editors: Prof. Adel Bouhoula, Prof. Bruno Buchberger and Dr. Temur Kutsia.

Guest editor of the Special Issue of the J. of Logic and Algebraic Programming on "Automated Specification and Verification of Web Systems", 2012/2013. Co-editors: Prof. Rosario Pugliese, Dr. Francesco Tiezzi, and Dr. Josep Silva Galiana.

Guest editor of the Special Issue of the J. of Symbolic Computation on "Invariant Generation and Advanced Techniques for Reasoning about Loops", 2010/2013. Co-editor: Dr. Nikolaj Bjørner.

Guest editor of the Special Issue of the J. of Applied Logic on "Automated Specification and Verification of Web Systems", 2010/2012. Co-editor: Dr. Temur Kutsia.

Guest editor of the Special Issue of the J. of Symbolic Computation on "Invariant Generation and Advanced Techniques for Reasoning about Loops", 2009/2010. Co-editors: Dr. Andrew Ireland and Dr. Martin Giese.

EDITORIAL BOARDS

Editorial Board of the Journal Mathematics in Computer Science (MCS), 2016-now.

MEMBER OF ORGANIZING COMMITTEES

Local chair of the Third Workshop on Automated-Inductive Theorem-Proving (WAIT), 2016;

Proceedings chair of the Vienna Summer of Logic (VSL), 2014;

Local chair of ICNPAA 2012 World Congress: 9th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences, Vienna University of Technology, 2012;

Local chair of Workshop on Logic and Computer Science, University of Vienna, 2011;

Local chair of Workshop on Automated Specification and Verification of Web Systems (WWV), 2010;

Symposium on the Integration of Symbolic Computation and Mechanized Reasoning (CALCULEMUS) and Mathematical Knowledge Management (MKM), 2007;

Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2004 and 2005.

SEMINAR AND TRAINING SCHOOL ORGANISATION

Co-Organizer. Dagstuhl Seminar 12461 on "Games and Decisions for Rigorous Systems Engineering", Schloss Dagstuhl, Germany, November 11-16, 2012;

Co-Organizer. ARiSE/VCLA Winter School on Verification, Vienna University of Technology, Austria, 6-10 February 2012.

OTHER TECHNICAL COMMITTEES

Conference of Automated Deduction - CADE, CADE Trustee (Steering Committee member), 2016-now;

Jury member of the Skolem Award for most influential papers in automated deduction, 2018-2019;

Jury member of "Hedy Lamarr Award for Young Women in IT" of the City of Vienna, Austria, 2018 and 2019

Int. Workshop on Automated Specification and Verification of Web Systems (WWV), Steering Committee, 2011-2014;

Int. Workshop on Invariant Generation (WING), Steering Committee, since 2007;

Vienna Center for Logic and Applications (VCLA), Advisory Board, since 2012.

MEMBER OF PROFESSIONAL ORGANIZATIONS

Association for Automated Reasoning.
Austrian Society for Rigorous Systems Engineering (ARiSE – www.arise.or.at) – Founding member.
European Association for Programming Languages and Systems.

CONSULTING

Dassault Aviation, France
– consulting in theorem proving and loop assertion synthesis for software verification (2009 - 2010).

Intel Haifa, Israel
– consulting in program verification (December 2010, restarted in October 2012).

RESEARCH GRANTS

Principal Investigator

1. Principal Investigator and Applicant, ERC Proof of Concept 2018, European Research Council (ERC), *SYMELS: Symbol Elimination in Reliable System Engineering*, 06/2019-12/2020, EUR 150,000.

2. Principal Investigator and Applicant, Austrian-Hungarian Action Foundation (OMAA), Grant 101öu8, *Domain-Specific Reasoning in IoT Applications*, 02/2019 - 01/2020, EUR 10,200.

3. Principal Investigator and Applicant, Austrian Science Foundation (FWF), DK Grant W1255-N23, *LogiCS: Logical Methods in Computer Science* – Doctoral College, 03/2018-02/2022, EUR 3,622,033.

4. Principal Investigator and Applicant, Wallenberg Foundation (Prof. Dave Sands, main PI at Chalmers), *WASP: Wallenberg Autonomous Systems Program*, 9/2015-8/2025, SEK 1,800,000,000.

5. Principal Investigator and Applicant, ERC Starting Grant 2014, European Research Council (ERC), *SYMCAR: Symbolic Computation and Automated Reasoning for Program Analysis*, 4/2016-3/2021, EUR 1,500,000.

6. Principal Investigator and Applicant, Wallenberg Academy Fellow 2014, Knut and Alice Wallenberg Foundation, *TheProSE: Theorem Proving and Symbol Elimination for Software Analysis and Verification*, 7/2015-6/2020, SEK 10,000,000.

7. Principal Investigator and Applicant, Swedish Research Council (VR), *Generating and Proving Program Properties using Symbol Elimination*, 1/2014-12/2017, SEK 3,360,000.

8. Principal Investigator and Applicant, Austrian Science Foundation (FWF), NFN Grant S11410-N23, *Interpolation and Symbol Elimination*, 3/2011-2/2015, EUR 178,668.

9. Principal Investigator and Applicant, Austrian-Hungarian Action Foundation (OMAA), Grant 82öu11, *Symbolic Computation and Automated Reasoning for the Numeric Analysis of Diabetes Models*, 10/2010 - 11/2011, EUR 9,143.

10. Principal Investigator and Applicant, TU Wien, Grant Innovative Ideas, *CETAT: Cutting-Edge Timing Analysis Technologies for Safety-Critical Real-Time Systems*, 3/2010 - 2/2013, EUR 99,480.

11. Principal Investigator and Applicant, Dassault Aviation, Grant D18501100001 (jointly with ETH Zürich), *Program Verification with Frama-C, Vampire, and Aligator*, 4/2010 - 12/2011, EUR 15,000.

12. Principal Investigator and Applicant, Austrian Science Foundation (FWF), Hertha Firnberg Grant T425-N23, *Computer Algebra and Theorem Proving for Verified Software*, 1/2010 - 3/2013, EUR 192,330.

Co-Principal Investigator and Project Partner

1. Co-Principal Investigator and Applicant, Austrian Science Foundation (FWF), NFN Grant S11409-N23 (Assoc. Prof. Uwe Egly, TU Wien, PI), *Quantified Boolean Formulas*, 3/2015-2/2019, EUR 193,270.

2. Co-Principal Investigator and Applicant, Chalmers Software Center (Assoc. Prof. Patrizio Pelliccione, Chalmers, PI), *Assurance as a Service: Upfront Quality and Safety in Continuous Software Engineering*, 1/2014 - 6/2014, SEK 140,400.

3. Co-Principal Investigator and Applicant, Vienna Science and Technology Fund (WWTF), Grant ICT C-050 (Prof. Helmut Veith, TU Wien, PI), *PROSEED: Proof Seeding for Software Verification*, 1/2011-12/2014, EUR 598,000.

4. Project Partner, Austrian Research Promotion Agency (FFG), Bridge Grant 834162, (Prof. Eva Kühn, TU Wien, PI), *Coordination Middleware for Wireless Networks of Low Power Nodes (LOPONODE)*, 4/2012 - 5/2014, EUR 443,000.

5. Project Partner, Austrian Research Promotion Agency (FFG), Bridge Grant 827485 (Prof. Andreas Krall, TU Wien, PI), *C3Pro: Correct Compilers for Correct Application Specific Processors*, 10/2010 - 9/2013, EUR 476,000.