

Curriculum Vitae¹

Dr. Stefan WOLTRAN

1 Personal Data

Degrees: Univ.Prof., Dipl.-Ing. (M.Sc.), Dr.techn. (Ph.D.)
Date and place of birth: January 8, 1975, Mödling (Austria)
Citizenship: Austrian citizen
Marital status: unmarried, no children
Current position: Full Professor “Formal Foundations of Artificial Intelligence”
Office and Mailing Address: Institute of Logic and Computation
Database and Artificial Intelligence Group
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2 Education

2008: Habilitation colloquium (for the *venia docendi* in “Information Systems”). Thesis: *Contributions to Advanced Equivalence Checking in Answer Set Programming*.
2001 – 2003: Doctoral Student of Computer Science at TU Wien.
Promotion as a Doctor *technicae* (Ph.D.) with distinction.
Thesis: *Quantified Boolean Formulas - From Theory to Practice*;
(Advisors: Prof. Dr. Uwe Egly and Prof. Dr. Thomas Eiter).
1994 – 2001: Student of Computer Science at TU Wien;
graduation as a Master of Science (M.Sc.) with distinction.
Thesis: *A Framework for Solving Advanced Reasoning Tasks*;
(Advisor: Prof. Dr. Uwe Egly).

3 Professional Record

since 02/2015: Full Professor at the Institute of Logic and Computation,
(formerly Institute of Information Systems),
Database and Artificial Intelligence Group (DBAI), TU Wien.
10/2013 – 02/2014: Deputy Professor at the Institute of Computer Science (Algebraic and
Logical Foundations of Computer Science) at the University of Leipzig.
07/2013 – 01/2015: Associate Professor at the Institute of Information Systems, DBAI, TU Wien.
06/2007 – 07/2013: Assistant Professor (Univ.Ass.), Institute of Information Systems, DBAI, TU Wien.
07/2001 – 05/2007: Research assistant at the Institute of Information Systems,
Knowledge-Based Systems Group (KBS), TU Wien.
06/2003 – 10/2003: Assistant Professor (interim; Univ.Ass.), KBS, TU Wien.

¹CV in German is available under <http://www.dbai.tuwien.ac.at/staff/woltran/>.

4 Project Experience

- **Project leader** (together with G. Brewka):
Advanced Tools for Graph-Based Formal Argumentation;
funded by *DFG – Deutsche Forschungsgemeinschaft* and
FWF – Fonds zur Förderung der wissenschaftlichen Forschung (I2854);
Project start: September 2016. EUR 450,000.
- **Project leader:**
Decodyn: Treating Hard Problems with Decomposition and Dynamic Programming;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung*
(START Programme / Y698);
Project start: June 2014. EUR 1,200,000.
- **Project leader:**
Fragment-Driven Belief Change;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P25521);
Project start: May 2013. EUR 349,000.
- **Project leader:**
Extending the Answer-Set Programming Paradigm to Decomposed Problem Solving;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P25607);
June 2013–June 2017. EUR 280,000.
- **Project leader** (together with G. Brewka):
Abstract Dialectical Frameworks: Advanced Tools for Formal Argumentation;
funded by *DFG – Deutsche Forschungsgemeinschaft* and
FWF – Fonds zur Förderung der wissenschaftlichen Forschung (I1102);
June 2013–December 2016. EUR 470,000.
- **Project leader:**
New Methods for Analyzing, Comparing, and Solving Argumentation Problems;
funded by *WWTF – Wiener Wissenschafts-, Forschungs- und Technologiefonds* (ICT 08-028);
April 2009–October 2012. EUR 280,000.
- **Project leader:**
dynASP - Dynamic Programming and Answer Set Programming;
funded by *TU Wien Programme “Innovative Ideen”* (9006.09/008);
March 2011–July 2014. EUR 90,000.
- **Coordinator:**
New Directions in Abstract Argumentation; bilateral project Austria/Slovakia;
funded by *Slovenská akademická informaná agentúra (SAIA)* and *Österreichischer Austausch-*
dienst (ÖAD); project number 2012-03-15-0001;
Partner: Jozef Siška, Comenius Univ. Bratislava.
September 2012–August 2013. EUR 2,000.

- **Coordinator:**
Complexity of Argumentation; bilateral project Austria/France;
funded by *Österreichischer Austauschdienst (ÖAD)*, *Programme Amadée* (FR 17/2011);
Partner: Nadia Creignou, Univ. Marseille;
January 2011–December 2012. EUR 12,000.
- Collaborator:
EMBAArg: Extending Methods in Belief Change to Advance Dynamics in Argumentation;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P30168);
Project Start: April 2017. EUR 350,000.
Collaborator:
FAIR: Fixed-Parameter Tractability in Artificial Intelligence and Reasoning;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P25518);
Project Start: May 2013. EUR 350,000.
- Collaborator:
SEE: SPARQL Evaluation and Extensions;
funded by *WWTF – Wiener Wissenschafts-, Forschungs- und Technologiefonds* (ICT 12-015);
September 2012–September 2016. EUR 500,000.
- Collaborator:
Towards Tractable Belief Merging; bilateral project Austria/France;
funded by *Österreichischer Austauschdienst (ÖAD)*, *Programme Amadée* (FR 12/2013);
January 2013–December 2014.
- Collaborator:
Service-Oriented Data Integration;
funded by *WWTF – Wiener Wissenschafts-, Forschungs- und Technologiefonds* (ICT 080-032);
April 2009–September 2012.
- Collaborator:
Turning Theoretical Tractability into Efficient Computation via Datalog;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P20704);
September 2008–August 2012.
- Main responsible project assistant:
Formal Methods for Comparing and Optimizing Nonmonotonic Logic Programs;
funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P18019);
April 2005–May 2008.
- Responsible for proposal and coordination at TU Wien:
Optimizing Logic Programs under the Answer-Set Programming Paradigm;
bilateral project Slovakia – Austria; funded by *Slovenská akademická informaná agentúra (SAIA)* and *Österreichischer Austauschdienst (ÖAD)*;
November 2003–December 2004.
- Responsible for coordination at node TU Wien: *WASP: Working Group on Answer Set Programming*;
funded by *European Commission* (IST-FET-2001-37004);
September 2002–September 2005.

- Main responsible project assistant:
QUIP: A Computational Framework for Advanced Reasoning Tasks;
 funded by *FWF – Fonds zur Förderung der wissenschaftlichen Forschung* (P15068);
 July 2001–October 2004.

5 Research Visits

- October 2013–February 2014: Deputy Professor, Univ. Leipzig, Germany.
- October–December 2009: Prof. Gerhard Brewka, Univ. Leipzig, Germany.
- July 2009: Prof. James Delgrande, Simon Fraser University, Canada.
- August 2004/November 2005/December 2007: Prof. Torsten Schaub, Univ. Potsdam, Germany.
- October 2005/February 2007: Prof. David Pearce, Univ. Rey Juan Carlos, Madrid, Spain.
- June 2005: Prof. Nicola Leone, Università della Calabria, Italy.

6 Awards and Honors

- 2013: **FWF START** Award.
- 13th International Conference on Principles of Knowledge Representation and Reasoning (KR'12):
“distinguished student paper prize”.
- 4th International Conference on Web Reasoning and Rule Systems (RR'10):
“best paper award”.
- 3rd International Conference on Computational Models of Argument (COMMA'10):
“best student-paper award” for a joint paper with my PhD student Sarah Alice Gaggl.
- Workshop of the European Working group on Answer Set Programming (ASP'05):
“best implementation-paper award”.
- 2002: **OCG-Förderpreis 2002**, an award for outstanding master theses in the field of Computer Science granted by the Austrian Computer Society (OCG).
- 2001: Research scholarship, TU Wien.
- 2001: Windhagstipendium des Landes Niederösterreich (Lower Austrian scholarship).
- 2000: Research scholarship, TU Wien.

7 Professional Service

- Steering Committee member of *Principles of Knowledge Representation and Reasoning, Incorporated (KR, Inc.)* 2012–2016, *COMMA – Computational Models of Argument*, and *International Workshops on Nonmonotonic Reasoning (NMR)*. Full member of the *Wolfgang Pauli Institute (WPI) Vienna*.
- Program Co-Chair: *14th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2019)*, Philadelphia, USA; *10th International Symposium on Foundations of Information and Knowledge Systems (FoIKS 2018)*, Budapest, Hungary; *14th International Workshop on Non-Monotonic Reasoning (NMR 2012)*, Rome, Italy.
- Editorial Board: *Argument & Computation*, *Journal of Artificial Intelligence Research (JAIR)*.
- Area Editor: *Newsletter of the Association for Logic Programming (2012–2013)*.
- Co-Chair/Local Chair of several conferences and events including: *2nd International Competition on Computational Models of Argumentation (ICCMA'17)*, *1st International Workshop on New Trends in Formal Argumentation (NTFA'17)*, *ÖGAI Award 2013–2016*, *1st International Workshop on Trends and Applications of Answer Set Programming (TAASP'16)*, *1st International Workshop on New Trends in Belief Change (NTBC'16)*, *14th International Conference on Principles of Knowledge Representation and Reasoning (KR'14)*, *14th International Workshop on Computational Logic in Multi-Agent Systems (CLIMA XIV)*, *3rd International Workshop on Graph Structures for Knowledge Representation and Reasoning (GKR'13)*, *International Conference on Computational Models of Argument (COMMA'12)*, *Doctoral Consortium on Logic Programming at ICLP'12 and ICLP'11*, *Workshops on Answer Set Programming and Other Computing Paradigms (ASPOCP'11, ASPOCP'10)*, *MFCS/CSL Satellite Workshop on Parameterized Complexity of Computational Reasoning (PCCR'10)*, *LPNMR-Workshop on Correspondence and Equivalence for Nonmonotonic Theories (CENT)*, and *Workshop on Logic Programming (WLP'06)*.
- Aera-Chair/Senior PC-member: *27th International Joint Conference on Artificial Intelligence (IJCAI 2018)*, *16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018)*, *26th International Joint Conference on Artificial Intelligence (IJCAI 2017)*, *15th International Conference on Principles of Knowledge Representation and Reasoning (KR 2016)*, *24th International Joint Conference on Artificial Intelligence (KR Track) (IJCAI 2015)*, *21st European Conference on Artificial Intelligence (ECAI 2014)*.
- Workshop Chair: *34th International Conference on Logic Programming (ICLP 2018)*.
- PC-member for several international conferences including: *International Joint Conference on Artificial Intelligence (IJCAI)*, *European Conference on Artificial Intelligence (ECAI)*, *AAAI Conference on Artificial Intelligence (AAAI)*, *International Conference on Principles of Knowledge Representation and Reasoning (KR)*, *International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, *International Conference on Logic Programming (ICLP)*, *European Conference on Logics in Artificial Intelligence (JELIA)*, *International Conference on Scalable Uncertainty Management (SUM)*, *International Symposium on Foundations of Information and Knowledge Systems (FoIKS)*, *International Conference on Computational Models of Argument (COMMA)*, *International Conference on Algorithmic Decision Theory (ADT)*, *ACM SIGAPP Symposium On Applied Computing (SAC)*, *International Symposium*

on Practical Aspects of Declarative Languages (PADL), German Conference on Artificial Intelligence (KI), European Starting AI Researcher Symposium (STAIRS), Chinese Conference on Logic and Argumentation (CLAR), International Conference on Industrial, Engineering, Other Applications of Applied Intelligent Systems (IEA/AIE), EPIA Conference on Artificial Intelligence (EPIA), Global Conference on Artificial Intelligence (GCAI), International Workshop on Computational Logic in Multi-Agent Systems (CLIMA), International Symposium on Artificial Intelligence and Mathematics (ISAIM), International Conference on Conceptual Structures (ICCS), International Conference on Agents and Artificial Intelligence (ICAART), Italian Conference on Computational Logic (CILC).

- Reviewing for journals such as Artificial Intelligence (AIJ), ACM Transactions on Computational Logic, Fundamenta Informaticae (FI), Annals of Mathematics and Artificial Intelligence (AMAI), Journal of Artificial Intelligence Research (JAIR), Theory and Practice of Logic Programming (TPLP), The Knowledge Engineering Review (KER), Journal of Applied Non-Classical Logics (JANCL), Semantic Web Journal, International Journal of Approximate Reasoning (IJAR), AI Magazine, AI Communications (AICOM), Journal of Logic and Computation (JLC), IfCoLog Journal of Logics and their Applications, Information Sciences, Argument and Computation, Journal of Computer Science and Technology (JCST), Journal of Philosophical Logic, and Journal of Experimental & Theoretical Artificial Intelligence (JETAI); and for Mathematical Reviews.
- Reviewing for agencies and publishers including GIF (German-Israeli Foundation for Scientific Research and Development), NSERC (Natural Sciences and Engineering Research Council of Canada), ANR (Agence nationale de la recherche), FWO (The Research Foundation - Flanders), Cambridge University Press, and the National Agency for the Evaluation of Universities and Research Institutes (ANVUR).

8 Invited Talks, Lectures, and Panel Discussions

- *AI Technology – New Trends, Old Fears?* Hypernormal Hybrids, Vienna, Austria, November 2017.
- *Towards Preprocessing for Abstract Argumentation Frameworks.* 4th International Workshop on Defeasible and Ampliative Reasoning (DARe 2017), Espoo, Finland, July 2017.
- *Panel Discussion / 1st International Workshop on Practical Aspects of Answer Set Programming (PAoASP 2017),* Espoo, Finland, July 2017.
- *Towards Advanced Systems for Abstract Argumentation.* 1st International Workshop on Systems and Algorithms for Formal Argumentation (SAFA 2016), Potsdam, Germany, September 2016.
- *Dynamic Programming on Tree Decompositions in Practice.* 8th European Starting AI Researcher Symposium (STAIRS 2016), The Hague, Netherlands, August 2016.
- *Dynamic Programming on Tree Decompositions in Practice. Some Lessons Learned.* 17th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2015), Timisoara, Romania, September 2015.
- *On Rejected Arguments and Implicit Conflicts: The Hidden Power of Argumentation Semantics.* Workshop on Change in Argumentation (WCiA@CRIL), Lens, France, September 2015.

- *Comparing the Power of Different Semantics for Abstract Argumentation*. Workshop on the Dynamics of Argumentation, Rules and Conditionals (DARC 2014), Luxembourg, October 2014.
- *Abstract Argumentation – All Problems Solved?* Frontiers of Artificial Intelligence / European Conference on Artificial Intelligence (ECAI 2014). Prague, Czech Republic, August 2014.
- *ASP-based Problem Solving on Tree Decompositions*. Workshop on Logic and Search – LaSh 2014. Vienna, Austria, July 2014.
- *An Introduction to Abstract Argumentation*. ProvenanceWeek 2014 / 6th USENIX Workshop on the Theory and Practice of Provenance. Cologne, Germany, June 2014.
- *Characteristics of Multiple Viewpoints in Abstract Argumentation*. Research Seminar of the DFG Graduate Programme on Quantitative Logics and Automata. Univ. Leipzig, January 2014.
- *Implementation of Argumentation*. ACAI (Advanced Courses in AI) Summer School 2013. King’s College London, July 2013.
- *On the Limits of Expressiveness in Abstract Argumentation Semantics*. Dagstuhl Seminar Nr. 13231 “Belief Change and Argumentation in Multi-Agent Scenarios”, Dagstuhl, June 2013.
- *Characteristics of Argumentation Semantics*. “Logique à Marseille – Camilla Schwind à l’honneur”. Marseille, December, 2012.
- *Complexity-Sensitive Decision Procedures for Abstract Argumentation*. “International Workshop on Formal, Experimental, and Informal Approaches to Argumentation” (FEI2A). Toulouse, May, 2012.
- *Belief Revision within Fragments of Propositional Logic*. Madeira Workshop on “Belief Revision and Argumentation”. Madeira, January 2012.
- *Panel Discussion / 1st International Workshop on the Theory and Applications of Formal Argumentation (TAFA’11)*. Barcelona, July 2011.
- *Computational Aspects of Formal Argumentation*. TU Dresden. Candidate Lecture. Dresden, March 2011.
- *Computational Aspects of Abstract Argumentation*. Helsinki Graduate School in Computer Science and Engineering. Invited Lecture. Helsinki, September 2010.
- *Strong Equivalence in Argumentation (and other KR-Formalisms)*. 11th International Workshop on Computational Logic in Multi-Agent Systems. Invited Talk. Lisbon, August 2010.
- *Deciding Equivalence between Extended Datalog Programs. A Brief Survey*. Datalog 2.0 Workshop, Oxford, U.K., March 2010.
- *Belief Revision with Bounded Treewidth*. Dagstuhl Seminar Nr. 09351 “Information Processing, Rational Belief Change and Social Interaction”, Dagstuhl, August 2009.
- *“In der Informatik geht es genau so wenig um Computer, wie in der Astronomie um Teleskope”*. Invited talk for the event “20 Jahre EDVO-Abteilung in der HTL Wr. Neustadt”, April 2008.

- *On Solution Correspondences in Answer Set Programming: A General Framework (and Characterizations for the Ground Case)*. Dagstuhl Seminar Nr. 05171 “Nonmonotonic Reasoning, Answer Set Programming and Constraints”, Dagstuhl, April 2005.
- *Paraconsistent Reasoning via QBFs*. Dagstuhl Seminar Nr. 03241 “Inconsistency Tolerance”, Dagstuhl, May 2003.
- *On Implementing Nested Logic Programs*. Dagstuhl Seminar Nr. 02381 “Nonmonotonic Reasoning, Answer Set Programming and Constraints”, Dagstuhl, September 2002.

9 University Services

Unless stated otherwise, the following positions all refer to TU Wien.

- *Associated faculty member* of the Doctoral Programme “Logical Methods in Computer Science”.
- *Faculty member* of the Doctoral Programme “Mathematical Logic in Computer Science”.
- Member of the *board of the faculty* of computer science.
- Member of the search committee for a chair in computer-aided verification (2008,2018).
- Head of the search committee for a chair in non-classical logics in computer science.
- Member in habilitation committees.
- External Reviewer/Board Member for PhD Theses:
 - Martin Baláž, Comenius University, Bratislava. August 2017.
 - Gonca Güllü, Universidade Nova de Lisboa, April 2016.
 - Jean-Guy Mailly, Université d’Artois, Lens. September 2015.
 - Jozef Frtús, Comenius University, Bratislava. September 2014.
 - Federico Cerutti, Università degli Studi di Brescia. April 2012.
 - Marco Sirianni, Università degli Studi della Calabria, Rende. February 2012.
 - Roberto Confalonieri, Universitat Politècnica de Catalunya, Barcelona. December 2011.
 - Jozef Síška, Comenius University, Bratislava. November 2010.

10 Teaching Experience

Unless stated otherwise, courses refer to TU Wien.

Lectures/Courses

- “Logic” (2.0h per week), Univ. of Leipzig, winter term (WT) 13/14.
- “Semi-structured Data” (2.0h). Undergraduate course with practical exercises for around 400 students per year; summer term (ST) 08 – ST14.
- “Formal Methods in Computer Science” (4.0h, WT+ST), with Uwe Egly, Gernot Salzer, Helmut Veith, Georg Weissenbacher; since WT14/15.
- “Deductive Databases” (2.0h, WT); WT05/06–WT14/15.
- “Preferences in Artificial Intelligence” (2.0h, ST), with Martin Lackner, since ST 15.
- “Abstract Argumentation” (3.0h), with Uwe Egly, Wolfgang Dvořák, Sarah Gaggl, Johannes Wallner, Thomas Linsbichler; ST10, WT11/12, WT12/13, WT14/15, WT15/16, WT16/17.
- Seminar “Principles of Scientific Work” (2.0h). Undergraduate course for beginners; ST10, ST11, ST13.
- “Complexity Analysis in Knowledge Representation”. Comenius University Bratislava, WT13.
- “Knowledge Representation” (2.0h, WT), with Prof. Gerhard Brewka, Univ. of Leipzig. WT09/10; WT13/14.
- Seminar “Intelligent Systems” (2.0h, WT) with Prof. Gerhard Brewka, Univ. of Leipzig. WT13/14.
- Seminar “Formal Models of Argumentation” (2.0h, WT) with Prof. Gerhard Brewka, Univ. of Leipzig. WT09/10.
- “Logics for Knowledge Representation” (2.0h, ST), with Hans Tompits, ST05–ST07.
- Exercises for the course “Introduction to Knowledge-based Systems” (1.0h, ST), with Michael Fink, ST03.
- Various seminars on logic, AI, etc.

Teaching Assistant

- “Logic-oriented Programming Languages” (2.0h, WT), WT01/02–WT02/03.
- “Data Modelling” (2.0h, WT+ST), ST01.
- “Systems Programming” (2.0h, WT+ST), WT97/98–ST00.

Supervised PhD Theses

- Bernhard Bliem. *Treewidth in Non-Ground Answer Set Solving and Alliance Problems in Graphs*, 2017.
selected as “Ausgezeichnete Informatikdissertationen” by Gesellschaft für Informatik (GI).
(Currently, Bernhard is employed as a post-doc at the University of Helsinki, Finland.)
- Günther Charwat. *BDD-based Dynamic Programming on Tree Decompositions – Towards an Alternative Approach for Efficient QBF Solving*, 2017.
(Currently, Günther Charwat is employed as a post-doc at the Institute of Information Systems, Vienna University of Technology.)
- Sylwia Polberg. *Developing the Abstract Dialectical Framework*, 2017.
(Sylwia Polberg is currently employed as a post-doc at the University College London.)
- Thomas Linsbichler. *Advances in Abstract Argumentation – Expressiveness and Dynamics*, 2017.
(Currently, Thomas Linsbichler is employed as a post-doc at the Institute of Information Systems, Vienna University of Technology.)
- Michael Abseher. *Tailored Tree Decompositions for Efficient Problem Solving*. 2017.
- Christoph Redl. *Answer Set Programming with External Sources: Algorithms and Efficient Evaluation*, 2015. (Co-Supervisor).
(Currently, Christoph Redl is employed as a post-doc at the Institute of Information Systems, Vienna University of Technology.)
- Friedrich Slivovksy. *Structure in #SAT and QBF*, 2015. (Co-Supervisor).
(Currently, Friedrich Slivovksy is employed as a post-doc at the Institute of Computer Graphics and Algorithms, Vienna University of Technology.)
- Johannes Wallner. *Complexity Results and Algorithms for Argumentation – Dung’s Frameworks and Beyond*, 2014.
(Currently, Johannes Wallner is running his own project the Institute of Information Systems, Vienna University of Technology.)
- Sarah Alice Gaggl. *A Comprehensive Analysis of the cf2 Argumentation Semantics: From Characterization to Implementation*, 2013.
(Since April 2013, Sarah Alice Gaggl has a post-doc position at the Research Group “Computational Logic”, Technische Universität Dresden.)
- Stefan Rümmele. *The Parameterized Complexity of Nonmonotonic Reasoning*, 2012. (Co-Supervisor).
(Currently, Stefan Rümmele is employed as a post-doc at the University of Sydney.)
- Wolfgang Dvořák. *Computational Aspects of Abstract Argumentation*, 2012.
selected as “Ausgezeichnete Informatikdissertationen” by Gesellschaft für Informatik (GI).
(From May 2012 to November 2016, Wolfgang Dvořák had a post-doc position at the Research Group “Theory and Applications of Algorithms” at the University of Vienna, Austria. Currently, he is employed as a post-doc at the Institute of Information Systems, Vienna University of Technology.)

- Michael Jakl. *Fixed Parameter Algorithms for Answer Set Programming*, 2010. (Co-Supervisor).
- Martina Seidl. *A Solver for Quantified Boolean Formulas in Negation Normal Form*, 2007. (Co-Supervisor).
selected as “Ausgezeichnete Informatikdissertationen 2007” by Gesellschaft für Informatik (GI). (Since September 2010 Martina Seidl holds a full position at the the Institute for Formal Models and Verification at the Johannes Kepler Universität in Linz, Austria.)

Supervised Master’s Theses

- Atefeh Keshaverzi. *Investigating Subclasses of Abstract Dialectical Frameworks*, 2017.
- Georg Heißenberger. *A System For Advanced Graphical Argumentation Formalisms*, 2016.
- Thomas Ambroz and Andreas Jusits. *Designing a System for Experimental Analysis and Visualization of Dynamic Programming on Tree Decompositions*, 2016.
- Markus Hecher. *Optimizing Second-Level Dynamic Programming Algorithms*, 2015. Awarded with prize “Würdigungspreis” given by the City of Vienna.
- Alina Aleksandrova. *Engineering Data-Aware Commitment-Based Multiagent Systems*, 2015. (Co-Supervisor).
- Marius Moldovan. *Implementing Variations of the Traveling Salesperson Problem in a Declarative Dynamic Programming Environment*, 2015.
- Adrian Haret. *Merging in the Horn fragment*, 2014.
- Martin Diller. *Solving Reasoning Problems on Abstract Dialectical Frameworks via Quantified Boolean Formulas*, 2014.
- Thomas Linsbichler. *On the Limits of Expressiveness in Abstract Argumentation Semantics: Realizability and Signatures*, 2013.
- Michael Abseher. *Solving Shift Design Problems with Answer Set Programming*, 2013.
- Christian Weichselbaum. *Abstract Argumentation and Answer-Set Programming – Modelling the Resolution-Based Grounded Semantics*, 2013.
- Christof Spanring. *Intertranslatability Results for Abstract Argumentation Semantics*, 2013.
- Bernhard Bliem. *Decompose, Guess & Check – Declarative Problem Solving on Tree Decompositions*, 2012. “Distinguished Young Alumnus”-Award given by the faculty of computer science. “Diplomarbeitspreis” given by the city council of Vienna.
- Stefan Ellmauthaler. *Abstract Dialectical Frameworks: Properties, Complexity, and Implementation*, 2012.
- Günther Charwat. *Tree-Decomposition based Algorithms for Abstract Argumentation Frameworks*, 2012. Awarded with the “ÖGAI Preis” of the Austrian Society for Artificial Intelligence.

- Michael Morak. *dynASP - A Dynamic Programming-based Answer-Set Programming Solver*, 2011. Awarded with prize “*Würdigungspreis*” given by the Austrian Ministry for Science and Research and the *OCG Förderpreis* granted by the Austrian Computer Society (OCG).
- Andreas Pfandler. *Decentralized Diagnosis: Complexity Analysis and Datalog Encodings*, 2009. (Co-Supervisor).
- Anna Roubickova. *Complexity of Argumentation*, 2009. (Co-Supervisor).
- Wolfgang Dvořák. *Alternation as a Programming Paradigm*, 2009. (Co-Supervisor).
- Sarah Alice Gaggl. *Solving Argumentation Frameworks using Answer Set Programming*, 2009. (Co-Supervisor).
- Stefan Rümmele. *Efficient Counting with Bounded Treewidth using Datalog*, 2008. (Co-Supervisor). “*Distinguished Young Alumnus*”-Award given by the faculty of computer science.
- Jörg Pührer. *On Debugging of Propositional Answer-Set Programs*, 2007. (Co-Supervisor).
- Andreas Heindl. *On Replacements in Answer-Set Programming based On Partial Evaluation*, 2007. (Co-Supervisor).
- Patrick Traxler. *Techniques for Simplifying Disjunctive Datalog Programs with Negation*, 2006. (Co-Supervisor).
- Michael Zolda. *Comparing Different Prenexing Strategies for Quantified Boolean Formulas*, 2004. (Co-Supervisor).

Current PhD Students and Project Staff

- Günther Charwat (Post-Doc), funded by TUWIEN 9006.09/008 / FWF Y698.
- Martin Diller. funded by FWF I1102 / FWF W1255.
- Johannes Fichte (Post-Doc), funded by FWF Y698.
- Adrian Haret, funded by FWF P25521.
- Markus Hecher, funded by FWF 25706 / FWF Y698.
- Thomas Linsbichler (Post-Doc), funded by FWF I2854 / FWF I1102 / FWF P25521.
- Jan Maly, funded by FWF P25521.
- Marius Moldovan, funded by FWF P25607 / FWF Y698.
- Michael Morak (Post-Doc), funded by FWF Y698.
- Jörg Pührer (Post-Doc), funded by WF I2854.
- Christof Spanring (Post-Doc), funded by FWF I2854 / FWF I1102.

In course of their PhD studies, Wolfgang Dvořák and Sarah Alice Gaggl received the *Best-Student Paper Prize* at NMR'12 for their work “Incorporating Stage Semantics in the SCC-recursive Schema for Argumentation Semantics”. Thomas Linsbichler received the *Best Student Paper Award* at COMMA'14 for his paper on “Splitting Abstract Dialectical Frameworks”. PhD student Sylwia Polberg won the *Best Talk Award* at the 7th European Starting AI Researcher Symposium (STAIRS-2014) for her presentation on “Extension-based Semantics of Abstract Dialectical Frameworks”. Bernhard Bliem was awarded with the “*Best ICLP Doctoral Program Presentation*” at ICLP'17.

Former Project Staff

Michael Abseher, Gerald Berger, Bernard Bliem, Frederico Dusberger, Wolfgang Dvořák, Sarah Alice Gaggl, Martin Kronegger, Martin Lackner, Jean-Guy Mailly, Sylwia Polberg, Stefan Rümmele, Emanuel Sallinger, Johannes Wallner.

11 Publications

Journals

- [1] B. Bliem and S. Woltran. Complexity of Secure Sets. To appear in *Algorithmica*, 2018. DOI: 10.1007/s00453-017-0358-5.
- [2] B. Bliem and S. Woltran. Equivalence between Answer-Set Programs under (partially) fixed Input. To appear in *Annals of Mathematics and Artificial Intelligence*, 2018. DOI: 10.1007/s10472-017-9567-5
- [3] M. Abseher, B. Bliem, G. Charwat, F. Dusberger and S. Woltran. Computing Secure Sets in Graphs using Answer Set Programming. To appear in *Journal of Logic and Computation*, 2018. DOI: 10.1093/logcom/exv060.
- [4] R. Brochenin, T. Linsbichler, M. Maratea, J. Wallner and S. Woltran. Abstract Solvers for Dung’s Argumentation Frameworks. *Argument & Computation* 9(1): 41–72, 2018.
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