Wolfgang Dvořák

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PERSONAL

Date of birth: June 24, 1984

Birthplace: Vienna, Austria

Citizenship: Austrian

Gender: male

EDUCATION

Student of *Technical Mathematics*, Vienna University of Technology, October 2003 - March 2009
Graduated as Diplom-Ingenieur (eq. to M.Sc.) with distinction.

Student of *Computational Intelligence*, Vienna University of Technology April 2009 - December 2009
Graduated as Diplom-Ingenieur (eq. to M.Sc.) with distinction.

Doctoral student in *Computer Science*, Vienna University of Technology, April 2009 - April 2012
Promotion as Doctor technicae (eq. to Dr.Sc.) with distinction.
Thesis: Computational Aspects of Abstract Argumentation
(Advisor: Prof. Dr. Stefan Woltran)

Habilitation (venia docendi) in *Theoretical Computer Science*, University of Vienna July 2017
Thesis: Algorithms and Algorithmic Lower Bounds for Graph Problems from Applications

Participation in International Summer Schools

European Summer School in Logic, Language and Information (ESSLLI'09), July 20-31, 2009
Bordeaux, France.

Advanced Course in Artificial Intelligence (ACAI'09), August 23-29, 2009
Belfast, UK.

European Summer School in Logic, Language and Information (ESSLLI'10), August 9-20, 2010
Copenhagen, Denmark.

EMPLOYMENT

Vienna University of Technology (TU Wien) November 2016 - Present
Postdoctoral Researcher at the Database and AI Group

University of Vienna November 2016 - August 2017
Lecturer for the Theoretical Computer Science Course

University of Vienna May 2012 - October 2016
Postdoctoral Researcher at the Theory and Applications of Algorithms Group
Involved in the projects *Challenges in Graph Algorithms with Applications*, *MULTIPLEX: Foundational Research on Multilevel Complex Networks and Systems*, and *Efficient Algorithms for Computer-Aided Verification*.

Vienna University of Technology (TU Wien) April 2009 - April 2012
Research Assistant at the Database and AI Group,
Employed in the project *New Methods for Analyzing, Comparing, and Solving Argumentation Problems*

Vienna University of Technology (TU Wien) March 2006 - February 2009
Teaching Assistant at the Database and AI Group,
Courses: Data Modeling, Database Systems, Semistructured Data, Database Theory

PROJECT EXPERIENCE

New Methods for Analyzing, Comparing, and Solving Argumentation Problems (2009-2012)
During my PhD I was employed as a research assistant in this WWTF funded project on Formal Argumentation.

MULTIPLEX: Foundational Research on Multilevel Complex Networks and Systems (2012-2016)
MULTIPLEX is a huge project gathering together more than twenty research institutions distributed all over Europe, financed by the European Commission through FET-Proactive.

Challenges in Graph Algorithms with Applications (2014-2016)
I was partially funded by Monika Henzinger's ERC Advanced Grant on Graph Algorithms.

Efficient Algorithms for Computer-Aided Verification (since 2016)
I am a co-applicant (with Monika Henzinger and Krishnendu Chatterjee as PIs) of this WWTF funded project on Algorithms for Computer-Aided Verification.

PUBLICATIONS

Journal Articles

[J19] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. A General Notion of Equivalence for Abstract Argumentation. Artificial Intelligence, 275 (1): Pages 379-410 (2019)

[J18] Wolfgang Dvořák, Jorge Fandinno, Stefan Woltran. On the Expressive Power of Collective Attacks Argument & Computation, Pre-press, doi: 10.3233/AAC-190457

[J17] Wolfgang Dvořák, Paul E. Dunne. Computational Problems in Formal Argumentation and their Complexity. IFCoLog Journal of Logics and Their Applications 4(8): Pages 2557–2622 (2017)

[J16] Sayan Bhattacharya, Wolfgang Dvořák, Monika Henzinger, Martin Starnberger. Welfare Maximization with Friends-of-Friends Network Externalities. Theory of Computing Systems, 61(4): Pages 948–986 (2017)

[J15] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Christof Spanring, Hannes Strass, Stefan Woltran. On rejected arguments and implicit conflicts: The hidden power of argumentation semantics. Artificial Intelligence, 241: Pages 244–284 (2016)

[J14] Wolfgang Dvořák, Christof Spanring. Comparing the Expressiveness of Argumentation Semantics. Journal of Logic and Computation, doi: 10.1093/logcom/exw008

[J13] Wolfgang Dvořák, Monika Henzinger, David P. Williamson. Maximizing a Submodular Function with Viability Constraints. Algorithmica 77(1): Pages 152–172 (2017)

[J12] Paul E. Dunne, Wolfgang Dvořák, Thomas Linsbichler, and Stefan Woltran. Characteristics of Multiple Viewpoints in Abstract Argumentation. Artificial Intelligence 228: Pages 153–178 (2015)

[J11] Martin Caminada, Samy Sà, João Alcântara, and Wolfgang Dvořák. On the Difference between Assumption-Based Argumentation and Abstract Argumentation. IFCoLog Journal of Logic and its Applications 2(1): Pages 15–34 (2015).

[J10] Martin Caminada, Samy Sà, João Alcântara, and Wolfgang Dvořák. On the equivalence between logic programming semantics and argumentation semantics. International Journal of Approximate Reasoning 58, Pages 87–111 (2015).

[J9] Günther Charwat, Wolfgang Dvořák, Sarah A. Gaggl, Johannes P. Wallner, and Stefan Woltran. Methods for Solving Reasoning Problems in Abstract Argumentation - A Survey. Artificial Intelligence 220(1), Pages 28–63 (2015).

[J8] Martin Caminada, Wolfgang Dvořák, Srdjan Vesic. Preferred Semantics as Socratic Discussion. Journal of Logic and Computation 26 (4), Pages 1257–1292 (2016).

[J7] Wolfgang Dvořák, Sarah Alice Gaggl. Stage Semantics and the SCC-recursive Schema for Argumentation Semantics. Journal of Logic and Computation 26 (4), Pages 1149–1202 (2016).

[J6] Wolfgang Dvořák, Matti Järvisalo, Johannes Wallner, Stefan Woltran. Complexity-Sensitive Decision Procedures for Abstract Argumentation. Artificial Intelligence, 206, Pages 53–78 (2014).

[J5] Paul E. Dunne, Wolfgang Dvořák, Stefan Woltran. Parametric properties of ideal semantics. Artificial Intelligence 202, Pages 1–28 (2013).

[J4] Wolfgang Dvořák, Reinhard Pichler, Stefan Woltran. Towards Fixed-Parameter Tractable Algorithms for Abstract Argumentation. Artificial Intelligence 186, Pages 1–37 (2012).

[J3] Wolfgang Dvořák, Stefan Szeider, Sebastion Ordyniak. Augmenting Tractable Fragments of Abstract Argumentation. Artificial Intelligence 186, Pages 157–173 (2012).

[J2] Wolfgang Dvořák, Stefan Woltran. On the Intertranslatability of Argumentation Semantics. Journal of Artificial Intelligence Research 41, Pages 445–475 (2011).

[J1] Wolfgang Dvořák, Stefan Woltran. Complexity of Semi-Stable and Stage Semantics in Argumentation Frameworks. Information Processing Letters 110(11), Pages 425–430 (2010).

Conference Papers and Posters

[C43] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Alexander Svozil. Near-linear time algorithms for Streett objectives in Graphs and MDPs. The 30th International Conference on Concurrency Theory (CONCUR 2019), pages 7:1–7:16

[C42] Wolfgang Dvořák, Matti Järvisalo, Thomas Linsbichler, Andreas Niskanen, Stefan Woltran. Preprocessing Argumentation Frameworks via Replacement Patterns. 16th edition of the European Conference on Logics in Artificial Intelligence (JELIA 2019), pages 116–132

[C41] Wolfgang Dvořák, Stefan Woltran. Complexity of Abstract Argumentation Under a Claim-centric View. Thirty-Third AAAI Conference on Artificial Intelligence (AAAI-19), pages 2801-2808

[C40] Martin Diller, Wolfgang Dvořák, Jörg Pührer, Johannes P. Wallner, Stefan Woltran. Applications of ASP in Formal Argumentation. Second Workshop on Trends and Applications of Answer Set Programming (TAASP 18)

[C39] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Alexander Svozil. Quasipolynomial Set-Based Symbolic Algorithms for Parity Games. 22nd International Conference on Logic for Programming Artificial Intelligence and Reasoning (LPAR-22), pages 233–253

[C38] Wolfgang Dvořák, Alexander Greßler, Stefan Woltran. Evaluating SETAFs via Answer-Set Programming The Second International Workshop on Systems and Algorithms for Formal Argumentation (SAFA 2018), pages 22–35

[C37] Wolfgang Dvořák, Jorge Fandinno, Stefan Woltran On the Expressive Power of Collective Attacks 7th International Conference on Computational Models of Argument (COMMA 2018), pages 49–60

[C36] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Alexander Svozil. Algorithms and Conditional Lower bounds for Planning Problems. The 28th International Conference on Automated Planning and Scheduling (ICAPS 2018), pages 56–64

[C35] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Lower Bounds for Symbolic Computation on Graphs: Strongly Connected Components, Liveness, Safety, and Diameter. ACM-SIAM Symposium on Discrete Algorithms (SODA 2018), pages 2341–2356

[C34] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Improved Set-based Symbolic Algorithms for Parity Games. In Proceedings of the 26th Computer Science Logic (CSL 2017), pages 18:1–18:21

[C33] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. A General Notion of Equivalence for Abstract Argumentation. In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI 2017), pages 800-806

[C32] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Conditionally Optimal Algorithms for Generalized Büchi Games. In Proceedings of the 41st International Symposium on Mathematical Foundations of Computer Science (MFCS 2016), pages 25:1-25:15

[C31] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Model and Objective Separation with Conditional Lower Bounds: Disjunction is Harder than Conjunction. In Proceedings of the Thirty-First Annual ACM/IEEE Symposium on Logic in Computer Science (LICS), pages 197–206, 2016

[C30] Wolfgang Dvořák, Matti Järvisalo, Johannes Peter Wallner and Stefan Woltran. Complexity-Sensitive Decision Procedures for Abstract Argumentation (Extended Abstract). In Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence (IJCAI 2015), pages 4173–4177, 2015

[C29] Wolfgang Dvořák, Matti Järvisalo, Johannes Peter Wallner and Stefan Woltran. CEGARTIX v0.4: A SAT-Based Counter-Example Guided Argumentation Reasoning Tool. In System Descriptions of the First International Competition on Computational Models of Argumentation (ICCMA'15), CoRR abs/1510.05373 (2015)

[C28] Sayan Bhattacharya, Wolfgang Dvořák, Monika Henzinger, Martin Starnberger. Welfare Maximization with Friends-of-Friends Network Externalities. In Proceedings of the 32nd Symposium on Theoretical Aspects of Computer Science (STACS'15), pages 90–102, 2015

[C27] Luděk Cigler, Wolfgang Dvořák, Monika Henzinger, Martin Starnberger. Limiting Price Discrimination when Selling Products with Positive Network Externalities. In Proceedings of the 10th Conference on Web and Internet Economics (WINE'14), pages 44–57, 2014

[C26] Wolfgang Dvořák, Monika Henzinger. Online Ad Assignment with an Ad Exchange. In Proceedings of the 12th Workshop on Approximation and Online Algorithms (WAOA'14), LNCS 8952, Springer, 2015, pages 156–167

[C25] Wolfgang Dvořák, Thomas Linsbichler, Emilia Oikarinen, Stefan Woltran. Resolution-based grounded semantics revisited. In Proceedings of the Fifth International Conference on Computational Models of Argument (COMMA 2014)

[C24] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Hannes Strass, Stefan Woltran. Compact Argumentation Frameworks. In Proceedings of the 21st European Conference on Artificial Intelligence (ECAI'14), pages 69–74,2014

[C23] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Hannes Strass, Stefan Woltran. Compact Argumentation Frameworks. In Proceedings of the 15th International Workshop on Non-Monotonic Reasoning (NMR 2014), 2014

[C22] Paul E. Dunne, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. Characteristics of Multiple Viewpoints in Abstract Argumentation. In Proceedings of the 14th International Conference on Principles of Knowledge Representation and Reasoning (KR2014), pages 72–81, 2014

[C21] Wolfgang Dvořák, Sarah Alice Gaggl, Johannes Peter Wallner and Stefan Woltran. Making Use of Advances in Answer-Set Programming for Abstract Argumentation Systems. In Proceedings of the 19th International Conference on Applications of Declarative Programming and Knowledge Management, INAP 2011, revised selected papers, pages 114–133, 2013

[C20] Wolfgang Dvořák, Michael Morak, Clemens Nopp and Stefan Woltran. dynPARTIX - A Dynamic Programming Reasoner for Abstract Argumentation. In Proceedings of the 19th International Conference on Applications of Declarative Programming and Knowledge Management, INAP 2011, revised selected papers, pages 259–268, 2013

[C19] Martin Caminada, Samy Sá, João Alcântara, and Wolfgang Dvořák. On the Difference between Assumption-Based Argumentation and Abstract Argumentation. In Proceedings of the 25th Benelux Conference on Artificial Intelligence (BNAIC 2013), pages 25–32

[C18] Paul E. Dunne, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. Characteristics of Multiple Viewpoints in Abstract Argumentation. 4th Workshop on Dynamics of Knowledge and Belief

[C17] Wolfgang Dvořák, Monika Henzinger, David P. Williamson. Maximizing a Submodular Function with Viability Constraints. In Proceedings of the 21st European Symposium on Algorithms (ESA 2013), pages 409-420

[C16] Wolfgang Dvořák, Stefan Szeider, Stefan Woltran. Abstract Argumentation via Monadic Second Order Logic. In Proceedings of the 6th International Conference on Scalable Uncertainty Management (SUM 2012), LNCS 7520, Springer: 85–98

[C15] Wolfgang Dvořák, Christof Spanring. Comparing the Expressiveness of Argumentation Semantics. In Proceedings of the Fourth International Conference on Computational Models of Argument (COMMA 2012): 261–272

[C14] Wolfgang Dvořák, Sarah Alice Gaggl. Computational Aspects of cf2 and stage2 Argumentation Semantics. In Proceedings of the Fourth International Conference on Computational Models of Argument (COMMA 2012): 273–284

[C13] Günther Charwat, Wolfgang Dvořák. dynPARTIX 2.0 - Dynamic Programming Argumentation Reasoning Tool. In Proceedings of the Fourth International Conference on Computational Models of Argument (COMMA 2012): 507–508

[C12] Wolfgang Dvořák, Matti Järvisalo, Johannes Peter Wallner and Stefan Woltran. CEGARTIX: A SAT-Based Argumentation System. PoS 2012 workshop

[C11] Wolfgang Dvořák, Sarah Alice Gaggl. Incorporating Stage Semantics in the SCC-recursive Schema for Argumentation Semantics. In Proceedings of the 14th International Workshop on Non-Monotonic Reasoning (NMR 2012), 2012

[C10] Wolfgang Dvořák, Matti Järvisalo, Johannes Wallner, Stefan Woltran. Complexity-Sensitive Decision Procedures for Abstract Argumentation. In Proceedings of the 13th International Conference on the Principles of Knowledge Representation and Reasoning (KR'12), 2012: 54–64

[C9] Wolfgang Dvořák, Sarah Alice Gaggl, Johannes Wallner, Stefan Woltran. Making Use of Advances in Answer-Set Programming for Abstract Argumentation Systems. In Proceedings of the 19th International Conference on Applications of Declarative Programming and Knowledge Management (INAP 2011), 2011: 117–130

[C8] Wolfgang Dvořák, Michael Morak, Clemens Nopp, Stefan Woltran. dynPARTIX - A Dynamic Programming Reasoner for Abstract Argumentation. In Proceedings of the 19th International Conference on Applications of Declarative Programming and Knowledge Management (INAP 2011), 2011: 78–82

[C7] Wolfgang Dvořák. On the Complexity of Computing the Justification Status of an Argument. First International Workshop on the Theory and Applications of Formal Argumentation (TAFA), LNCS 7132, Springer, 2012, pages 32–49

[C6] Wolfgang Dvořák, Paul E. Dunne, Stefan Woltran. Parametric Properties of Ideal Semantics. In Proceedings of the Twenty-Second International Joint Conference on Artificial Intelligence (IJCAI 2011), 2011: 851–856.

[C5] Wolfgang Dvořák, Stefan Woltran. On the Intertranslatability of Argumentation Semantics. In Proceedings of the Conference on Thirty Years of Noncmonotonic Reasoning (NONMON@30), 2010

[C4] Wolfgang Dvořák, Stefan Szeider, Stefan Woltran. Reasoning in Argumentation Frameworks of Bounded Clique-Width. In Proceedings of the Third International Conference on Computational Models of Argument (COMMA 2010), 2010: 219–230

[C3] Wolfgang Dvořák, Reinhard Pichler, Stefan Woltran. Towards Fixed-Parameter Tractable Algorithms for Argumentation. In Proceedings of the 12th International Conference on the Principles of Knowledge Representation and Reasoning (KR'10), 2010: 112–122

[C2] Wolfgang Dvořák. Poster: Argumentation with Bounded Tree-Width. Advanced Course in Artificial Intelligence (ACAI'09) Poster Session

[C1] Wolfgang Dvořák, Georg Gottlob, Reinhard Pichler, Stefan Woltran. Alternation as a Programming Paradigm. In Proceedings of the 11th ACM SIGPLAN Conference on Principles and Practice of Declarative Programming (PPDP'09), ACM, 2009: 61–72

Theses, Book Contributions

[B6] Wolfgang Dvořák, Paul E. Dunne. Computational Problems in Formal Argumentation and their Complexity. In Handbook of Formal Argumentation, pages 631-688, 2018

[B5] Wolfgang Dvořák, Sarah Alice Gaggl, Thomas Linsbichler, Johannes Peter Wallner. Reduction-Based Approaches to Implement Modgil's Extended Argumentation Frameworks. In Advances in Knowledge Representation, Logic Programming, and Abstract Argumentation. (Festschrift in honor of Gerhard Brewka on the occasion of his 60th birthday), pages 249-264, 2015

[B4] Wolfgang Dvořák. Computationale Aspekte der Abstrakten Argumentation. (in German) In Sammelband Ausgezeichnete Informatikdissertationen 2012, Lecture Notes in Informatics (LNI D-13), pages 61-70, 2013.

[B3] Wolfgang Dvořák, Sarah Alice Gaggl, Stefan Szeider, Stefan Woltran. Benchmark libraries for argumentation. In Agreement Technologies, volume 8 of LGTS, chapter The Added Value of Argumentation, pages 389-393. Springer, 2013.

[B2] Ringo Baumann, Gerhard Brewka, Wolfgang Dvořák, Stefan Woltran. Parameterized Splitting: A Simple Modification-Based Approach. Correct Reasoning - Essays on Logic-Based AI in Honour of Vladimir Lifschitz, LNCS 7265, Springer, 2012, pages 57-71

[B1] Wolfgang Dvořák. Computational Aspects of Abstract Argumentation. PhD Thesis, Technische Universität Wien, 2012

Technical Reports

[R22] Wolfgang Dvořák, Anna Rapberger, Stefan Woltran. Strong Equivalence for Argumentation Frameworks with Collective Attacks Technical Report DBAI-TR-2019-116, Technische Universität Wien, Database and Artificial Intelligence Group, 2019.

[R21] Wolfgang Dvořák, Alexander Greßler, Stefan Woltran. Evaluating SETAFs via Answer-Set Programming Technical Report DBAI-TR-2018-112, Technische Universität Wien, Database and Artificial Intelligence Group, 2018.

[R20] Wolfgang Dvořák, Jorge Fandinno, Stefan Woltran On the Expressive Power of Collective Attacks Technical Report DBAI-TR-2018-111, Technische Universität Wien, Database and Artificial Intelligence Group, 2018.

[R19] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Alexander Svozil. Algorithms and Conditional Lower bounds for Planning Problems. CoRR abs/1804.07031, 2018.

[R18] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Lower Bounds for Symbolic Computation on Graphs: Strongly Connected Components, Liveness, Safety, and Diameter. CoRR abs/1711.09148, 2017.

[R17] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Improved Set-based Symbolic Algorithms for Parity Games. CoRR abs/1706.04889, 2017.

[R16] Wolfgang Dvořák. Technical Note: On the Complexity of the Uniqueness Problem in Abstract Argumentation Technical Report DBAI-TR-2017-108, Technische Universität Wien, Database and Artificial Intelligence Group, 2017.

[R15] Ringo Baumann, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. A General Notion of Equivalence for Abstract Argumentation. Technical Report DBAI-TR-2017-105, Technische Universität Wien, Database and Artificial Intelligence Group, 2017.

[R14] Wolfgang Dvořák, Monika Henzinger, David P. Williamson. Maximizing a Submodular Function with Viability Constraints. CoRR abs/1611.05753, 2016.

[R13] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Conditionally Optimal Algorithms for Generalized Büchi Games. CoRR abs/1607.05850, 2016.

[R12] Wolfgang Dvořák, Monika Henzinger. Online Ad Assignment with an Ad Exchange. CoRR abs/1604.05603, 2016.

[R11] Krishnendu Chatterjee, Wolfgang Dvořák, Monika Henzinger, Veronika Loitzenbauer. Model and Objective Separation with Conditional Lower Bounds: Disjunction is Harder than Conjunction. CoRR abs/1602.02670, 2016.

[R10] Wolfgang Dvořák, Christof Spanring. Comparing the Expressiveness of Argumentation Semantics. Technical Report DBAI-TR-2012-90, Technische Universität Wien, Database and Artificial Intelligence Group, 2015.

[R9] Paul E. Dunne, Wolfgang Dvořák, Thomas Linsbichler, Stefan Woltran. Characteristics of Multiple Viewpoints in Abstract Argumentation. Technical Report DBAI-TR-2012-89, Technische Universität Wien, Database and Artificial Intelligence Group, 2015.

[R8] Günther Charwat, Wolfgang Dvořák, Sarah Alice Gaggl, Johannes Wallner, and Stefan Woltran. Implementing Abstract Argumentation - A Survey. Technical Report DBAI-TR-2013-82, Technische Universität Wien, Database and Artificial Intelligence Group, 2013.

[R7] Wolfgang Dvořák, Stefan Szeider, Stefan Woltran. Abstract Argumentation via Monadic Second Order Logic. Technical Report DBAI-TR-2012-79, Technische Universität Wien, Database and Artificial Intelligence Group, 2012.

[R6] Wolfgang Dvořák, Sarah Alice Gaggl. Incorporating Stage Semantics in the SCC-recursive Schema for Argumentation Semantics. Technical Report DBAI-TR-2012-78, Technische Universität Wien, Database and Artificial Intelligence Group, 2012.

[R5] Wolfgang Dvořák. Technical Note: Exploring Σ_2^P / Π_2^P -hardness for Argumentation Problems with fixed distance to tractable classes. CoRR, 2012, abs/1201.0478

[R4] Wolfgang Dvořák, Reinhard Pichler, Stefan Woltran. Towards Fixed-Parameter Tractable Algorithms for Abstract Argumentation. Technical Report DBAI-TR-2008-74, Technische Universität Wien, Database and Artificial Intelligence Group, 2011.

[R3] Wolfgang Dvořák, Sarah Gaggl, Johannes Wallner, Stefan Woltran. Making Use of Advances in Answer-Set Programming for Abstract Argumentation Systems. Technical Report DBAI-TR-2011-70, Technische Universität Wien, 2011.

[R2] Wolfgang Dvořák, Stefan Woltran. Technical Note: Complexity of Stage Semantics in Argumentation Frameworks. Technical Report DBAI-TR-2009-66, Technische Universität Wien, Database and Artificial Intelligence Group, 2009

[R1] Wolfgang Dvořák, Georg Gottlob, Reinhard Pichler, Stefan Woltran. Alternation as a Programming Paradigm. Technical Report DBAI-TR-2008-64, Technische Universität Wien, Database and Artificial Intelligence Group, 2009

TEACHING

Courses

"Advanced Algorithms" at the University of Vienna (2012)

"Theoretical Computer Science" at the University of Vienna (2013 – 2017)

"Introduction to Scientific Computing" at the University of Vienna (2015)

"Database Systems" at the University of Vienna (2013)

"Abstract Argumentation" at TU Wien (2011, 2017 –)

"Semistructured Data" at TU Wien (2017 –)

"Formal Methods in Computer Science" at TU Wien (2017 –)

"Argumentation and Proof" at TU Wien (2019 –)

"Seminar of Artificial Intelligence" at TU Wien (2018 –)

I have also been *teaching assistant* at the *Database and AI group* at TU Wien (2006 – 2009), and was involved in the courses Data Modeling, Database Systems, Semistructured Data, and Database Theory.

Co-Supervised Theses

Alexander Greßler - Argumentation Frameworks with Claims and Collective Attacks (master thesis)

Patrick Bellositz - Advancements in Equivalence Checking for Abstract Argumentation Frameworks (master thesis)

Thomas Linsbichler - Advances in Abstract Argumentation - Expressiveness and Dynamics (PhD thesis)

Johannes P. Wallner - Complexity Results and Algorithms for Argumentation (PhD thesis)

Thomas Linsbichler - On the Limits of Expressiveness in Abstract Argumentation Semantics: Realizability and Signatures (master thesis)

Christof Spanring - Intertranslatability Results for Argumentation Semantics. (master thesis)

Günther Charwat - Tree-Decomposition based Algorithms for Abstract Argumentation. (master thesis)

OTHER SCIENTIFIC ACTIVITIES

Reviewing

PC-member: IJCAI 2011, IJCAI 2013, CLIMA 2013, GKR@IJCAI 2013, ECAI 2014, IJCAI 2015, KR 2016, COMMA 2016, SAFA 2016, IJCAI 2017, ICAART 2018, KRR@SAC 2018, IJCAI 2018, COMMA 2018, SAFA 2018, AAAI 2019, KRR@SAC 2019, IJCAI 2019, AAAI 2000

Reviewer: Artificial Intelligence Journal, Journal of Artificial Intelligence Research, Journal of Logic and Computation, Journal of Applied Logic, Argument & Computation, International Journal of Approximate Reasoning, Fundamenta Informaticae, Theory and Practice of Logic Programming, Journal of Computer and System Sciences, ECAI 2010, LPNMR 2011, ECSQARU 2011, AAAI 2011, ICAART 2012, FOIKS 2012, CP 2012, JELIA 2012, CLIMA 2014, JELIA 2014, AAAI-15, ICALP 2015, AAAI-16, JELIA 2016, SODA 2017, STOC 2017, MFCS 2017, LICS 2018, KR 2018, STACS 2019, ICLP 2019

Award Committees

Member of the VCLA International Student Awards 2019 committee

University Services

ERASMUS Departmental coordinator, (2018 –)

Member of the *board of the faculty* (Fakultätskonferenz) of Computer Science, University of Vienna, 2014–2016.

Substitute Member of the *Curricular Committee* (Studienkonferenz) of Computer Science, University of Vienna, 2014–2016.

Scientific Talks

[T32] *Complexity of Abstract Argumentation under a Claim-Centric View* - AAAI'19, Jan 29, 2019

[T31] *Lower Bounds for Symbolic Computation on Graphs* - HALG'18, June 4, 2018

[T30] *Quasipolynomial Set-based Symbolic Algorithms for Parity Games* - JKU Linz, April 9, 2018

[T29] *Lower Bounds for Symbolic Computation on Graphs* - Helmut Veith Memorial Workshop, Jan. 29, 2018

[T28] *A General Notion of Equivalence for Abstract Argumentation* - KI'17, Sept. 27, 2017

[T27] *Improved Set-based Symbolic Algorithms for Parity Games* - CSL'17, August 22, 2017

[T26] *Algorithms and Algorithmic Lower Bounds for Graph Problems from Applications* - Habilitation Colloquium (University of Vienna), June 29, 2017

[T25] *Computationale Aspekte der Abstrakten Argumentation* - Hearing for the Heinz Zemanek Preis 2016, OCG, Wien, Oct 12, 2016

[T24] *Conditionally Optimal Algorithms for Generalized Büchi Games.* - MFCS'16, Krakow, Aug. 22, 2016

[T23] *Model and Objective Separation with Conditional Lower Bounds: Disjunction is Harder than Conjunction* - LICS'16, New York City, July 5, 2016

[T22] *Computational problems in formal argumentation and their complexity* - Schloss Dagstuhl, Sept 2, 2015

[T21] *Welfare Maximization with Friends-of-Friends Network Externalities* - TU Wien, May 18, 2015

[T20] *Welfare Maximization with Friends-of-Friends Network Externalities* - STACS'15, Munich, March 7, 2015

[T19] *Online Ad Assignment with an Ad Exchange* - WAOA'14, Wrocław, Sept 12, 2014

[T18] *Uniform Price Strategies to Exploit Positive Network Externalities* - Medical University of Vienna, Jan. 31, 2014

[T17] *Uniform Price Strategies to Exploit Positive Network Externalities* - TU Dresden, Dec 17, 2013

[T16] *Complexity-Sensitive Decision Procedures for Abstract Argumentation* - TU Dresden, Dec 17, 2013

[T15] *Maximizing a Submodular Function with Viability Constraints.* - ESA'13, Sept 4, 2013

[T14] *Computationale Aspekte der Abstrakten Argumentation* - Kolloquium zum GI Dissertationspreis, May 6, 2013

[T13] *Abstract Argumentation via Monadic Second Order Logic* - SUM'12, Sept. 17, 2012

[T12] *Computational Aspects of cf2 and stage2 Argumentation Semantics.* - COMMA'12, Sept. 11, 2012

[T11] *Complexity-Sensitive Decision Procedures for Abstract Argumentation* - KR'12, June 14, 2012

[T10] *Computational Aspects of Abstract Argumentation* - PhD Defense (Vienna University of Technology), April 11, 2012

[T9] *Parameterized Splitting - A Simple Modification-Based Approach* - Argumentation Seminar (Comenius University in Bratislava), Jan. 30, 2012

[T8] *dynPARTIX - A Dynamic Programming Reasoner for Abstract Argumentation* - INAP'11, Sept. 28, 2011

[T7] *Parametric Properties of Ideal Semantics* - IJCAI'11, July 22, 2011

[T6] *On the Complexity of Computing the Justification Status of an Argument* - TAFA'11, July 17, 2011

[T5] *On the Intertranslatability of Argumentation Semantics* - London Argumentation Forum (LAF), March 25, 2011

[T4] *On the Intertranslatability of Argumentation Semantics* - Argumentation Christmas Meeting Vienna, Dec. 7, 2010

[T3] *Reasoning in Argumentation Frameworks of Bounded Clique-Width* - COMMA'10, Sept. 20, 2010

[T2] *Towards Fixed-Parameter Tractable Algorithms for Argumentation* - KR'10, May 12, 2010

[T1] *Alternation as a programming paradigm* - PPDP'09, Sept. 7, 2009

GRANTS & AWARDS

Certificate of Appreciation from the Faculty of Computer Science (University of Vienna) for significant contributions in the category A/B Publication Strategy Period 2016.

Shortlisted for the Heinz Zemanek Award 2016, for excellent degree dissertations in the field of informatics and related areas.

Certificate of Appreciation from the Faculty of Computer Science (University of Vienna) for significant contributions in the category A/B Publication Strategy Period 2015.

Honorable Mention at ICCMA 2015 for our system CEGARTIX (see [C29]).

Certificate of Appreciation from the Faculty of Computer Science (University of Vienna) for significant contributions in the category A/B Publication Strategy Period 2014.

Nomination for the GI-Dissertations Preis 2012 (see [B5])

Distinguished Student Paper Prize at KR 2012 (see [C10])

Best Student Paper Award at NMR 2012 (see [C11])

IJCAI Travel Grant for attending IJCAI 2011

COST Travel Award for attending the London Argumentation Forum (LAF) in March 2011

ECCAI Travel Award for attending ACAI 2009

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