Curriculum Vitae of Johannes Peter Wallner

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Education

2024 **Habilitation** (venia docendi) in Theoretical Computer Science, Graz University of Technology. Thesis: *Computational Aspects of Formal Argumentation*.

2011 – 2014 **Ph.D. study** at TU Wien. Received degree: Dr. techn., passed with distinction (28.5.2014). Thesis: *Complexity Results and Algorithms for Argumentation - Dung's Frameworks and Beyond*. Supervisors: Prof. Dr. Stefan Woltran and Assoc. Prof. Georg Weissenbacher, D.Phil.; Assistance: Dr. Wolfgang Dvořák.

2008 – 2010 **Master study** "Computational Intelligence" at TU Wien. Received degree: Dipl.-Ing. (comparable to Master of Science), passed with distinction (9.12.2010). Thesis: *A Hybrid Approach for Model-Based Random Testing*. Supervisors: Prof. Dr. Franz Wotawa and Dr. Bernhard Peischl.

2003 – 2008 **Bachelor study** "Software & Information Engineering" at TU Wien. Received degree: Bachelor of Science (14.2.2008).

Doctoral programme, visited summer schools, and certificate

2011 – 2014 Participation in doctoral programme *Mathematical Logic in Computer Science* at TU Wien.

02/2014 Advanced winter school on reasoning engines for rigorous system engineering, ReRiSE 2014, Linz, Austria.

07/2013 Advanced course on AI (ACAI) 2013 summer school; student session topic: *Advanced procedures for hard problems in abstract argumentation*, London, UK.

06/2012 Doctoral consortium at the thirteenth conference on Principles of Knowledge Representation and Reasoning (KR) 2012. Topic: *Computational properties of abstract dialectical frameworks*, Rome, Italy.

2010 ISTQB certified tester (foundation level).

Academic working experience

10/2024 – present	**Associate professor** in the Institute of Institute of Software Engineering and Artificial Intelligence, **TU Graz**.
06/2021 – 09/2024	**Assistant professor** in the Institute of Software Technology, **TU Graz**.
12/2020 – 05/2021	**University assistant** in the Institute of Software Technology, **TU Graz**.
04/2017 – 2021	**Principle investigator** in the Database and AI group, **TU Wien**. Project: *Extending Belief Change to Advance Dynamics in Argumentation*. Funded by Austrian Science Fund (FWF) through project P30168. `http://www.dbai.tuwien.ac.at/proj/embarg/`
01/2017 – 04/2017	**Project assistant** in the Database and AI group, **TU Wien**. Project: *A Semantical Framework for Graph-Based Argument Processing*. Funded by Deutsche Forschungsgemeinschaft (DFG) and Austrian Science Fund (FWF) through project I2854. Project leaders: Prof. Dr. Gerhard Brewka and Prof. Dr. Stefan Woltran.
04/2015 – 12/2016	**Project assistant** in the Constraint Reasoning and Optimization group, Department of Computer Science / HIIT, **University of Helsinki**. Project: *Decision Procedures for the Polynomial Hierarchy, Boolean Optimization, and Model Counting*. Funded by Academy of Finland. Project leader: Prof. Dr. Matti Järvisalo.
07/2014 – 04/2015	**Project assistant** in the Database and AI group, **TU Wien**. Project: *Fragment-Driven Belief Change*. Funded by Austrian Science Fund (FWF) through project P25521. Project leader: Prof. Dr. Stefan Woltran.
06/2013 – 06/2014	**Project assistant** in the Database and AI group, **TU Wien**. International project (Germany/Austria): *Abstract Dialectical Frameworks: Advanced Tools for Formal Argumentation*. Funded by Deutsche Forschungsgemeinschaft (DFG) and Austrian Science Fund (FWF) through project I1102. Project leaders: Prof. Dr. Gerhard Brewka and Prof. Dr. Stefan Woltran.
09/2012 – 05/2013	**Project assistant** in the Database and AI group, **TU Wien**. Project: *SEE: SPARQL Evaluation and Extensions*. Funded by WWTF – Wiener Wissenschafts-, Forschungs- und Technologiefonds (ICT 12-015). Project leader: Prof. Dr. Reinhard Pichler.
05/2011 – 08/2012	**Project assistant** in the Database and AI group, **TU Wien**. Project: *New Methods for Analyzing, Comparing, and Solving Argumentation Problems*. Funded by WWTF – Wiener Wissenschafts-, Forschungs- und Technologiefonds (ICT 08-028). Project leader: Prof. Dr. Stefan Woltran.

Other project activities

2012 – 2013 Project member in bilateral project Austria/Slovakia Project: *New Directions in Abstract Argumentation*. Funded by Slovenská akademická informaná agentúra (SAIA) and Österreichischer Austauschdienst (ÖAD); project number 2012-03-15-0001. Project coordinators: RNDr. Jozef Šiška, Comenius Univ. Bratislava and Prof. Dr. Stefan Woltran.

Professional activities

Reviewing activities

- Member of the Program Committee Board of IJCAI (2022–2024).
- Senior program committee member (SPC) of IJCAI 2021.
- Program committee member (PC) of **AAAI** (2018-2021, 2023-2025), **IJCAI** (2015-2023), **KR** (2018, 2020, 2021, & 2022), and **COMMA** (2016, 2018, 2020, & 2022). In details, I was on the PC of
  - 2025: AAAI, ICAPS, JELIA, SAC,
  - 2024: AAAI, IJCAI, ECAI, UAI, LPNMR, COMMA, SAC, PADL, ASPOCP, ArgXAI, SAFA, FCR, RCRA,
  - 2023: AAAI, IJCAI, KR, ECAI, JELIA, SAC, RCRA, FCR,
  - 2022: IJCAI, KR, UAI, COMMA, LPNMR, SAC (KRR track), ASPOCP, ArgXAI, RCRA, FCR,
  - 2021: AAAI, UAI, KR, SAC (KRR track), ASPOCP,
  - 2020: AAAI, IJCAI, KR, ECAI, COMMA, SAC (KRR track), STAIRS, ASPOCP, SAFA,
  - 2019: AAAI, IJCAI, AAMAS (main track), LPNMR, SAC (KRR track), RCRA, ASPOCP,
  - 2018: AAAI, IJCAI, KR, COMMA, SAFA, RCRA,
  - 2017: IJCAI, IEA/AIE (track Applications of Argumentation), RCRA, TAFA,
  - 2016: IJCAI (main track), COMMA, RCRA, SAFA, TAASP,
  - 2015: IJCAI (KR track), and RCRA.
- Reviewing for journals:
  - AI Communications (2019 & 2024)
  - Argument & Computation (special issues in 2016 & 2019, and 2022),
  - Artificial Intelligence (2015, 2017, 2019, 2021, & 2022),
  - Journal of Artificial Intelligence Research (2019, 2020, & 2021),

  - Journal of Heuristics (2021),
  - Journal of Logic and Computation (2020),
  - Fundamenta Informaticae (special issues in 2016 and 2018),
  - IfCoLog Journal of Logics and their Applications (2017),
  - International Journal of Approximate Reasoning (2015, 2017, 2019, & 2023),
  - Knowledge and Information Systems (2017), and
  - Theory and Practice of Logic Programming (special issues in 2017,2019, 2021, 2023, & 2024).
- Member of the editorial board of Argument and Computation.
- Further reviewing activities (e.g., sub reviewer for conferences):
  - IEA/AIE 2019, ACM Symposium on Applied Computing 2017 (KRR track), AAAI 2016, ICDT 2015, LPNMR 2015, PhDs in Logic VII, KR 2014, ESSLLI 2013, CILC 2013, LPNMR 2013, and ECAI 2012.

Organization activities

- Co-Chair of the Doctoral Consortium at KR 2024.
- Member of IJCAI 2022 local organization team (part of workshop and tutorial coordination).
- Co-organizer of the workshop on "Recent Advances in Collaborative and Argumentative Decision-Making", Vienna.
- Co-organizer of the SAFA 2022 workshop, Cardiff.
- Co-organizer of the workshop on "New Trends in Formal Argumentation 2017", Vienna.
- Fourth ASP Competition 2013, member of organizing committee.

Invitations

17/09/2024 *Reasoning in Structured Argumentation: Assumption-based Argumentation and ASPIC+* invited talk at the Fifth International Workshop on Systems and Algorithms for Formal Argumentation at FernUnversität in Hagen.

07/08/2024 *Computational Argumentation: Reasoning, Dynamics, and Supporting Explainability* invited to the Early Career track at IJCAI 2024.

09/07/2024 *Instantiations and Computational Aspects of Assumption-based Argumentation* invited talk at the Workshop on Recent Trends in Formal Argumentation workshop at TU Wien.

15/12/2022 *Computation in Structured Argumentation: to Instantiate or not to Instantiate?* invited talk at Oberseminar of the Artificial Intelligence Group at FernUnversität in Hagen.

Further activities and memberships

- Member of appointment committee ("Berufungskommission") for
  - Data Management at TU Graz,
  - Foundations of Computer Science (deputy), and
  - Computational Discrete Mathematics (deputy) at TU Graz.
- National expert for proficiency evaluation at TU Wien for Matthias König and Simon Wietheger.
- Member of the International Competition on Computational Models of Argumentation (ICCMA) steering committee (role: vice president)
- AAAI 2020 Student Abstract and Poster Program, program committee member.
- Member of the Austrian Society for Artificial Intelligence (ASAI).
- Vienna Center for Logic and Algorithms (VCLA) Award Committee member for student awards 2019, 2020, 2021.
- Assistance in writing project proposal (co-author): *Abstract Dialectical Frameworks: Advanced Tools for Formal Argumentation*. Funded by Deutsche Forschungsgemeinschaft (DFG) and Austrian Science Fund (FWF) through project I1102.

Research visits

10/2025	Planned: Prof. Jean-Guy Mailly, Université Toulouse Capitole
09/2024	Prof. Dr. Matthias Thimm, FernUnversität Hagen
03/2018	Prof. Dr. Matti Järvisalo, University of Helsinki
04 – 06/2012	Prof. Dr. Gerhard Brewka, Leipzig University

Scientific talks

02/12/2024 *Computational Argumentation: Reasoning, Dynamics, and Explainability:* habilitation talk at 20 years celebration of Faculty of Computer Science and Biomedical Engineering at Graz University of Technology

05/11/2024 *Complexity Results and Algorithms for Preferential Argumentative Reasoning in ASPIC+*. KR'24

17/09/2024 *Reasoning in Structured Argumentation: Assumption-based Argumentation and ASPIC+:* invited talk at the Fifth International Workshop on Algorithms and Formal Argumentation

17/09/2024 *Presentation of the Sixth International Competition on Computational Models of Argumentation (ICCMA'25)* at the Fifth International Workshop on Algorithms and Formal Argumentation

07/08/2024 *Computational Argumentation: Reasoning, Dynamics, and Supporting Explainability:* invited to the Early Career Track at IJCAI'24

09/07/2024 *Instantiations and Computational Aspects of Assumption-based Argumentation:* invited talk at the Workshop on Recent Trends in Formal Argumentation at TU Wien

08/09/2023 *Argumentation Frameworks induced by Assumption-based Argumentation: Relating Size and Complexity.* KR'23

06/03/2023 *Manipulating Skeptical and Credulous Consequences when Merging Beliefs.* Talk at the Vienna-Graz workshop on Computational Social Choice 2023

15/12/2022 *Computation in Structured Argumentation: to Instantiate or not to Instantiate?* invited talk at Oberseminar of the Artificial Intelligence Group at FernUnversität Hagen

14/09/2022 *Strongly Accepting Subframeworks: Connecting Abstract and Structured Argumentation.* COMMA'22

23/05/2022 *Existential Abstraction on Argumentation Frameworks via Clustering.* NAVAS workshop on Navigation Approaches for Answer Sets 2022

12/11/2021 *Existential Abstraction on Argumentation Frameworks via Clustering.* KR'21

11/09/2020 *Computing Strongly Admissible Sets.* COMMA'20

30/04/2019 *Reasoning over Assumption-Based Argumentation Frameworks via Direct Answer Set Programming Encodings.* Second workshop on "New Trends of Formal Argumentation"

12/09/2018 *Structural Constraints for Dynamic Operators in Abstract Argumentation.* COMMA'18

10/04/2018 *Strategic manipulation when merging argumentation frameworks.* AMANDE Workshop on "Argument strength"

17/08/2017 *From structured to abstract argumentation: assumption-based acceptance via AF reasoning.* Workshop on "New Trends of Formal Argumentation"

12/07/2017 *From structured to abstract argumentation: assumption-based acceptance via AF reasoning.* ECSQARU'17

10/04/2017 *Synthesizing Argumentation Frameworks from Examples.* Workshop on "Formal Argumentation in Online Discussions"

27/04/2016 *Implicit Hitting Set Algorithms for Reasoning Beyond NP.* KR'16

15/02/2016 *Complexity Results and Algorithms for Extension Enforcement in Abstract Argumentation.* AAAI'16

29/07/2015 *Complexity-Sensitive Decision Procedures for Abstract Argumentation.* IJCAI'15

25/07/2015 *Abstract Solvers for Dung's Argumentation Frameworks.* TAFA'15

22/07/2014	*Analyzing the Computational Complexity of Abstract Dialectical Frameworks via Approximation Fixpoint Theory*. KR'14
16/09/2013	*Advanced SAT Techniques for Abstract Argumentation*. CLIMA'13
05/07/2013	*SAT-based Argumentation Systems*. Advanced Course on AI (ACAI) 2013, student session.
02/04/2012	*Knowledge Base Change and Abstract Dialectical Frameworks*. Dynamics of Argumentation, Rules and Conditionals (DARC) workshop
28/09/2011	*Making Use of Advances in Answer-Set Programming for Abstract Argumentation Systems*. INAP'11
23/08/2010	*A hybrid approach for model-based random testing*. VALID'10

Awards and grants

- Early Career Track invitation by IJCAI 2024.
- Project funding (PI): *A Novel Computational Workflow for Argumentation in AI*. Funded by Austrian Science Fund (FWF) under grant P 35632.
- Project funding (PI): *Extending Belief Change to Advance Dynamics in Argumentation*. Funded by Austrian Science Fund (FWF) under grant P30168-N31.
- IJCAI 2019 Distinguished Program Committee member, "Discussion Master" award for ECAI 2023.
- Runner-Up Best Student Paper Award at ECAI 2016
- Honorable mention from International Competition on Computational Models of Argumentation (ICCMA) 2015 for participating solver *cegartix*
- ECCAI Travel Award for attending ACAI 2013
- Grant for attending doctoral consortium at KR 2012
- Distinguished student paper prize for "Complexity-Sensitive Decision Procedures for Abstract Argumentation" at KR 2012

Teaching

Summer 2025	Course "Basics in Artificial Intelligence and Logic" at TU Graz
Summer 2025	Course "Intelligent Systems" at TU Graz
Winter 2024	Course "Foundations of Computer Science" at TU Graz
Winter 2024	Course "Logic-based Knowledge Representation" at TU Graz
Summer 2024	Course "Basics in Artificial Intelligence and Logic" at TU Graz
Winter 2023	Course "Logic-based Knowledge Representation" at TU Graz

Winter 2023	temporary replacement for ”Grundlagen der Informatik“ at FH Campus02 and FH Joanneum
Summer 2023	Course ”Basics in Artificial Intelligence and Logic“ at TU Graz
Winter 2022	Course ”Logic-based Knowledge Representation“ at TU Graz
Winter 2022	temporary replacement for ”Grundlagen der Informatik“ at FH Campus02 and FH Joanneum
Summer 2022	Course ”Basics in Artificial Intelligence and Logic“ at TU Graz
Summer 2021	Course ”Basics in Artificial Intelligence and Logic“ at TU Graz
Winter 2020	Course ”Data Base Systems“ at TU Wien
Winter 2019	Course ”Abstract Argumentation“ at TU Wien
Winter 2018	Course ”Abstract Argumentation“ at TU Wien
Winter 2017	Course ”Abstract Argumentation“ at TU Wien
Period i-ii 2016	”Seminar on Computational Social Choice“ at University of Helsinki
Period i 2016	Course ”Scientific Writing for MSc in Computer Science“ at University of Helsinki
Period i-ii 2015	”Seminar on Tractability“ at University of Helsinki
Period iv 2015	Guest lecture for ”Satisfiability, Boolean Modeling and Computation“ at University of Helsinki
Winter 2014	Course ”Abstract Argumentation“ at TU Wien
Winter 2012	Course ”Abstract Argumentation“ at TU Wien

Co-supervised PhD thesis

- Tuomo Lehtonen, *Computational Approaches to Reasoning in Structured Argumentation*, University of Helsinki, 2023

Co-supervised master's theses

- Mathias Hofer, *Towards Parallel Algorithms for Abstract Dialectical Frameworks*, TU Wien, 2022
- Tuomo Lehtonen, *Reasoning over Assumption-Based Argumentation Frameworks via Answer Set Programming*, University of Helsinki, 2019 (2nd instructor)
- Andreas Niskanen, *Enforcement in Abstract Argumentation via Boolean Optimization*, University of Helsinki, 2016 (2nd instructor)
- Martin Diller, *Solving Reasoning Problems on Abstract Dialectical Frameworks via Quantified Boolean Formulas*, TU Wien, 2014
- Stefan Ellmauthaler, *Abstract Dialectical Frameworks: Properties, Complexity, and Implementation*, TU Wien, 2012

Current PhD students are Iosif Apostolakis and Andrei Popescu.

Languages

- German
- English

Publications

Publication summary Wallner's publication record includes 55 peer-reviewed publications in proceedings of conferences (among these seven papers in **IJCAI**, thirteen papers in **KR**, and seven papers in **AAAI**), seventeen publications in international journals (e.g. five in **Artificial Intelligence** and three in the **Journal of Artificial Intelligence Research**), four contributions to books (e.g. in the **Handbook of Formal Argumentation**), and nine publications in peer-reviewed proceedings of workshops. Topic-wise, Wallner published on diverse fields in, or related to, knowledge representation and reasoning within AI: formal argumentation, belief change, inconsistency measures, computational social choice, satisfiability solving, answer set programming, and abduction, and has worked on algorithms, computational complexity, formal foundations, and implementations for formal models in KR. Google scholar citation metrics for Wallner's profile shows 1885 citations, an h-index of 22, and an i10-index of 41 (as of July 15, 2024).

Online profiles are available at:

- Google Scholar
  `https://scholar.google.at/citations?user=MNjnPt4AAAAJ&hl=en`
- DBLP
  `http://dblp.uni-trier.de/pers/hd/w/Wallner:Johannes_Peter`

Journals

Author ordering in the following list is alphabetical, except for [j16, j14, j12, j7].

[j17] Thomas Linsbichler, Andreas Niskanen, Marco Maratea, Johannes P. Wallner, and Stefan Woltran. Advanced Algorithms for Abstract Dialectical Frameworks based on Complexity Analysis of Subclasses and SAT Solving. *Artificial Intelligence*, 307:103697, 2022.

[j16] Tuomo Lehtonen, Johannes P. Wallner, and Matti Järvisalo. Harnessing Incremental Answer Set Solving for Reasoning in Assumption-Based Argumentation. *Theory and Practice of Logic Programming*, 21(6):717–734, 2021.

[j15] Ringo Baumann, Sylvie Doutre, Jean-Guy Mailly, and Johannes P. Wallner. Enforcement in Formal Argumentation. *Journal of Applied Logics - IfCoLog Journal of Logics and their Applications*, 8(6):1623–1677, 2021.

[j14] Tuomo Lehtonen, Johannes P. Wallner, and Matti Järvisalo. Declarative Algorithms and Complexity Results for Assumption-Based Argumentation. *Journal of Artificial Intelligence Research*, 71:265–318, 2021.

[j13] Johannes P. Wallner. Structural Constraints for Dynamic Operators in Abstract Argumentation. *Argument & Computation*, 11(1-2):151–190, 2020.

[j12] Andreas Niskanen, Johannes P. Wallner, and Matti Järvisalo. Synthesizing Argumentation Frameworks from Examples. *Journal of Artificial Intelligence Research*, 66:503–554, 2019.

[j11] Matthias Thimm and Johannes P. Wallner. On the complexity of inconsistency measurement. *Artificial Intelligence*, 275:411–456, 2019.

[j10] Rémi Brochenin, Thomas Linsbichler, Marco Maratea, Johannes P. Wallner, and Stefan Woltran. Abstract Solvers for Dung's Argumentation Frameworks. *Argument & Computation*, 9(1):41–72, 2018.

[j9] Federico Cerutti, Sarah A. Gaggl, Matthias Thimm, and Johannes P. Wallner. Foundations of implementations for formal argumentation. *IfCoLog Journal of Logics and their Applications*, 4(8):2623–2705, 2017.

[j8] Gerhard Brewka, Stefan Ellmauthaler, Hannes Strass, Johannes P. Wallner, and Stefan Woltran. Abstract dialectical frameworks. An overview. *IfCoLog Journal of Logics and their Applications*, 4(8):2263–2317, 2017.

[j7] Johannes P. Wallner, Andreas Niskanen, and Matti Järvisalo. Complexity Results and Algorithms for Extension Enforcement in Abstract Argumentation. *Journal of Artificial Intelligence Research*, 60:1–40, 2017.

[j6] 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*, 220:28–63, 2015.

[j5] Martin Diller, Johannes P. Wallner, and Stefan Woltran. Reasoning in abstract dialectical frameworks using quantified Boolean formulas. *Argument & Computation*, 6(2):149–177, 2015.

[j4] Sarah A. Gaggl, Norbert Manthey, Alessandro Ronca, Johannes P. Wallner, and Stefan Woltran. Improved answer-set programming encodings for abstract argumentation. *Theory and Practice of Logic Programming*, 15(4–5):434–448, 7 2015.

[j3] Hannes Strass and Johannes P. Wallner. Analyzing the Computational Complexity of Abstract Dialectical Frameworks via Approximation Fixpoint Theory. *Artificial Intelligence*, 226:34–74, 2015.

[j2] Wolfgang Dvořák, Matti Järvisalo, Johannes P. Wallner, and Stefan Woltran. Complexity-sensitive decision procedures for abstract argumentation. *Artificial Intelligence*, 206:53–78, 2014.

[j1] Axel Polleres and Johannes P. Wallner. On the relation between SPARQL1.1 and answer set programming. *Journal of Applied Non-Classical Logics*, 23(1–2):159–212, 2013.

Publications in conference proceedings (peer reviewed)

Author ordering in the following list is alphabetical, except

for [c52, c50, c47, c42, c41, c38, c31, c26, c25, c20, c19, c18, c17, c16, c14].

[c56] Andrei Popescu and Johannes P. Wallner. Dynamic Programming Algorithms for Probabilistic Bipolar Argumentation Frameworks Accepted to SAC (KRR track) 2025.

[c55] Iosif Apostolakis, Zeynep G. Saribatur, and Johannes P. Wallner. A Semantical Approach to Abstraction in Answer Set Programming and Assumption-based Argumentation. In Carmine Dodaro, Gopal Gupta, and Maria Vanina Martinez, editors, *Proceedings of the 17th International Conference on Logic Programming and Non-monotonic Reasoning, LPNMR 2024*, volume 15245 of *Lecture Notes in Computer Science* pages 228–234, Dallas, USA, 2024. Springer.

[c54] Andrei Popescu and Johannes P. Wallner. Advancing Algorithmic Approaches to Probabilistic Argumentation under the Constellation Approach. In Pierre Marquis, Magdalena Ortiz, and Maurice Pagnucco, editors, *Proceedings of the 21st International Conference on Principles of Knowledge Representation and Reasoning, KR 2024*, pages 585–596, 2024. IJCAI.

[c53] Iosif Apostolakis, Zeynep G. Saribatur, and Johannes P. Wallner. Abstraction in Assumption-based Argumentation. In Pierre Marquis, Magdalena Ortiz, and Maurice Pagnucco, editors, *Proceedings of the 21st International Conference on Principles of Knowledge Representation and Reasoning, KR 2024*, pages 49–59, 2024. IJCAI.

[c52] Tuomo Lehtonen, Daphne Odekerken, Johannes P. Wallner, and Matti Järvisalo. Complexity Results and Algorithms for Preferential Argumentative Reasoning in ASPIC+. In Pierre Marquis, Magdalena Ortiz, and Maurice Pagnucco, editors, *Proceedings of the 21st International Conference on Principles of Knowledge Representation and Reasoning, KR 2024*, pages 520–530, 2024. IJCAI.

[c51] Atefeh Keshavarzi Zafarghandi and Johannes P. Wallner. Complexity of Semi-Stable Semantics in Abstract Dialectical Frameworks. *Proceedings of the Tenth International Conference on Computational Models of Argument, COMMA 2024*, volume 388 of *Frontiers in Artificial Intelligence and Applications* pages 109–120, Hagen, Germany, 2024. IOS Press.

[c50] Tuomo Lehtonen, Anna Rapberger, Francesca Toni, Markus Ulbricht, and Johannes P. Wallner. On Computing Admissibility in ABA. *Proceedings of the Tenth International Conference on Computational Models of Argument, COMMA 2024*, volume 388 of *Frontiers in Artificial Intelligence and Applications* pages 121–132, Hagen, Germany, 2024. IOS Press.

[c49] Johannes P. Wallner, Adam Wyner, and Tomasz Zurek. Value-based Reasoning in ASPIC+. *Proceedings of the Tenth International Conference on Computational Models of Argument, COMMA 2024*, volume 388 of *Frontiers in Artificial Intelligence and Applications* pages 325–336, Hagen, Germany, 2024. IOS Press.

[c48] Johannes P. Wallner. Computational Argumentation: Reasoning, Dynamics, and Supporting Explainability (extended abstract). In Kate Larson, editor, *Proceedings of the 33rd International Joint Conference on Artificial Intelligence, IJCAI 2024*, pages 8583–8588, Jeju, South Korea, August 2024. IJCAI.

[c47] Tuomo Lehtonen, Anna Rapberger, Francesca Toni, Markus Ulbricht, and Johannes P. Wallner. Instantiations and Computational Aspects of Non-Flat Assumption-based Argumentation. In Kate Larson, editor, *Proceedings of the 33rd International Joint Conference on Artificial Intelligence, IJCAI 2024*, pages 3457–3465, Jeju, South Korea, August 2024. IJCAI.

[c46] Kenneth Skiba, Matthias Thimm, and Johannes P. Wallner. Ranking Transition-based Medical Recommendations using Assumption-based Argumentation. In Philipp Cimiano, Anette Frank, Michael Kohlhase, and Benno Stein editors, *Proceedings of the First International Conference on Recent Advances in Robust Argumentation Machines, RATIO 2024*, volume 14638 of *Lecture Notes in Computer Science* pages 202-220, Bielefeld, Germany, 2024. Springer.

[c45] Iosif Apostolakis, Zeynep G. Saribatur, and Johannes P. Wallner. Abstracting Assumptions in Structured Argumentation. In Mehdi Dastani, Jaime Simão Sichman, Natasha Alechina, and Virginia Dignum, editors, *Proceedings of the 23rd International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2024*, pages 2722–2724, 2024. IFAAMAS.

[c44] Andrei Popescu and Johannes P. Wallner. Reasoning in Assumption-based Argumentation using Tree-decompositions. In Sarah Gaggl, Vanina Martinez, and Magdalena Ortiz, editors, *Proceedings of the 18th European Conference on Logics in Artificial Intelligence, JELIA 2023*, volume 14281 of *Lecture Notes in Computer Science* pages 192–208, Dresden, Germany, 2023. Springer.

[c43] Tuomo Lehtonen, Anna Rapberger, Markus Ulbricht, and Johannes P. Wallner. Argumentation Frameworks induced by Assumption-based Argumentation: Relating Size and Complexity. In Pierre Marquis, Tran Cao Son, and Gabriele Kern-Isberner, editors, *Proceedings of the 20th International Conference on Principles of Knowledge Representation and Reasoning, KR 2023*, pages 440–450, 2023. IJCAI.

[c42] Daphne Odekerken, Tuomo Lehtonen, AnneMarie Borg, Johannes P. Wallner, and Matti Järvisalo. Argumentative Reasoning in ASPIC+ under Incomplete Information. In Pierre Marquis, Tran Cao Son, and Gabriele Kern-Isberner, editors, *Proceedings of the 20th International Conference on Principles of Knowledge Representation and Reasoning, KR 2023*, pages 531–541, 2023. IJCAI.

[c41] Tuomo Lehtonen, Johannes P. Wallner, and Matti Järvisalo. Algorithms for Reasoning in a Default Logic Instantiation of Assumption-Based Argumentation. In Francesca Toni, Sylwia Polberg, Richard Booth, Martin Caminada, and Hiroyuki Kido, editors, *Proceedings of the Ninth International Conference on Computational Models of Argument, COMMA*

2022, volume 353 of *Frontiers in Artificial Intelligence and Applications* pages 236–247, 2022. IOS Press.

[c40] Markus Ulbricht and Johannes P. Wallner. Strongly Accepting Subframeworks: Connecting Abstract and Structured Argumentation. In Francesca Toni, Sylwia Polberg, Richard Booth, Martin Caminada, and Hiroyuki Kido, editors, *Proceedings of the Ninth International Conference on Computational Models of Argument, COMMA 2022*, volume 353 of *Frontiers in Artificial Intelligence and Applications* pages 320–331, 2022. IOS Press.

[c39] Stefan Ellmauthaler, Sarah A. Gaggl, Dominik Rusovac, and Johannes P. Wallner. Representing Abstract Dialectical Frameworks with Binary Decision Diagrams. In Georg Gottlob, Daniela Inclezan, Marco Maratea, editors, *Proceedings of the 16th International Conference on Logic Programming and Non-monotonic Reasoning, LPNMR 2022*, volume 13416 of *Lecture Notes in Computer Science* pages 177–189, Genova Nervi, Italy, September 2022. Springer.

[c38] Tuomo Lehtonen, Johannes P. Wallner, and Matti Järvisalo. Computing Stable Conclusions under the Weakest-Link Principle in the ASPIC+ Argumentation Formalism. In Gabriele Kern-Isberner, Gerhard Lakemeyer, and Thomas Meyer, editors, *Proceedings of the 19th International Conference on Principles of Knowledge Representation and Reasoning, KR 2022*, pages 215–225, 2022. IJCAI.

[c37] Adrian Haret and Johannes P. Wallner. An Axiomatic Approach to Revising Preferences. *Proceedings of the 36th AAAI Conference on Artificial Intelligence, AAAI 2022*, pages 5676–5683. AAAI Press.

[c36] Zeynep G. Saribatur and Johannes P. Wallner. Existential Abstraction on Argumentation Frameworks via Clustering. In Meghyn Bienvenu, Gerhard Lakemeyer, and Esra Erdem, editors, *Proceedings of the 18th International Conference on Principles of Knowledge Representation and Reasoning, KR 2021*, pages 549–559, 2021. IJCAI.

[c35] Jan Maly and Johannes P. Wallner. Ranking Sets of Defeasible Elements in Preferential Approaches to Structured Argumentation: Postulates, Relations, and Characterizations. *Proceedings of the 35th AAAI Conference on Artificial Intelligence, AAAI 2021*, pages 6435–6443. AAAI Press.

[c34] Markus Ulbricht and Johannes P. Wallner. Strong Explanations in Abstract Argumentation. *Proceedings of the 35th AAAI Conference on Artificial Intelligence, AAAI 2021*, pages 6496–6504. AAAI Press.

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