

Jaroslav Bendík

curriculum vitæ

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Education

- 2016–present **Masaryk University**, Brno, Czech Republic.
Ph.D. candidate in Computer Systems and Technologies
Ph.D thesis (submitted): [Minimal Sets over a Monotone Predicate: Enumeration and Counting](#)
Supervisor: prof. Ivana Černá
- 2018 **Masaryk University**, Brno, Czech Republic.
RNDr. (M.Sc. degree) in Parallel and Distributed Systems
Thesis: *Algorithms for Finding Minimal Unsatisfiable Subsets*
- 2016 **Masaryk University**, Brno, Czech Republic.
Mgr. (master degree) in Parallel and Distributed Systems
Thesis: *Algorithms for Finding Maximal Satisfiable Sets of Constraints*
- 2014 **Masaryk University**, Brno, Czech Republic.
Bc. (bachelor degree) in Applied Informatics
Thesis: *Cycle Detection in Dynamic Graphs*

Research Interests

Formal methods, constraint processing, analysis of infeasible constraint systems, SAT and SMT solving, requirements analysis, software verification, symbolic and explicit model checking, timed automata.

Work and Internship Experience

- 2013–present **Parallel & Distributed Systems Laboratory**, Masaryk University, Brno, Czech Republic.
research laboratory member
- October 2019 **National University of Singapore**, Singapore.
academic stay (4 weeks)
- Jan–Mar 2019 **Automated Reasoning Group, Amazon**, Minneapolis, USA.
SDE internship (12 weeks)
- 2016–2019 **ECSEL Joint Undertaking project AMASS**, Masaryk University, Brno, Czech Republic.
part-time research assistant
- Autumn 2017 **University of Minnesota**, Minneapolis, USA.
academic stay (2 weeks)
- 2015 **ARTEMIS Joint Undertaking project CRYSTAL**, Masaryk University, Brno, Czech Republic.
part-time research assistant

Teaching Experience

- 2015–present **Masaryk University**, Brno, Czech Republic.
Introduction to Programming and Algorithms II seminar tutor (Spring 2020)
Introduction to Programming seminar tutor (Autumn 2016, Autumn 2017)
Algorithms and Data Structures II seminar tutor (Spring 2016 - now)
Introduction to Programming using Python seminar tutor (Autumn 2015)
Algorithms and Data Structures I seminar tutor (Spring 2015)

Other Academic Experience

- 2019–present **Masaryk University**, Brno, Czech Republic.
member of Academic Senate
- 2018–present **Masaryk University**, *Faculty of Informatics*, Brno, Czech Republic.
member of the faculty Academic Senate
- 2016–present **Subreviewer of computer science conference papers.**
SEFM'16, FMICS-AVoCS'16, FMICS-AVoCS'17, CONCUR'19, SAT'20, TACAS'21

Language Skills

- Czech native language
- English fluent (Cambridge certificate C1)

Appreciation of Science Community

- 2018 **13th International Conference on Software Technologies.**
Best student paper award
- 2016 **Masaryk University**, *Faculty of Informatics*, Brno, Czech Republic.
Dean's award

Publications

- 2021 Jaroslav Bendík and Kuldeep S. Meel. “Counting Maximal Satisfiable Subsets”. In: *AAAI (to appear)*. 2021.
- Jaroslav Bendík, Ahmet Sencan, Ebru Aydin Gol, and Ivana Černá. “Timed Automata Relaxation for Reachability”. In: *TACAS (to appear)*. 2021.
- 2020 Jaroslav Bendík and Ivana Černá. “MUST: Minimal Unsatisfiable Subsets Enumeration Tool”. In: *TACAS*. 2020, pp. 135–152.
- Jaroslav Bendík and Ivana Černá. “Replication-Guided Enumeration of Minimal Unsatisfiable Subsets”. In: *CP*. 2020, pp. 37–54.
- Jaroslav Bendík and Ivana Černá. “Rotation Based MSS/MCS Enumeration”. In: *LPAR*. 2020, pp. 120–137.
- Jaroslav Bendík and Kuldeep S. Meel. “Approximate Counting of Minimal Unsatisfiable Subsets”. In: *CAV*. 2020, pp. 439–462.

- 2018 Jaroslav Bendík, Nikola Beneš, and Ivana Černá. “Finding Regressions in Projects under Version Control Systems”. In: *ICSOFT*. 2018, pp. 186–197.
- Jaroslav Bendík and Ivana Černá. “Evaluation of Domain Agnostic Approaches for Enumeration of Minimal Unsatisfiable Subsets”. In: *LPAR*. 2018, pp. 131–142.
- Jaroslav Bendík, Ivana Černá, and Nikola Beneš. “Recursive Online Enumeration of All Minimal Unsatisfiable Subsets”. In: *ATVA*. 2018, pp. 143–159.
- Jaroslav Bendík, Elaheh Ghassabani, Michael W. Whalen, and Ivana Černá. “Online Enumeration of All Minimal Inductive Validity Cores”. In: *SEFM*. 2018, pp. 189–204.
- 2017 Jaroslav Bendík. “Consistency Checking in Requirements Analysis”. In: *ISSTA (doctoral symposium)*. 2017, pp. 408–411.
- 2016 Jaroslav Bendík, Nikola Beneš, Jiří Barnat, and Ivana Černá. “Finding Boundary Elements in Ordered Sets with Application to Safety and Requirements Analysis”. In: *SEFM*. 2016, pp. 121–136.
- Jaroslav Bendík, Nikola Beneš, Ivana Černá, and Jiří Barnat. “Tunable Online MUS/MSS Enumeration”. In: *FSTTCS*. 2016, 50:1–50:13.

References

- Ivana Černá **Masaryk University, Faculty of Informatics**, Brno, Czech Republic.
email: cerna@muni.cz
- Kuldeep S. **National University of Singapore, School of Computing**, Singapore.
Meel email: meel@comp.nus.edu.sg
- Mike Whalen **Automated Reasoning Group, Amazon**.
email: mww@amazon.com