Marijana Lazić

Curriculum Vitae

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Personal Information

Born	May 6, 1988 in Šabac, Serbia
Nationality	Serbian
Languages	Serbian (native), English (fluent), German (intermediate) and Spanish (basic knowledge)
Address	Technische Universität München Institut für Informatik (I7) Boltzmannstraße 3 85748 Garching b. München, Germany
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Education

2015-2019	**Ph.D. studies in Computer Science**, *Technische Universität Wien, Austria*.
Thesis	Reduction Techniques for Parameterized Model Checking and Synthesis of Fault-Tolerant Distributed Algorithms
Supervisors	Privatdoz. Dr. Josef Widder and Privatdoz. Dr. Igor Konnov
	(Initially supervised by Prof. Dr. Helmut Veith✝)
GPA	1 (Excellent), Passed with Distinctions
2011–2012	**Master studies in Mathematics**, *University of Novi Sad, Serbia*.
Prof. title	Master Professor in Mathematics
GPA	9.61/10 (Excellent)
Thesis	Power structures and Multialgebras
Supervisor	Prof. Dr. Rozalia Madarasz Szilagyi
2007–2011	**Bachelor studies in Mathematics**, *University of Novi Sad, Serbia*.
Prof. title	Bachelor with Honors in Mathematics Teaching
GPA	9.47/10 (Exceptionally good)

Work Experience

06/2019– Postdoctoral Researcher, *Institut für Informatik (I7), Technische Universität*
Present *München*, with Prof. Javier Esparza.
- Teaching assistant in *Automata and Formal Languages*, Winter semesters 2019/2020, 2020/2021 and 2022/2023
- Teaching assistant in *Logic*, Summer semester 2020 (online)
- June 2021 – June 2022 on maternity leave

02/2015– Project Assistant, *"Formal Methods in Systems Engineering", Institut for Informa-*
05/2019 *tion Systems 184/4, Technische Universität Wien, Vienna, Austria*.
- Teaching assistant in *Formal Methods in Computer Science*, Winter semester 2018/2019

2013–2015 Teaching Assistant, *University of Novi Sad, Novi Sad, Serbia*.
- *Algebra 1* (Applied Mathematics, Graduate Professor of Mathematics)
- *Algebra 2* (Applied Mathematics)
- *Algebra for students of informatics* (Information Technologies)
- *Business Mathematics* (Geography, Tourism and Hotel Management)
- *Geometry 1* (Graduate Professor of Mathematics)
- *Theoretical Foundations of Mathematics 1* (Information Technologies)
- *Theoretical Foundations of Mathematics 2, Automata theory* (Information Technologies)

06/2014– Project Assistant, *Institute for Algebra, Johannes Kepler University, Linz, Austria*.
08/2014

Publications

2022 Nathalie Bertrand, Vincent Gramoli, Igor Konnov, Marijana Lazic, Pierre Tholoniat, and Josef Widder. Holistic verification of blockchain consensus. In *DISC*, 2022. To appear.

2022 Nathalie Bertrand, Vincent Gramoli, Igor Konnov, Marijana Lazic, Pierre Tholoniat, and Josef Widder. Brief announcement: Holistic verification of blockchain consensus. In *PODC*, pages 424–426. ACM, 2022.

2021 Hans van Ditmarsch, Éric Goubault, Marijana Lazić, Jérémy Ledent, and Sergio Rajsbaum. A dynamic epistemic logic analysis of equality negation and other epistemic covering tasks. *Journal of Logical and Algebraic Methods in Programming*, 121:100662, 2021.

2021 Nathalie Bertrand, Marijana Lazić, and Josef Widder. A reduction theorem for randomized distributed algorithms under weak adversaries. In *VMCAI*, volume 12597 of *Lecture Notes in Computer Science*, pages 219–239. Springer, 2021.

2021 Nathalie Bertrand, Igor Konnov, Marijana Lazić, and Josef Widder. Verification of randomized consensus algorithms under round-rigid adversaries. *International Journal on Software Tools for Technology Transfer*, February 2021.

2020 Igor Konnov, Marijana Lazić, Ilina Stoilkovska, and Josef Widder. Tutorial: Parameterized verification with byzantine model checker. In *FORTE*, volume 12136 of *Lecture Notes in Computer Science*, pages 189–207. Springer, 2020.

2020 A. R. Balasubramanian, Javier Esparza, and Marijana Lazić. Complexity of verification and synthesis of threshold automata. In *ATVA*, volume 12302 of *Lecture Notes in Computer Science*, pages 144–160. Springer, 2020.

2019   Éric Goubault, Marijana Lazić, Jérémy Ledent, and Sergio Rajsbaum. Wait-free solvability of equality negation tasks. In *DISC*, volume 146 of *LIPIcs*, pages 21:1–21:16. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2019.

2019   Éric Goubault, Marijana Lazic, Jérémy Ledent, and Sergio Rajsbaum. A dynamic epistemic logic analysis of the equality negation task. In *DaLí*, volume 12005 of *Lecture Notes in Computer Science*, pages 53–70. Springer, 2019.

2019   Nathalie Bertrand, Igor Konnov, Marijana Lazic, and Josef Widder. Verification of Randomized Consensus Algorithms Under Round-Rigid Adversaries. In *30th International Conference on Concurrency Theory (CONCUR 2019)*, volume 140 of *LIPIcs*, pages 33:1–33:15. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2019.

2019   Idan Berkovits, Marijana Lazić, Giuliano Losa, Oded Padon, and Sharon Shoham. Verification of threshold-based distributed algorithms by decomposition to decidable logics. In *CAV (2)*, volume 11562 of *Lecture Notes in Computer Science*, pages 245–266. Springer, 2019.

2018   Cezara Dragǒi, Marijana Lazić, and Josef Widder. Communication-closed layers as paradigm for distributed systems: A manifesto. In *Sinteza*, pages 131–138, 2018.

2017   Marijana Lazić, Igor Konnov, Josef Widder, and Roderick Bloem. Synthesis of distributed algorithms with parameterized threshold guards. In *OPODIS*, volume 95 of *LIPIcs*, pages 32:1–32:20, 2017.

2017   Igor V. Konnov, Marijana Lazić, Helmut Veith, and Josef Widder. A short counterexample property for safety and liveness verification of fault-tolerant distributed algorithms. In *Proceedings of the 44th ACM SIGPLAN Symposium on Principles of Programming Languages, POPL 2017, Paris, France, January 18-20, 2017*, pages 719–734, 2017.

2017   Igor Konnov, Marijana Lazić, Helmut Veith, and Josef Widder. Para^2: Parameterized Path Reduction, Acceleration, and SMT for Reachability in Threshold-Guarded Distributed Algorithms. *Formal Methods in System Design*, 2017.

2016   Erhard Aichinger, Marijana Lazić, and Nebojša Mudrinski. Finite generation of congruence preserving functions. *Monatshefte für Mathematik*, (181):35–62, 2016.

Invited Talks

October 2019   **Verification of Randomized Consensus Algorithms under Round-Rigid Adversaries**, joint work with Nathalie Bertrand, Igor Konnov, and Josef Widder. The 6th Workshop on Formal Reasoning in Distributed Algorithms (FRIDA 2019), Budapest, Hungary.

November 2018   **Parameterized Verification of Randomized Distributed Algorithms under Round-Rigid Adversaries**, TU Munich, Germany.

May 2018   **Synthesizing thresholds for fault-tolerant distributed algorithms**, *Formal Methods and Fault-Tolerant Distributed Computing: Forging an Alliance*, Dagstuhl seminar, Germany.

April 2018   **Synthesis of Distributed Algorithms with Parameterized Threshold Guards**, University of Novi Sad, Serbia.

December 2017	**Parameterized Verification and Synthesis of Distributed Algorithms**, Tel Aviv University, Tel Aviv, Israel.
February 2017	**A Short Counterexample Property for Safety and Liveness Verification of Fault-tolerant Distributed Algorithms**, University of Novi Sad (Faculty of Sciences and Faculty of Technical Sciences), Novi Sad, Serbia.
July 2016	**Parameterized Verification of Liveness of Distributed Algorithms**, Yale University, New Haven, CT, USA.
July 2016	**Parameterized Verification of Liveness of Distributed Algorithms**, Amazon, New York City, NY, USA.
May 2016	**Completeness of Bounded Model Checking of Threshold-Based Distributed Algorithms: Safety and Liveness**, joint work with Igor Konnov, Helmut Veith, and Josef Widder. The Third Workshop on Formal Reasoning in Distributed Algorithms (FRIDA 2016), Marrakech, Morocco.

Conference and Workshop Talks

January 2021	**A Reduction Theorem for Randomized Distributed Algorithms under Weak Adversaries**, joint work with Nathalie Bertrand and Josef Widder. The 22nd International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2021), Online.
August 2019	**Verification of Randomized Consensus Algorithms under Round-Rigid Adversaries**, joint work with Nathalie Bertrand, Igor Konnov, and Josef Widder. The 30th International Conference on Concurrency Theory (CONCUR 2019), Amsterdam, The Netherlands.
January 2017	**A Short Counterexample Property for Safety and Liveness Verification of Fault-tolerant Distributed Algorithms**, joint work with Igor Konnov, Helmut Veith, and Josef Widder. The 44th ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2017), Paris, France.
February 2015	**On terms in 3-supernilpotent groups with an additional unary operation**, joint work with Erhard Aichinger, and Nebojša Mudrinski. The 89th Workshop on General Algebra (89. Arbeitstagung Allgemeine Algebra, AAA89), Dresden, Germany.
February 2014	**On a class of finite modular congruence lattices**, joint work with Erhard Aichinger, and Nebojša Mudrinski. The 87th Workshop on General Algebra (87. Arbeitstagung Allgemeine Algebra, AAA87), Linz, Austria.

Other Talks

December 2020	**Parameterized Verification of Fault-Tolerant Distributed Algorithms**, *(in Serbian)*, Serbian AI meeting.
December 2017	**Synthesis of Distributed Algorithms with Parameterized Threshold Guards**, The 2nd Winter School in Engineering and Computer Science on Formal Verification (student spotlight), Jerusalem, Israel.

Research Visits

Sep 2018	**Sergio Rajsbaum**, *Universidad Nacional Autónoma de México*, Mexico City.

Jun-Jul 2017 Nov-Dec 2017	**Yoram Moses**, *Technion, Israel Institute of Technology*, Haifa, Israel.
Oct-Dec 2016	**Prakash Panangaden and Vijay D'Silva**, *Simons Institute for the Theory of Computing, University of California, Berkeley*.
Jun-Aug 2014 Jan-Feb 2014 May-Jun 2013	**Erhard Aichinger**, *Johannes Kepler University*, Linz, Austria.

Awards and Grants

- Female promotion measure "Doktorandinnen ans Rednerpult", travel grant for attending Dagstuhl Seminar 18211, May 2018
- Travel Grants for attending GETCO 2018, FLoC 2018, CAV & VMW 2016, AAA89
- Travel Grant by Amazon for attending LICS 2016 and LMW 2016
- Zonta Club Wien 1 mobility grant for female researchers, 2016
- Relocation Grant by FFG, February 2015
- Grant of Serbian Ministry of Education, Science and Technological Development for PhD students for the school year 2012/2013
- Grant of Serbian Ministry of Education for the school years 2011/2012, 2010/2011, 2009/2010, 2008/2009

Scientific Services

- FLOC 2022 Mentoring Workshop Co-chair
- Organizing The 9th Workshop on Formal Reasoning in Distributed Algorithms (FRIDA 2022)
- Program committee member at CAV 2022, CAV 2021 and CONCUR 2020
- Organizing The 7th Workshop on Formal Reasoning in Distributed Algorithms (FRIDA 2020)
- Reviewer for Acta Informatica, Journal of Logical and Algebraic Methods in Programming, Software Quality Journal
- Reviewer for CONCUR 2018/2017, FMCAD 2018/2017, PSSV 2018/2017, STACS 2017, ICDCN 2017
- Co-organizing CAV 2016 Buddy System
- Student volunteer at DISC 2017, FMCAD 2017, POPL & VMCAI 2017, CAV 2016
- Co-organizing The 90th Workshop on General Algebra (AAA90)