

CURRICULUM VITAE

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1 Education

- Oct 2009 — May 2013. **PhD in Computer Science.** Department of Computer Science, Faculty of Mathematics, University of Belgrade
PhD Thesis: "Guiding Search in Automated Theorem Proving".
Advisor: prof. Predrag Janičić.
Area: automated reasoning and data mining.
- Oct 2005 — Dec 2008. **MSc in Computer Science.** Faculty of Mathematics, University of Belgrade
Master thesis: "Methodology of Selection of Suitable Parameter Values for SAT Solvers".
Advisor: prof. Predrag Janičić.
Area: automated reasoning and data mining.
Grade point average: 10.00 (out of 10).
- Oct 2000 — Jul 2005. **BSc in Mathematics and Computer Science.** Faculty of Mathematics, University of Belgrade
Grade point average: 9.31 (out of 10).

2 Publications

1. Dragan Lambić, Mladen Nikolić, Pseudo-Random Number Generator Based on Discrete-Space Chaotic Map, Nonlinear Dynamics, 2017.

2. Vesna Pavlović, Mladen Nikolić, Zoltan Kovacs, Predrag Janičić, Portfolio Methods in Theorem Proving for Elementary Geometry, Automated Deduction in Geometry, 2016.
3. Miloš Manić, Mladen Nikolić, Feature Extraction for Rasters Using Autoencoders, Geostatistics and Machine Learning Conference, 2016.
4. Marko Porčić, Mladen Nikolić, The Approximate Bayesian computation approach to reconstructing population dynamics and size from settlement data: demography of the Mesolithic-Neolithic transition at Lepenski Vir, Archaeological and Anthropological Sciences, 2014.
5. Jelena Slivka, Mladen Nikolić, Kosta Ristovski, Vladan Radosavljević, Zoran Obradović, Distributed Gaussian Conditional Random Fields Based Regression for Large Evolving Graphs, SIAM International Conference on Data Mining, Workshop on Mining Networks and Graphs, 2014.
6. Milena Vujošević-Janičić, Mladen Nikolić, Dušan Tošić, Viktor Kuncak, Software Verification and Graph Similarity for Automated Evaluation of Students' Assignments. Information and Software Technology, Elsevier, 2013.
7. Mladen Nikolić, Measuring Similarity of Graph Nodes by Neighbor Matching. Intelligent Data Analysis, IOS Press, 2013.
8. Tomislav Hengl, Mladen Nikolić, Robert McMillan, Mapping Efficiency and Information Content. International Journal of Applied Earth Observation and Geoinformation, Elsevier, 2012.
9. Mladen Nikolić, Filip Marić, Predrag Janičić, Simple Algorithm Portfolio for SAT. Artificial Intelligence Review, Springer, 2012.
10. Mladen Nikolić, Predrag Janičić, CDCL-Based Abstract State Transition System for Coherent Logic, CICM 2012, LNCS 7362, Springer, 2012.
11. Mladen Nikolić, Statistical Methodology for Comparison of SAT Solvers. SAT 2010, LNCS 6175, Springer, 2010.
12. Mladen Nikolić, Filip Marić, Predrag Janičić, Instance-Based Selection of Policies for SAT Solvers. SAT 2009, LNCS 5584, Springer, 2009.

3 Participation in research projects

- 2014 — 2016. Swiss National Science Foundation SCOPES grant IZ73Z0_152415 — Predicting Patient's Future Health State: Development and Deployment of Fast, Effective, and Interpretable Algorithms for Healthcare, lead by prof. Alexandros Kalousis, University of Applied Sciences, University of Geneva.

- July 2013 - August 2013. DARPA grant — Prospective Analysis of Large and Complex Partially Observed Temporal Social Networks, lead by prof. Zoran Obradović, Temple University.
- November 2012 - February 2013. DARPA grant — Prospective Analysis of Large and Complex Partially Observed Temporal Social Networks, lead by prof. Zoran Obradović, Temple University.
- 2010 — 2012. Swiss National Science Foundation SCOPES grant IZ7370_127979 — Decision Procedures: From Formalizations to Applications, lead by prof. Viktor Kuncak, EPFL.
- 2011 — 2017. Serbian Ministry of Science grant 174021 — Automated Reasoning and Data mining, lead by prof. Predraga Janičić, Faculty of Mathematics, University of Belgrade.
- 2008 — 2010. Serbian Ministry of Science grant 144030 — Automated Reasoning and Processing of Large Quantities of Data and Text, lead by prof. Predraga Janičić, Faculty of Mathematics, University of Belgrade.
- 2005 — 2007. Serbian Ministry of Science grant 144007 — Mathematical models and methods of optimization with applications, lead by dr Nenad Mladenović, Mathematical Institute of Serbian Academy of Sciences and Arts.

4 Visits

- Group for Machine Learning, Data Mining, and Information Retrieval (Viper) lead by prof. Stephane Marchand-Maillet and dr Alexandros Kalousis, University of Geneva, Switzerland, November 16 — November 22, 2015.
- Center for Data Analytics and Biomedical Informatics lead by prof. Zoran Obradovic, Temple University, USA, July 1, 2013 — August 31, 2013.
- Center for Data Analytics and Biomedical Informatics lead by prof. Zoran Obradovic, Temple University, USA, November 5, 2012 — February 28, 2013.
- Lab for Automated Reasoning and Analysis lead by prof. Viktor Kuncak, EPFL, Switzerland, March 16 — March 18, 2011.
- Institute of Geomatics and Risk Analysis lead by prof. Mikhail Kanevski, UNIL, Switzerland, March 9 — March 15, 2011.
- Lab for Automated Reasoning and Analysis lead by prof. Viktor Kuncak, EPFL, Switzerland, December 7 — December 11, 2010.

5 Conferences attended

- Computational Decision Making and Data Science Workshop, Belgrade, Serbia, 2017.
- SEE Forum on Data Science, Belgrade, Serbia, 2016.
- Geostatistics and Machine Learning, Belgrade, Serbia, 2016.
- Conferences on Intelligent Computer Mathematics (CICM 2012), Bremen, Germany, 2012.
- Theory and Applications of Satisfiability Testing (SAT 2012), Trento, Italy, 2012.
- Conference on Learning Theory (COLT 2011), Budapest, Hungary, 2011.
- Theory and Applications of Satisfiability Testing (SAT 2010), Edinburgh, UK, 2010.
- Theory and Applications of Satisfiability Testing (SAT 2009), Swansea, UK, 2009.

6 Talks at workshops and summer schools

- "Supervised Learning: Design and Evaluation", Microsoft Development Center Serbia Machine Learning Petnica Summer Institute, 2017.
- "Propositional Feature Extraction Using Random Forests and Deep Neural Networks", SEE Forum on Data Science, 2016.
- "Supervised Learning: Design and Evaluation", Microsoft Development Center Serbia Machine Learning Petnica Summer Institute, 2016.
- "CDCL-Based Abstract State Transition System for Coherent Logic", The Fifth Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, 2012.
- "ArgoCaLyPso - SAT Inspired Coherent Logic Prover", The Fourth Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, 2011.
- "Statistical Methodology for Comparison of SAT Solvers", Evaluation Methods for Solvers and Quality Metrics for Solutions (EMSQMS), Edinburgh, 2010.
- "A Methodology for Comparison and Ranking of SAT Solvers", The Third Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, 2010.

- "Instance-based Selection of Strategies for SAT Solvers", The Second Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, 2009.

7 Workshops and summer schools attended

- The 99th European Study Group with Industry, Department of Mathematics and Informatics, Faculty of Sciences, University of Novi Sad, Serbia, 2014.
- Progress in Decision Procedures: From Formalisations to Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2013.
- SAT/SMT Summer School, Fondazione Bruno Kessler, Italy, 2012.
- Fifth Workshop on Formal and Automated Theorem Proving and Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2012.
- GEOSTAT Belgrade: R+OSGeo in higher education, Faculty of Civil Engineering, University of Belgrade, Serbia, 2011.
- Fourth Workshop on Formal and Automated Theorem Proving and Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2011.
- Evaluation Methods for Solvers and Quality Metrics for Solutions, University of Edinburgh, UK, 2010.
- Third Workshop on Formal and Automated Theorem Proving and Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2010.
- Second Workshop on Formal and Automated Theorem Proving and Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2009.
- First Workshop on Formal Theorem Proving and Applications, Faculty of Mathematics, University of Belgrade, Serbia, 2008.
- Spatio temporal data analysis: R + ILWIS/SAGA + Google Earth, Faculty of Civil Engineering, University of Belgrade, Serbia, 2008.

8 Teaching experience

- Machine Learning, 2018.
- Data Mining, 2008-2012, 2017.
- Scientific Computing, 2017.
- Programming 1/2, 2005-2006, 2013-2017.
- Introduction to computer architecture, 2005-2008, 2014-2016.

- Introduction to computer organization, 2005-2008, 2013-2015.
- Artificial intelligence, 2007-2012.
- Computer architecture and operating systems, 2006-2012.

- Machine Learning (informal 15 hour course), 2016.

9 Awards

- The best teaching assistant at the Faculty of Mathematics for school year 2006/07.