Curriculum Vitae

Milan Banković

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Personal Details

Gender: Male
Date of birth: May 3rd, 1982
Place of birth: Petrovac, Serbia
Citizenship: Serbian

Positions

2017–present Assistant professor at the Department for Computer Science, Faculty of Mathematics, University of Belgrade.

2020–2022 Guest teacher at School of applied technical sciences, Požarevac

2016–2020 High school teacher in Computer science gymnasium, Belgrade

2010–2017 Teaching assistant at the Department for Computer Science, Faculty of Mathematics, University of Belgrade.

2007–2010 Junior teaching assistant at the Department for Computer Science, Faculty of Mathematics, University of Belgrade.

Courses taught (as a professor at Faculty of Mathematics):

- Automated reasoning
- Introduction to computer organization and architecture
- Computer architecture
- Compilation of programming languages

- Web programming
- Constraint programming

Courses taught (as a teaching assistant at Faculty of Mathematics):

- Introduction to programming (programming language C)
- Microprocessors (IA-32 and ARM assembly language)
- Introduction to computer organization
- Software development (C# programming, ASP.NET)
- Advanced computer architecture (Verilog HDL)
- Automated reasoning
- Introduction to computer architecture
- Parallel algorithms

Courses taught (as a guest teacher at School of applied technical sciences):

- Operating systems
- Computer networks administration

Courses taught (as a high school teacher in Computer science gymnasium):

- Computer systems
- Applications of computers (Matlab/Octave software package)

Other professional activities

- Coordinator for relations of the Faculty of Mathematics with the industry (2018/19)
- Administration of *Linux* servers used to support teaching and scientific activities at Faculty of Mathematics
- Participation in computer programming training programs for elementary and secondary school pupils
- Participation in training programs for secondary school informatics teachers
- Mentor for 6 completed master's thesis in Computer Science and 3 master's thesis in progress

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Education

10/2007–12/2016 PhD studies at Department of Computer Science, Faculty of Mathematics, University of Belgrade; GPA 10.00 (on the scale from 6.00 to 10.00). Doctoral dissertation with subject "Improving SMT solvers using CSP techniques and parallelization techniques" defended on December 8, 2016.

10/2001–12/2006 Undergraduate studies at Department of Computer Science, Faculty of Mathematics, University of Belgrade; graduated with GPA 9.93 (on the scale from 6.00 to 10.00).

09/1997–06/2001 Secondary School "Nikola Tesla" in Kostolac; school finished with top average mark, was awarded the best student of the generation.

09/1989–06/1997 Elementary School "Bata Bulić" in Petrovac; school finished with top average mark, was awarded the best student of the generation.

Research interests

- Automated reasoning
- SAT and SMT solvers and applications
- Constraint programming
- Interactive theorem proving

Summer schools

- SAT/SMT Summer School 2012. Trento, Italy, 12-15 June. 2012.

Participation in international scientific meetings

- *Federated Logic Conference – FLOC 2010.* Edinburgh, UK, 9-21 July. 2010.

- *Theory and Applications of Satisfiability Testing – SAT 2012.* Trento, Italy, 17-20 June. 2012.

- *Federated Logic Conference – FLOC 2022.* Haifa, Israel, July 31 - August 12. 2022.

Participation in domestic scientific meetings

- *Second Workshop on Formal and Automated Theorem Proving and Applications.* Belgrade, January 30 - January 31, 2009.

- *COST Action IC0901 WG1and WG2 Meeting and Third Workshop on Formal and Automated Theorem Proving and Applications.* Belgrade, January 29- 30, 2010.

- *Fourth Workshop on Formal and Automated Theorem Proving and Applications.* Belgrade, February 4-5, 2011.

- *Fifth Workshop on Formal and Automated Theorem Proving and Applications.* Belgrade, February 3-4, 2012.

- *Workshop Progres in Decision Procedures: From Formalisations to Applications.* Belgrade, March 30, 2013.

- *YU INFO 2021.* Kopaonik, March, 2021.

- *XII Symposium ,,Math and Applications".* Belgrade, Serbia, December 2022.

- *Automated Deduction in Geometry – ADG 2023*, Belgrade, Serbia, September 20-22, 2023.

Publications in journals indexed by Thomson Reuters (SCI)

- **Milan Banković**. *Automation of triangle straightedge-and-compass constructions using automated planning.* Annals of Mathematics and Artificial Intelligence. 2025. (M22)

- **Milan Banković**, Ivan Drecun, Filip Marić. *A proof system for graph (non)-isomorphism verification.* Logical Methods in Computer Science. 2023. (M23)

- **Milan Banković**, Filip Marić. *Faradžev Read-type enumeration of non-isomorphic CC systems.* Computational Geometry. 2021. (M23)

- **Milan Banković** et al. *Teaching graduate students how to review research articles and respond to reviewer comments.* Advances in Computers. 2020. (M22)

- **Milan Banković**. *Parallelizing simplex within SMT solvers.* Artificial Intelligence Review. 2017. (M21)

- **Milan Banković**. *Solving finite-domain linear constraints in presence of the alldifferent.* Logical Methods in Computer Science. 2016. (M22)

- **Milan Banković**. *Extending SMT solvers with support for finite domain alldifferent constraint.* Constraints. 2016. (M23)

Talks on international scientific meetings

- **Milan Banković**, David Šćepanović. *Trail saving in SMT*. Federated Logic Conference 2022. (International Workshop on Satisfiability Modulo Theories - SMT2022). Haifa, Israel, July 31 - August 12, 2022.

- **Milan Banković**. *ArgoSMTe: an SMT-LIB 2.0 compliant expression library*. Pragmatics of SAT 2012, Trento, Italy.

- **Milan Banković**, Filip Marić. *Alldifferent constraint solver in SMT*. International Workshop on Satisfiability Modulo Theories - SMT 2010, Edinburgh, UK.

Talks on domestic scientific meetings

- **Milan Banković**. *Automation of Triangle Ruler-and-Compass Constructions Using Constraint Solver*. Automated Deduction in Geometry – ADG2023. Belgrade, Serbia, September 20-22, 2023.

- **Milan Banković**. *Automated solving of Sokoban puzzle using artificial intelligence*. YU INFO 2021, Kopaonik, Serbia. 2021.

- **Milan Banković**, Filip Marić. *Parallelization of BCP in DPLL-based SAT solvers*. Fifth Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, Serbia, 2012.

- **Milan Banković**, Filip Marić. *ArgoSMTExpression: an SMT-LIB 2.0 compliant expression library*. Fourth Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, Serbia, 2011.

- **Milan Banković**, Filip Marić. *An SMT solver for the theory of alldifferent*. Second Workshop on Formal and Automated Theorem Proving and Applications, Belgrade, Serbia, 2009.

Participation in scientific projects

2009-2010 Project 144030 funded by Serbian Minstry of Science.

2010-present Project 174021 funded by Serbian Minstry of Science.

2009-2013 International project COST (EU) IC0901 – "Rich-Model Toolkit – An Infrastructure for Reliable Computer Systems"

Languages

Serbian	native
English	fluent

Other skills

- Strong background in mathematics (analysis, algebra, logic, geometry, numerics and statistics)

- Programming languages: *C, C++, Perl, PHP, Java, JavaScript, C#, Haskell*

- Web technologies: *HTM5/CSS3, JQuery, LAMP, ASP.NET*

- Assembly languages: *x86*, *x86-64* and *ARM* architectures.

- *Verilog* hardware description language.

- *Matlab/Octave* software package for scientific computing.

- Databases. *SQL* query language.

- *Isabelle/HOL* interactive theorem prover.

- *UNIX/Linux* advanced user.

Belgrade, March, 2025.