# Dragutin Ostojić

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# EDUCATION

| Faculty of Science • University of Kragujevac, Serbia Ph.D. in Computer Science • Dpt. of Mathematics and Informatics   | 2020 -       |
|---|--------------|
| <ul> <li>Faculty of Science • University of Kragujevac, Serbia</li> <li>M.Sc. in Informatics • Dpt. of Mathematics and Informatics</li> </ul>   | 2018 - 2020  |
| Faculty of Science • University of Kragujevac, Serbia  B.Sc. in Informatics • Dpt. of Mathematics and Informatics   | 2013 - 2018  |
| First Kragujevac Gymnasium • Kragujevac, Serbia<br>Specialized mathematics class  | 2009 - 2013  |
| Work Experience   |              |
| Research Internship • Center for Data Analytics and Biomedical Informatics, College of Science Technology • Temple University, Philadelphia, USA Scheduling problems  | and 2023 –   |
| <b>Research Internship</b> • Math. Inst. of the Serbian Academy of Sciences and Arts • Belgrade, Se Scheduling problems   | erbia 2021 – |
| <b>Teaching Assistant</b> • Master 4.0 • University of Kragujevac, Serbia 3D Computer Graphics  | 2020 -       |
| Teaching Assistant • Faculty of Science • University of Kragujevac, Serbia Computer Graphics • Parallel Programming • Data Structures and Algorithms 1 • Data Structures and Algorithms 2 • Operating Systems 2 • Algorithm Strategies • Object-Oriented Programming Practicum • Information Theory • Intelligent Systems | 2019 –       |
| <b>Teacher •</b> First Kragujevac Gymnasium • Kragujevac, Serbia Programming and Programming Languages (SM and SI) • Advanced Programming Techniques (SI)   | 2018 - 2022  |
| <b>Teacher</b> • IT Azbuka • Kragujevac, Serbia Web Programming • Scratch Programming • Robotics  | 2017 - 2019  |
| Software Engineer • Technomedia Ltd. • Kragujevac, Serbia $IoT$   | 2017 - 2018  |
| <b>Software Engineer •</b> Beson Distributie BV • Amsterdam, Netherlands <i>Information Systems</i>   | 2016 - 2017  |
| Software Engineer • Centrebuild Ltd. • Kragujevac, Serbia Web Development   | 2016         |
| <b>System Administrator</b> • Global Connect Agency • Kragujevac, Serbia <i>Technical Support</i>   | 2013 - 2014  |
| <b>Teacher</b> • Preparing for competitions for elementary and high school students <i>Mathematics</i> • <i>Programming</i>   | 2013 –       |
| Pro increa  |              |

# PROJECTS

- DEEPTECH-2M, Deep Tech Materials and Manufacturing Talent Development for an Improved EU Economy and Climate, EIT HEI Initiative, 2023.
- SMART-2M, Innovation Capacity Building for Higher Education in Industry 4.0 and Smart Manufacturing, EIT HEI Initiative, 2021-2023.
- Extreme Science, Center for the Promotion of Science, Ministry of Education, Science and Technological Development of the Republic Serbia, 2022.
- AI4TrustBC Advanced Artificial Intelligence Techniques for Analysis and Design of System Components Based on Trustworthy BlockChain Technology, Science Fund Republic of Serbia, 2021-2022.

- [Ost+25] D. Ostojić, D. Ramljak, A. Urošević, M. Jolović, R. Drašković, J. Kakka, T. Jakšić Krüger, and T. Davidović. Systematic Literature Review of Optimization Algorithms for P||Cmax Problem. In: Symmetry 17.2 (2025). ISSN: 2073-8994. DOI: 10.3390/sym17020178.
- [Ost+24a] D. Ostojić, C. Zarges, T. Davidović, and D. Ramljak. Polynomial Regression Model for Standardizing Large Precision Instances for P||Cmax problem. In: Artificial Intelligence Conference. Belgrade, Dec. 2024.
- [Joj+24] R. Jojić, N. Ranđelović, I. Šuša, M. Todorović, D. Ramljak, D. Ostojić, and T. Davidović. Balancing Efficiency and Fairness in Blockchain: A Proof-of-Useful-Work-Based Blockchain Consensus Protocol. In: Artificial Intelligence Conference. Belgrade, Dec. 2024.
- [Dav+24a] T. Davidović, D. Stevanović, L. Radanović, A. Fellague, and D. Ostojić. Maximizing Spectral Radius of Graphs is an Optimization Problem. In: 51st International Symposium on Operational Research (SYM-OP-IS 2024). Tara, Sept. 2024.
- [Dav+24b] T. Davidović, D. Stevanović, L. Radanović, A. Fellague, and D. Ostojić. Metaheuristics for finding threshold graphs with maximum spectral radius. In: *The 1st Chinese-SouthEastEuropean Conference on Discrete Mathematics and Applications (CSEE-CDMA-2024)*. Belgrade, June 2024, p. 32.
- [MOM24] A. Milenković, D. Ostojić, and A. Maksimović. How High School Students Assess the Importance of STEM Workshops for Acquiring New Knowledge. In: STEM/STEAM/STREAM Approach in Theory and Practice of Contemporary Education. Jagodina, May 2024.
- [Ost+24b] D. Ostojić, M. Jolović, R. Drašković, and A. Fellague. Efficient Generation of Diverse Instances for P||Cmax Solver Evaluation. In: Book of Abstracts of First Deep Tech Open Science Day Conference. Kragujevac, Apr. 2024, p. 45.
- [Mal+23] U. Maleš, D. Ramljak, T. Jakšić Krüger, T. Davidović, D. Ostojić, and A. Haridas. Controlling the Difficulty of Combinatorial Optimization Problems for Fair Proof-of-Useful-Work-Based Blockchain Consensus Protocol. In: Symmetry 15.1 (2023). ISSN: 2073-8994. DOI: 10.3390/sym15010140.
- [OG23] D. Ostojić and T. Golonek. Indirect Method for Identification of Electric Power Generated by Means of Panel of Thermoelectric Modules. In: Book of Abstracts of Artificial Intelligence Conference. Belgrade, Dec. 2023, p. 91.
- [Ost+23] D. Ostojić, A. Urošević, T. Davidović, T. Jakšić-Krüger, and D. Ramljak. Decomposition-Based Efficient Heuristic for Scheduling. In: Proceedings of the 50th International Symposium on Operational Research (SYM-OP-IS 2023). Tara, Sept. 2023, pp. 1027–1034.
- [MOM23] A. Milenković, D. Ostojić, and A. Maksimović. Using Logistic Regression to Explain Enhancing Adolescent Students' Interest in Mathematics, Physics and Computer Science through STEM Workshops. In: Transformations in Education Policy and Culture: Teacher Education and School Creation in the Anthropocene. Vilnius, May 2023.
- [Ost+22a] D. Ostojić, B. Arsić, T. Stojanovć, and N. Miletic Vidanović. Efficient Model for English to Serbian Neural Machine Translation. In: Proceedings of the First Serbian International Conference on Applied Artificial Intelligence (SICAAI). UNIKG; SANU. Kragujevac, May 2022.
- [Ost+22b] D. Ostojić, T. Davidović, T. Jakisić-Krüger, and D. Ramljak. Comparative Analysis of Heuristic Approaches to P||Cmax. In: Proceedings of the 11th International Conference on Operations Research and Enterprise Systems (ICORES 2022). INSTICC. virtual: SciTePress, Feb. 2022, pp. 259–266. ISBN: 978-989-758-548-7. DOI: 10.5220/0011008500003117.
- [Ost20] D. Ostojić. Application of Recurrent Neural Networks in Natural Language Processing. Supervisor: Stojanović, T. MA thesis. Kragujevac: Faculty of Science, University of Kragujevac, Sept. 2020.
- [Ost18] D. Ostojić. Advanced Parallel Programming Techniques. Supervisor: Ivanović, M. BA thesis. Kragujevac: Faculty of Science, University of Kragujevac, Oct. 2018.

- Short cycle course in Data Science and Artificial Intelligence, Erasmus+ WICT, University of Kragujevac, University of Rijeka, Ionian University, Pázmány Péter Catholic University, Krakow University of Economics, (virtual), 2024.
- LiveCase Simulation: Horizon Ventures Innovation Accelerator, Harvard Business Publishing Education, EIT Digital, University of Ljubljana, (virtual), 2024.
- SPIN: Rise, EIT Digital, University of Ljubljana, Ljubljana, Slovenia, 2024-2025.
- Research internship, The British Scholarship Trust, Advanced Reasoning Research Group, Aberystwyth University, Aberystwyth, UK, 2024.
- Expert2Mentors Training Program for Teachers, Route2Launch, USAID, Digital Serbia Initiative, University of Belgrade Faculty of Organizational Sciences, Kragujevac, Serbia, 2023-2024.
- Research internship, Erasmus+ Mobility Program, Computational Cognition Lab, Open University of Cyprus, Nicosia, Cyprus, 2024.
- InteRussia Fellowship Program in Engineering and Artificial intelligence, New Generation, Rossotrudnichestvo, The Gorchakov Fund, Novosibirsk State University, Moscow and Novosibirk, Russia, 2024.
- Deeptech and Innovation, EIT HEI Initiative, DEEPTECH-2M, Dublin City University, Ireland, University of Kragujevac, Serbia, (virtual), 2024.
- Carbon Management Training for Consultants, Center for Green Economy, University of Kragujevac, Kragujevac, Serbia, 2024.
- Deeptech and Innovation, EIT HEI Initiative, DEEPTECH-2M, Dublin City University, Ireland, University of Kragujevac, Serbia, (virtual), 2023.
- Summer School for the Future (STE)M Leaders, Western Balkans Fund, University of Montenegro, Mathematical Institute of the Serbian Academy of Sciences and Arts, University of East Sarajevo, University of Mostar, Ss. Cyril and Methodius University, Ismail Qemali University of Vlorë, Petrovac, Montenegro, 2023.
- Research internship, Ministry of Education, Science, Research and Sport of the Slovak Republic, Recovery and Resilience Plan, NextGenerationEU, Faculty of Informatics and Information Technologies, Slovak University of Technology in Bratislava, Bratislava, Slovakia, 2023.
- Research internship, Erasmus+ Mobility Program, Faculty of Mathematics and Computer Science, University of Science and Technology of Oran Mohamed-Boudiaf, Oran, Algeria, 2023.
- Research internship, IT makes S(ci)ENSE Program, French Embassy Serbia, French Institute in Serbia, ICube Laboratory, University of Strasbourg, Strasbourg, France, 2022.
- Innovation and Smart Manufacturing, EIT HEI Initiative, SMART-2M, Dublin City University, Ireland, University of Kragujevac, Serbia, (virtual), 2022.
- Advanced Tools for Multidisciplinary Machine Learning and Big Data, Erasmus+ Blended Intensive Program (BIP), Technical University of Liberec, Liberec, Czech Republic, 2022.
- Research internship, Erasmus+ Mobility Program, Institute of Electronics, Silesian University of Technology, Gliwice, Poland, 2022.
- Practical Innovation & Entrepreneurship, EIT HEI Initiative, SMART-2M, Dublin City University, Ireland, University of Kragujevac, Serbia, (virtual), 2022.
- NVIDIA DLI Certificate Fundamentals of Accelerated Computing with CUDA Python, NVIDIA Deep Learning Institute, (virtual), 2022.
- Application of Machine Learning in Solving Global Challenges in Water and Energy Sectors, UNESCO WSDAC, University of Kragujevac, Kragujevac, Serbia, 2021.
- Business Communications and Entrepreneurial Skills, Business Innovation Center, University of Kragujevac, Kragujevac, Serbia, 2021.
- Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences (TeComp), Erasmus+, Ghent University, Belgium, (virtual), 2021.
- Business Mentoring, Lean Canvas, Design Thinking, Business Capacity Assessment, Business Development Center Kragujevac, EU PRO, UNOPS, Kragujevac, Serbia, 2020.
- Media Literacy, United States Embassy in Serbia, IREX, Serbia, (virtual), 2020.
- User Experience in IoT World, Comtrade Edit Summer School, Kragujevac and Belgrade, Serbia, 2017.

#### Awards

- Diploma of Mathematical Institute of the Serbian Academy of Sciences and Arts for successfully completed project Implementation of Bee Colony Optimization Algorithm for Spectral Reconstruction of Graph, Belgrade, 2021.
- Annual Award of the Mathematical Institute of the Serbian Academy of Sciences and Arts in the field of computing for M.Sc. students, Belgrade, 2021.
- Social Impact Award, finalist (team HAL), Razlivalište, Belgrade, 2021.
- MIND Hackathon, II place (team HAL), MIND Group, Kragujevac, 2021.
- HAKATON KG, finalist (team HAL), Business Innovation Center, Embassy of Israel in Serbia, Kragujevac, 2021.
- IoT Hackathon Kragujevac, I place (team HAL), UNDP, Kragujevac, 2020.
- Comtrade Edit, best individual, Comtrade, Kragujevac, 2017.
- Microsoft Bubble Cup, finalist, Microsoft, Belgrade, 2013.
- Republic Center for Talents Mathematic, II place, Belgrade, 2013.
- Republic Center for Talents Mathematic, special reward for research, Belgrade, 2013.
- Award of Dositeja, Belgrade, 2012.
- Award of Fondation for 5+, Belgrade, 2012.
- National Competition in Informatics, III place A category, Belgrade, 2012.
- Serbian Olympiad in Informatics, III place, Belgrade, 2011.
- Republic Center for Talents Mathematic, III place, Belgrade, 2011.
- National Competition in Informatics, III place A category, Belgrade, 2011.
- National Competition in Mathematics, III place A category, Kragujevac, 2010.
- Republic Center for Talents Mathematic, I place, Belgrade, 2010.
- Award Vuk Karadžić, Kragujevac, 2009.
- International Kangaroo Mathematics Contest, III place, Belgrade, 2008.
- National Competition in Mathematics, II place, Niš, 2008.

# INVITED TALKS

- Decomposition-based Iterative Stochastic Transformation Algorithm:  $P||C_{max}|$  Case Study, Advanced Reasoning Research Group, Aberystwyth University, Aberystwyth, UK, October 7, 2024.
- Decomposition-based Iterative Stochastic Transformation Algorithm:  $P||C_{max}||$  Case Study, Sobolev Institute of Mathematics of the Siberian Branch of the Russian Academy of Sciences, Novosibirk, Russia, June 4, 2024.
- DIST Algorithm, Center for Data Analytics and Biomedical Informatics, College of Science and Technology, Temple University, Philadelphia, USA, November 22, 2023.
- Comparative Analysis of Heuristic Approaches to  $P||C_{max}$ , Department of Mathematics and Informatics, Faculty of Science, University of Kragujevac, Kragujevac, Serbia, Oct 15, 2022.
- Efficient Machine Translation: English-Serbian Case Study, Institute of Electronics, Silesian University of Technology, Gliwice, Poland, May 11, 2022.

# Languages

• Serbian (native)

• English (B2)

• Russian (A1)

#### OTHER

- $\bullet \ \ Member \ of \ \textit{Mathematical Society of Serbia-the Breach of Kragujevac}, \ 2025-.$
- Member of COST Action CA22137 (ROAR-NET), 2024 .
- Member of Google Dev Student Club Kragujevac, 2024 .
- Member of Mensa, 2021 .
- Coordinator of Youth Mathematics Workshop, 2018 2020.
- Member of *AIESEC*, 2013 2015.
- Member of Youth Mathematics Workshop, 2003 2009.