Đorđe Marković (Djordje Markovic)

PhD student / Knowledge Representation and Reasoning / KU Leuven

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Professional Summary

I am a PhD student at KULeuven University in the Knowledge Representation and Reasoning group, under the supervision of Professor Marc Denecker. The main topic of my research is the proper treatment of partial functions in Knowledge Representation. Building on this, I worked on the relations of partial functions and types (sorts) in logic and applied these techniques to the decision modeling languages. On this journey, I also get to work on epistemic logic.

Education

2021 - Present	KU Leuven , Leuven, Belgium PhD in Computer Science, Knowledge Representation
2020 - 2021	KU Leuven , Leuven, Belgium Predoctoral training in Computer Science, Knowledge Representation
2018 - 2019	Faculty of Science , University of Kragujevac, Serbia <i>M.S. in Computer Science</i>
2013 - 2018	Faculty of Science , University of Kragujevac, Serbia <i>B.S. in Computer Science</i>
2009 - 2013	Prva Kragujevačka Gimnazija , Kragujevac, Serbia High School Diploma in Natural Sciences

Summer schools

2024	ESSLLI , Leuven, Belgium 35th European Summer School in Logic, Language and Information
2022	ESSLLI , Galway, Ireland 33th European Summer School in Logic, Language and Information
2021	MGS21 , In Cyberspace Midlands Graduate School in the Foundations of Computing Science

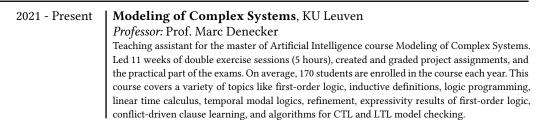
Professional Experience

10/2018 - 8/2019	Technomedia d.o.o Software Engineer Reverse engineering of the connection API for obsolete peripheral devices such as cameras and tag readers.
07/2017 - 9/2017	DM Dokumenten Management GmbH Software Engineer Intern Designed and implemented a setup and configuration application for Lobotalk client and server.
04/2016 - 04/2017	Neutrinos IT/AI Justice Association Software Engineer Intern Developing a private and secure self-hosted cloud solution.

Publications

- 1. Markovic D., & Denecker M., (2024). Order-Sorted Intensional Logic: Expressing Subtyping Polymorphism with Typing Assertions and Quantification over Concepts. In Proceedings 40th International Conference on Logic Programming (ICLP 2024).
- 2. **Markovic D.**, & Denecker M., (2024). Solving "Greeting a Customer with Unknown Data" Challenge with Epistemic DMN. In **Proceedings of International Joint Conference on Rules and Reasoning 2024** (RuleML+RR 2024).
- 3. Markovic D., & Bogaerts B., & Passmore. G., (2024). Modeling and verifying simple vehicle controller, such as the Triton unmanned aircraft systems of the US Navy: using Imandra system and first-order logic. In book Demystifying Artificial Intelligence Symbolic, Data-Driven, Statistical and Ethical AI, Chapter 4 Reasoning with first-order logic. Published by De Gruyter (p. 136) (2024).
- Markovic D., & Vandevelde S., Vanbesien L., & Vennekens J., & Denecker M., (2024). An epistemic logic for modeling decisions in the context of incomplete knowledge. In Proceedings of the 39th ACM/SIGAPP Symposium on Applied Computing (SAC 2024).
- Markovic D., & Bruynooghe M., & Denecker M., (2023). Towards Systematic Treatment of Partial Functions in Knowledge Representation. In Logics in Artificial Intelligence - European Conference on Logics in Artificial Intelligence 2023, part of Lecture Notes in Computer Science (JELIA 2023).
- 6. **Markovic D.**, & Vandevelde S., & Vennekens J., & Denecker M., (2022). On the Semantics of "null" in DMN: Undefined is not Unknown. In **Proceedings of International Joint Conference on Rules and Reasoning 2022** (RuleML+RR 2022).

Teaching Experience



Programming languages

I have experience developing custom algorithms and software in C, C++, C#, Rust, and Python. I am also familiar with web development languages including HTML, CSS, JavaScript, and PHP. Additionally, I have limited hands-on experience with Haskell, MiniZinc, ASP, Prolog, ProB, and Event-B. I have extensive experience with IDP3 and IDP-Z3.