
Education

- 2017–2021 **Dr.techn.**, TU Wien, *pass with distinction*.
Dr.-Studium der technischen Wissenschaften Informatik
- 2013–2016 **Dipl.-Ing.**, TU Wien, *pass with distinction*.
Software Engineering & Internet Computing
- 2008–2013 **Bachelor of Science**, TU Wien, *pass with distinction*.
Software & Information Engineering

PhD Thesis

- Title *Automated Scheduling for Automotive Supplier Paint Shops and Teeth Manufacturing*
- Supervisor Priv.-Doz. Dr. Nysret Musliu

Master Thesis

- Title *MaxSAT Modeling and Heuristic Solution Methods for the Employee Scheduling Problem*
- Supervisor Priv.-Doz. Dr. Nysret Musliu

Work Experience

- since July **University Assistant**, TU Wien.
2022 Researcher and lecturer at the *Databases and Artificial Intelligence* group
- 2017–2022 **Project Assistant**, TU Wien.
Researcher in the Christian Doppler Laboratory for *Artificial Intelligence and Optimization for Planning and Scheduling*
- 2016–2017 **Consultant**, MCP GmbH, Vienna.
Consultant and Software Engineer for *Automated Planning and Scheduling Software*
- 2015–2016 **Project Assistant**, TU Wien.
Assistant in the research project *Artificial Intelligence in Employee Scheduling*
- 2011–2012 **Junior Data Warehouse Consultant**, pmOne GmbH, Vienna.
Consulting for Business Intelligence Solutions based on Microsoft SQL Server
- 2009 **Software Developer**, xS+S,*x Software und Systeme, Vienna.
Development of JavaEE software

Teaching Experience

- 2022 Lecturer at TU Wien for the course *Database Systems*
- 2021–2022 Lecturer at TU Wien for the course *Problem Solving and Search in Artificial Intelligence*

- 2020 Co-supervision of the diploma thesis *Solving the paintshop scheduling problem with memetic algorithms* by Wolfgang Weintritt at TU Wien
- 2014–2016 Teaching Assistant for *Distributed System Technologies* and *Advanced Internet Security*

Awards & Scholarships

- 2022 Won the *TU Wien Ressel Prize* for the best PhD thesis focusing on applied research in collaboration with the industry (13,000 EUR prize money)
- 2019 Won the *Best Doctoral Consortium Poster Award* at the *29th International Conference on Automated Planning and Scheduling*
- 2019 Won the *Medium Instances* category of the *ACP Summer School 2019* Hackathon
- 2016 Won the *Distinguished Young Alumnus Award* of the faculty of informatics for the best diploma thesis (1,500 EUR prize money)
- 2009–2011 Performance scholarship from TU Vienna

Conference Organization & Additional Info

- 2022 Student Volunteer Chair and Local Arrangements Committee Member of the *31st International Joint Conference on Artificial Intelligence*
- 2020–2021 Organizing Committee Member of the *17th and 18th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research*
- 2019 Research visit to Monash University in Melbourne
- 2018 Organizing Committee Member of the *12th International Conference on the Practice and Theory of Automated Timetabling*
- 2014–2015 Participation at the TUtheTOP High Potential program from TU Vienna, where participants are selected among the best 20% of the students through a multi-stage selection process

Languages

- German Mother Language
- English Fluent
- Albanian Basic Level (A2)

Interests

- Research Problem Solving with Artificial Intelligence, Metaheuristics, Constraint Programming, SAT & maxSAT solving, Hybrid Approaches for Combinatorial Optimization Problems, Constraint Satisfaction Problem, Automated Algorithm Selection and Configuration
- Activities Spending quality time with my wife and daughter, Performing live music with my band, Swimming, Hiking

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Publications

Felix Winter, Sebastian Meiswinkel, Nysret Musliu, and Daniel Walkiewicz. **Modeling and solving parallel machine scheduling with contamination constraints in the agricultural industry.** *28th International Conference on Principles and Practice of Constraint Programming*, 235:41:1–41:18, August 2022.

Jakob Preininger, Felix Winter, and Nysret Musliu. **Modeling and solving the k-track assignment problem.** *14th Metaheuristics International Conference*, July 2022.

Felix Winter and Nysret Musliu. **An investigation of hyper-heuristic approaches for teeth scheduling.** *14th Metaheuristics International Conference*, July 2022.

Johannes Vass, Marie-Louise Lackner, Christoph Mrkvicka, Nysret Musliu, and Felix Winter. **Exact and meta-heuristic approaches for the production leveling problem.** *Journal of Scheduling*, April 2022.

Maximilian Moser, Nysret Musliu, Andrea Schaerf, and Felix Winter. **Exact and metaheuristic approaches for unrelated parallel machine scheduling.** *Journal of Scheduling*, December 2021.

Felix Winter and Nysret Musliu. **A large neighborhood search approach for the paint shop scheduling problem.** *Journal of Scheduling*, December 2021.

Georg Faustmann, Christoph Mrkvicka, Nysret Musliu, and Felix Winter. Automated configuration of parallel machine dispatching rules by machine learning. In *Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '21*, pages 125–126, New York, NY, USA, July 2021. Association for Computing Machinery.

Wolfgang Weintritt, Nysret Musliu, and Felix Winter. **Solving the paintshop scheduling problem with memetic algorithms.** *Proceedings of the Genetic and Evolutionary Computation Conference*, pages 1070–1078, June 2021.

Felix Winter, Christoph Mrkvicka, Nysret Musliu, and Jakob Preininger. **Automated Production Scheduling for Artificial Teeth Manufacturing.** *Proceedings of the International Conference on Automated Planning and Scheduling*, 31:500–508, May 2021.

Felix Winter and Nysret Musliu. **Constraint-based Scheduling for Paint Shops in the Automotive Supply Industry.** *ACM Transactions on Intelligent Systems and Technology*, 12(2):17:1–17:25, January 2021.

Tobias Geibinger, Lucas Kletzander, Matthias Krainz, Florian Mischek, Nysret Musliu, and Felix Winter. **Physician Scheduling During a Pandemic.** *Proceedings of the 18th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research*, pages 456–465, 2021.

Marie-Louise Lackner, Christoph Mrkvicka, Nysret Musliu, Daniel Walkiewicz, and Felix Winter. **Minimizing Cumulative Batch Processing Time for an Industrial Oven Scheduling Problem.** *27th International Conference on Principles and Practice of Constraint Programming*, 210:37:1–37:18, 2021.

Johannes Vass, Nysret Musliu, and Felix Winter. **Solving the Production Leveling Problem with Order-Splitting and Resource Constraints.** *Proceedings of the*

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13th International Conference on the Practice and Theory of Automated Timetabling, I:261–284, 2021.

Felix Winter, Nysret Musliu, and Peter Stuckey. **Explaining Propagators for String Edit Distance Constraints**. *Proceedings of the AAAI Conference on Artificial Intelligence*, 34(02):1676–1683, April 2020.

Felix Winter, Nysret Musliu, Emir Demirović, and Christoph Mrkvicka. **Solution Approaches for an Automotive Paint Shop Scheduling Problem**. *Proceedings of the International Conference on Automated Planning and Scheduling*, 29:573–581, July 2019.

Emir Demirović, Nysret Musliu, and Felix Winter. **Modeling and solving staff scheduling with partial weighted maxSAT**. *Annals of Operations Research*, 275(1):79–99, April 2019.

Emir Demirović, Nysret Musliu, and Felix Winter. **Solution-based phase saving and maxsat for employee scheduling: A computational study**. *Proceedings of the 11th International Conference on the Practice and Theory of Automated Timetabling*, pages 452–457, 2018.

Nysret Musliu and Felix Winter. **A Hybrid Approach for the Sudoku Problem: Using Constraint Programming in Iterated Local Search**. *IEEE Intelligent Systems*, 32(2):52–62, March 2017.