

# MATTEO CARDELLINI

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## JOURNAL PUBLICATIONS

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- J3 **Optimising Dynamic Traffic Distribution for Urban Networks with Answer Set Programming.** M. Cardellini, C. Dodaro, M. Maratea and M. Vallati - To appear in Theory and Practice of Logic Programming
- J2 **Solving Rehabilitation Scheduling Problems via a Two-Phase ASP approach.** M. Cardellini, P. De Nardi, C. Dodaro, G. Galatà, A. Giardini, M. Maratea, I. Porro. Theory and Practice of Logic Programming, Volume 24, Issue 2, March 2024, pp. 344-367
- J1 **Rescheduling Rehabilitation Sessions with Answer Set Programming.** M. Cardellini, C. Dodaro, G. Galatà, A. Giardini, M. Maratea, N. Nisopoli and I. Porro. Journal of Logic and Computation, Volume 33, Issue 3, April 2023

## CONFERENCE PUBLICATIONS

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- C8 **Taming Discretised PDDL+ through Multiple Discretisations.** M. Cardellini, M. Maratea, F. Percassi, E. Scala and M. Vallati - Proceedings of the 34th International Conference on Automated Planning and Scheduling (ICAPS 2024)
- C7 **Symbolic Numeric Planning With Patterns.** M. Cardellini, E. Giunchiglia and M. Maratea - Proceedings of the 38th Annual AAAI Conference on Artificial Intelligence (AAAI 2024)
- C6 **A Framework for Risk-Aware Routing of Connected Autonomous Vehicles via Artificial Intelligence.** M. Cardellini, C. Dodaro, M. Maratea, and M. Vallati. In Proceedings of the 26th IEEE International Conference on Intelligent Transportation Systems (IEEE ITS 2023)
- C5 **In-Station Train Dispatching: A PDDL+ Planning Approach.** M. Cardellini, M. Maratea, M. Vallati, G. Boleto, and L. Oneto. Proceedings of the 31st International Conference on Automated Planning and Scheduling. AAAI Press, (ICAPS 2021)
- C4 **A Planning-based Approach for In-Station Train Dispatching.** M. Cardellini, M. Maratea, M. Vallati, G. Boleto, and L. Oneto. Proceedings of the 14th Annual Symposium on Combinatorial Search (SoCS-21)
- C3 **An Efficient Hybrid Planning Framework for In-Station Train Dispatching.** M. Cardellini, M. Maratea, M. Vallati, G. Boleto, and L. Oneto. Proceedings of the 21st International Conference on Computational Science. Springer, (ICCS 2021)
- C2 **In-Station Train Movements Prediction: from Shallow to Deep Multi Scale Models.** G. Boleto, L. Oneto, M. Cardellini, M. Maratea, M. Vallati, R. Canepa, D. Anguita. In Proceedings of the 29th European Symposium on Artificial Neural Networks. i6doc, 2021
- C1 **A Two-Phase ASP Encoding for Solving Rehabilitation Scheduling.** M. Cardellini, P. De Nardi, C. Dodaro, G. Galatà, A. Giardini, M. Maratea and I. Porro. In Proceedings of RuleML+RR 2021. Springer, 2021

## THESES

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- T3 *Ph.D. Symbolic Pattern Planning - M. Cardellini* - Supervisors: E. Giunchiglia, M. Maratea, M. Vallati
- T2 *Master's degree. Artificial Intelligence Techniques for Solving the In-Station Train Dispatching Problem - M. Cardellini* - Supervisors: M. Maratea
- T1 *Bachelor's degree. Visual and Data Analytics for the Analysis of Trains' Flux in a Railway Network - G. Boleto, M. Cardellini, G. Martino* - Supervisors: L. Oneto, M. Maratea

## ACADEMIC POSITIONS

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### Research Fellow (Post-Doc)

DIBRIS, University of Genova, Italy

*November 2024 - October 2025*

## EDUCATION

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### Italian National Ph.D. in Artificial Intelligence

*November 2021 - October 2024*

Work Faculty: University of Genova, Italy

Administrative Faculty: Polytechnic of Torino, Italy

Supervisors: M. Maratea, E. Giunchiglia, and M. Vallati

### University of Genova, Italy

*September 2019 - July 2021*

Master's Degree on Computer Engineering

Curriculum in Artificial Intelligence and Human-Centered Computing

Final Grade: 110/110 cum Laude and 'Dignità di Stampa'

### University of Genova, Italy

*September 2016 - September 2019*

Bachelor's degree on Computer Engineering

Final Grade: 110/110

## AWARDS

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- A1 **Award AIxIA Leonardo Lesmo 2022.** Special mention for the best Italian Master's Degree Thesis in Artificial Intelligence

## PROJECTS

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- P1 Post-graduate scholarship on **Induction and Deduction for Railway Traffic Planning in Small and Medium-sized Stations** - *July 2020 to November 2020 - 5k EUR* - DIBRIS, University of Genova

## TEACHING ACTIVITIES

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- TA3 **Fondamenti di Informatica.** Teaching assistant, Prof. E. Giunchiglia. ING-INF/05, University of Genova (DIBRIS) - 2024
- TA2 **Fondamenti di Informatica.** Teaching assistant, Prof. E. Giunchiglia. ING-INF/05, University of Genova (DIBRIS) - 2023
- TA1 **Databases.** Teaching assistant. Prof. A. Boccalatte, Prof. M. Maratea, ING-INF/05, University of Genova (DIBRIS) - 2022

## INVITED TALKS AND SEMINARS

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- IT3 **University of Oxford.** Seminar. *Symbolic Pattern Planning.* July 16, 2024
- IT2 **Fondazione Bruno Kessler.** Seminar. *Symbolic Pattern Planning.* February 16, 2024
- IT1 **University of Huddersfield.** Seminar. *An ASP Framework for Efficient Urban Traffic Optimization.* March 1, 2023

## EXPERIENCES ABROAD

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- E1 **University of Huddersfield.** *Visiting Researcher - From February to Mid May 2023.* Worked in the group of Prof. Mauro Vallati at the Centre for Planning, Autonomy and Representation of Knowledge (PARK)

## SUPERVISOR ACTIVITIES

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- S2 **A. Formica.** *October 2022.* Master's Degree in Computer Engineering. *In-Station Train Dispatching via Artificial Intelligence Techniques: Optimisation, Rescheduling and Visualisation.* Co-supervisor with Prof. M. Maratea
- S1 **C. Ansaldi, N. Chiesa.** *July 2022.* Bachelor's Degree in Computer Engineering. *Artificial Intelligence Techniques for Solving the Shift Scheduling Problem.* Co-supervisor with Prof. M. Maratea

## EVENTS

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- **ICAPS 23, 24, 25.** *PC Member.* International Conference on Automated Planning and Scheduling
- **AAAI 23, 24, 25.** *PC Member.* AAAI Conference on Artificial Intelligence
- **Intelligenza Artificiale 24.** *Guest Reviewer*
- **KEPS 23, 24.** *PC Member.* Workshop on Knowledge Engineering for Planning and Scheduling
- **ECAI 23.** *PC Member.* European Conference on Artificial Intelligence
- **LPNMR 22.** *Local Organizer.* 18th International Conference on Logic Programming and Non-monotonic Reasoning

## WORK EXPERIENCE

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<b>SurgiQ SRL</b> <i>Researcher</i>	April 2021 - November 2021 <i>Genova - IT</i>
<b>Secondhand Mobile SRL</b> <i>CTO e Co-founder</i>	February 2018 - April 2021 <i>Genova - IT</i>