

Tommaso Mannelli Mazzoli

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Education

TU Wien <i>PhD in Computer Science</i>	Vienna, Austria 2021–Present
Universidad Complutense Madrid <i>M.Sc. Mathematical Engineering</i>	Madrid, Spain 2019–2020
University of Florence <i>M.Sc. Applied Mathematics</i>	Florence, Italy 2018–2020
University of Florence <i>B.Sc. Mathematics</i>	Florence, Italy 2013–2017

Work Experience

Institute of Logic and Computation, TU Wien <i>Project Assistant</i>	Vienna, Austria 2021–Present
University of Melbourne <i>Visiting Student</i>	Melbourne, Australia Mar–Jun 2023
Universitat Autònoma de Barcelona <i>Visiting Student</i>	Barcelona, Spain Sep–Dec 2023

Projects

PhD Thesis: *Hybrid methods for the Bus Driver Scheduling Problem*

- Developments of metaheuristic methods for a real-life problem. Used Instance Space Analysis to assess strengths and weaknesses of methods. Hybridisation of exact and heuristic techniques.
- Successfully presented results at international conferences (GECCO, ICAPS, PATAT).

Master's thesis: *The Quadratic Assignment Problem: Metaheuristic Approaches.*

- Solved a NP-hard problem with metaheuristic methods.

Bachelor's thesis : *Integration in Finite Terms: Liouville's Theorem*

- Studying Differential fields and proving that the primitive of elementary functions cannot be written in easy terms

Technical Skills

Area of expertise: Metaheuristics, combinatorial optimisation, mathematical modeling, algorithm design and performance analysis, instance space analysis

Programming Languages: Python (incl. NumPy, SciPy, Pandas), Matlab, Julia, R, Fortran, \LaTeX

Optimisation Software & Tools: GAMS, MiniZinc, CPLEX, Gurobi, Irace, SMAC

Data Analysis & ML, : SAS, SPSS

Operating Systems & Other Tools: GNU/Linux, Windows, Git

Languages: Italian (mother tongue), English (proficiency), Spanish (proficiency), German (Intermediate)

Awards & Scholarships

GECCO Student Travel Grant, Erasmus+ Scholarship, Matricula de Honor (Highest Distinction) for 'Advanced Optimisation Techniques':

Miscellaneous

Interests: Languages, Chess, Latin American dances and Latin America in general