Tommaso Mannelli Mazzoli

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Education

TU Wien — **Vienna, Austria**
PhD in Computer Science — *2021–Present*

Universidad Complutense Madrid — **Madrid, Spain**
M.Sc. Mathematical Engineering — *2019–2020*

University of Florence — **Florence, Italy**
M.Sc. Applied Mathematics — *2018–2020*

University of Florence — **Florence, Italy**
B.Sc. Mathematics — *2013–2017*

Experience

Institute of Logic and Computation, TU Wien — **Vienna, Austria**
Project Assistant — *2021–2025*

University of Melbourne — **Melbourne, Australia**
Visiting Student — *Mar–Jun 2023*

Universitat Autònoma de Barcelona — **Barcelona, Spain**
Visiting Student — *Sep–Dec 2023*

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 using several metaheuristic methods, in Fortran.

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, LLMs, experience with data forma JSON, and CSV

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