

Tommaso Mannelli Mazzoli

Curriculum Vitae

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Personal Data

born in Florence (Italy), 1993-09-22

Italian Citizenship

Education

Since 2021 **Ph.D. Student in Computer Science**, *TU Wien*, Vienna (Austria)

Advisor: Nysret Musliu

2019 – 2020 **Master of Science in Mathematical Engineering**, *Universidad Complutense Madrid*, Madrid (Spain), Double degree

Advisor: Angel Felipe Ortega

2018 – 2020 **Master of Science in Applied Mathematics**, *University of study*, Florence (Italy)

Advisor: Stefania Bellavia

Thesis topic: The Quadratic Assignment Problem, Metaheuristic approaches

Area of Concentration: Combinatorial Optimisation

2013 – 2017 **Bachelor of Science in Mathematics**, *University of study*, Florence (Italy)

Advisor: Andrea Colesanti

Thesis topic: "Integration in finite terms: The Liouville's Theorem"

Area of Concentration: Differential Algebra

Research Interests

Metaheuristic methods

Hybridization of Metaheuristics with Exact Methods

Evolutionary Computation

Crew Scheduling Problems (in particular, Bus Driver Scheduling Problem)

Work Experience

Sep – Dec 2023 **Visiting Scholar**, *Universidad Autonoma Barcelona*, Bellaterra, Spain

Mar – June 2023 **Visiting Scholar**, *University of Melbourne*, Melbourne, Australia

Since 2021 **Project Assistant**, *Institute for Logic and Computation*, TU Wien, Vienna, Austria
Funded by FWF project W1260-N35, Vienna Graduate School of Combinatorial Optimization

2017 – 2021 **Ambulance rescuer**, *Humanitas Firenze Nord*, Florence (Italy)

2014 – 2019 **Academic senator**, *University of study*, Florence (Italy)

2011 – 2022 **Maths and Physics's private tutor**

Residence in Foreign Countries

Madrid, Spain

September 2019-February 2020

Melbourne, Australia

March 2023-June 2023

Barcelona, Spain

September 2023-December 2023

Publication(s)

- 1 **On Solving the 2-optimality Consensus Finding Problem Using Exact Solvers**, *Tommaso Mannelli Mazzoli, Christian Blum, Pedro Pablo Pinacho Davidson*, on-going, 2024
- 2 **Instance Space Analysis for the Bus Driver Scheduling**, *Tommaso Mannelli Mazzoli, Lucas Kletzander, Nysret Musliu, Kate Smith-Miles*, International Conference on the Practice and Theory of Automated Timetabling (PATAT), 2024
- 3 **Investigating Large Neighbourhood Search for Bus Driver Scheduling**, *Tommaso Mannelli Mazzoli, Lucas Kletzander, Nysret Musliu, Pascal Van Hentenrick*, International Conference on Automated Planning and Scheduling (ICAPS), 2024
<https://doi.org/10.1609/icaps.v34i1.31495>
- 4 **Metaheuristic Algorithms for the Bus Driver Scheduling Problem with Complex Break Constraints**, *Lucas Kletzander, Tommaso Mannelli Mazzoli, Nysret Musliu*, Genetic and Evolutionary Computation Conference (GECCO), 2022
<https://doi.org/10.1145/3512290.3528876>

Seminars

- Ago 2024 (Upcoming) **PATAT 2024**, *Instance Space Analysis for the Bus Driver Scheduling Problem*
- June 2024 **MIC 2024**, *Investigating Large Neighbourhood Search for Bus Driver Scheduling*
- May 2024 **VGSCO Retreat**, *From stars in the sky to instances in the space*
- Jan 2024 **VGSCO Colloquia**, *Optimisation and Consensus*
- Oct 2023 **UAB Seminar**, *Solving the bus driver scheduling problem*
- Apr 2023 **Optima Seminar**, *Solving the bus driver scheduling problem*
- Jan 2022 **VGSCO Colloquia**, *Metaheuristic Algorithms for Bus Driver Scheduling Problem with Complex Break Constraints*
- Jun 2022 **DBAI Meeting**, *Metaheuristic Algorithms for Bus Driver Scheduling Problem with Complex Break Constraints*
- Jun 2022 **VGSCO retreat**, *Tabu Search for Bus Driver Scheduling Problem with hard Break Constraints*
- Jul 2022 **GECCO 2022**, *Metaheuristic Algorithms for Bus Driver Scheduling Problem with Complex Break Constraints*
- Nov 2022 **VGSCO Open Problems Sessions**, *Metaheuristic Algorithms for Bus Driver Scheduling Problem with Complex Break Constraints*

Merits and Awards

- 2022 GECCO Student Travel Grant Award (450 \$)
- Matricula de Honor for Advanced Optimization Techniques, UCM, Madrid
- Erasmus scholarship at Universidad Complutense, Madrid, Spain (Ago 2019-Feb 2020)

Other activities

- 2023 Journal Reviewing (ITOR International Transactions in Operational Research)
2022 SIGEVO Summer School (<https://gecco-2022.sigevo.org/Summer-School>)

Knowledge

- OS GNU Linux, Windows, Android
Languages Python, Matlab, Fortran, Julia, R
Software Gams, MiniZinc, SAS, SPSS Tuner Irace, Smac

Service

- 2022 **Volunteer**, *GECCO 2022*, Boston, US
2012 **Internship**, *National Archaeological Museum*, piazza Santissima annunziata, Italy
2012 **Internship**, *Polo Scientifico*, Physics and Astronomy department, Sesto Fiorentino, Italy

Outreach

- 2016 **Gara matematica (Mathematics Contest)**, *Dipartimento di Matematica Ulisse Dini, Florence*
Collaboration in proctoring and grading in an annual contest for high school students.

Languages

- Italian Mother Language
English Professional working proficiency
Spanish Professional working proficiency
German Basic

Interests and Hobbies

- Science and Techonology Chess
Salsa (Cubana/New York) Bachata (Dominican, Sensual)
Others **Italian driving license B, AED operator**

Last Update: 25 July 2024