

Alberto Santini

Contacts Email: alberto.santini@upf.edu
Website: santini.in

Current affiliation [Universitat Pompeu Fabra, Spain](#)
Tenure-track assistant professor and “Ramon y Cajal” researcher at the Department of Economics and Business.
Affiliate professor at the Centre for Studies on Planetary Wellbeing.

Past Positions

2021–2023 [ESSEC Business School, France](#)
Department of Information Systems, Decision Sciences and Statistics.
Marie Skłodowska-Curie Fellow.

2017–2021 [Universitat Pompeu Fabra, Spain](#)
Department of Economics and Business.
Tenure-track assistant professor and “Juan de la Cierva” researcher.

2017 [RWTH Aachen University, Germany](#)
Deutsche Post Chair for the Optimisation of Distribution Networks.
Postdoctoral Researcher. Chair: Prof. Michael Schneider.

Other affiliations

2023–now [Global Challenges Lab, RWTH Aachen University, Germany](#)
Partner.

2018–now [Barcelona School of Management, Spain](#)
Professor.

2018–now [Barcelona Graduate School of Mathematics, Spain](#)
Affiliate professor.

2018–now [Barcelona School of Economics, Spain](#)
Affiliate professor.

2017–2023 [RWTH Aachen University Business School, Germany](#)
Lecturer.

Habilitations

2023 [Certificado R3](#)
Certificate in the Spanish higher education system. It recognises researchers who have reached the European Union’s R3 profile “Established Researcher”. Success rate in the 2023 call: 1/3.

2023 [Acreditació de Recerca \(Professor Agregat\)](#)
Habilitation as Associate Professor in the Catalan higher education system.

2022 [Abilitazione Scientifica Nazionale a Professore di Seconda Fascia 01/A6](#)
Habilitation as Associate Professor in the Italian higher education system.

Education

2014–2016 [University of Bologna, Italy](#)
Ph.D. in Automatic Control and Operational Research.
Supervisors: Silvano Martello, Daniele Vigo.

- 2011–2013 [University of Copenhagen, Denmark](#)
M.Sc. in Mathematics, part of the Master of Excellence programme.
Thesis advisors: Stefan Røpke and Louise Kallehauge. Mark: 12/12.
- 2008–2010 [University of Catania, Italy](#)
B.Sc. in Mathematics.
Thesis advisor: Angelo Bella. Mark: 110/110 summa cum laude.

Publications Journal papers

-
- 2024 1. Alberto Santini and Enrico Malaguti (2024). “The min-Knapsack Problem with Compactness Constraints and Applications in Statistics”. In: *European Journal of Operational Research* 312 (1), pp. 385–397. doi: 10.1016/j.ejor.2023.07.020
2. Alberto Santini (2024). “Destination selection and flight scheduling for regional airlines at slot-constrained airports”. Available on-line (in advance) in: *International Transactions in Operational Research*. doi: 10.1111/itor.13505
- 2023 3. Alberto Santini, Michael Schneider, Thibaut Vidal, and Daniele Vigo (2023). “Decomposition strategies for vehicle routing heuristics”. In: *INFORMS Journal on Computing* 35.3, pp. 543–559. doi: 10.1287/ijoc.2023.1288
4. Alberto Santini and Claudia Archetti (2023). “The hazardous orienteering problem”. In: *Networks* 81 (2), pp. 235–252. doi: 10.1002/net.22129
- 2022 5. Michele Monaci, Ciara Pike-Burke, and Alberto Santini (2022). “Exact algorithms for the 0–1 time-bomb knapsack problem”. In: *Computers & Operations Research* 145. Article ID 105848. doi: 10.1016/j.cor.2022.105848
6. Maxence Delorme and Alberto Santini (2022). “Energy-efficient automated vertical farms”. In: *Omega* 109. Article ID 102611. doi: 10.1016/j.omega.2022.102611
7. Alberto Santini, Ana Viana, Xenia Klimentova, and João Pedro Pedroso (2022). “The probabilistic Traveling Salesman Problem with crowdsourcing”. In: *Computers & Operations Research* 142. Article ID 105722. doi: 10.1016/j.cor.2022.105722
- 2021 8. Christian Blum, Marko Djukanovic, Alberto Santini, Hua Jiang, Chu-Min Li, Felip Manyà, and Günter Raidl (2021). “Solving common longest subsequence problems via a transformation to the maximum clique problem”. In: *Computers & Operations Research* 125. Article ID 105089. doi: 10.1016/j.cor.2020.105089
9. Alberto Santini, Michael Schneider, Enrico Bartolini, and Vinicius Greco de Lemos (2021). “The crop growth planning problem in vertical farming”. In: *European Journal of Operational Research* 294 (1), pp. 377–390. doi: 10.1016/j.ejor.2021.01.034
10. Alberto Santini (2021). “Optimising the assignment of swabs and reagents for PCR testing during a viral epidemic”. In: *Omega* 102. Article ID 102341. doi: 10.1016/j.omega.2020.102341
- 2020 11. Renata Turkeš, Kenneth Sörensen, Lars Magnus Hvattum, Eva Barrena, Hayet Chentli, Leandro Coelho, Iman Dayarian, Axel Grimault, Anders Gullhav, Çağatay Iris, Merve Keskin, Alexander Kiefer, Richard Martin Lusby, Geraldo Regis Mauri, Marcela Monroy-Licht, Sophie Parragh, Juan-Pablo Riquelme-Rodríguez, Alberto Santini, Vinicius Gandra Martins Santos, and Charles Thomas (2020). “Data for a meta-analysis of the adaptive layer in adaptive large neighborhood search”. In: *Data in Brief* 33. doi: 10.1016/j.dib.2020.106568
- 2019 12. Alberto Santini (2019). “An Adaptive Large Neighbourhood Search algorithm for the Orienteering Problem”. In: *Expert Systems with Applications* 123, pp. 154–167. doi: 10.1016/j.eswa.2018.12.050
13. Denis Cornaz, Fabio Furini, Enrico Malaguti, and Alberto Santini (2019). “A note on selective line-graphs and partition colorings”. In: *Operations Research Letters* 47 (6), pp. 565–568. doi: 10.1016/j.orl.2019.08.005
- 2018 14. Enrico Malaguti, Silvano Martello, and Alberto Santini (2018). “The Traveling Salesman Problem with Pickups, Deliveries, and Draft Limits”. In: *Omega* 74, pp. 50–58. doi: 10.1016/j.omega.2017.01.005
15. Fabio Furini, Enrico Malaguti, and Alberto Santini (2018). “An Exact Algorithm for the Partition Coloring

- Problem”. In: *Computers & Operations Research* 92, pp. 170–181. doi: 10.1016/j.cor.2017.12.019
- 2017 16. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum (2018). “A comparison of acceptance criteria for the Adaptive Large Neighbourhood Search metaheuristic”. In: *Journal of Heuristics* 24 (5), pp. 783–815. doi: 10.1007/s10732-018-9377-x
17. Alberto Santini, Stefan Ropke, and Christian E.M. Plum (2017). “A branch-and-price approach to the Feeder Network Design Problem”. In: *European Journal of Operational Research* 264 (2), pp. 607–622. doi: 10.1016/j.ejor.2017.06.063
18. Andrea Bettinelli, Alberto Santini, and Daniele Vigo (2017). “A real-time conflict solution algorithm for the Train Rescheduling Problem”. In: *Transportation Research Part B: Methodological* 106, pp. 237–265. doi: 10.1016/j.trb.2017.10.005
- 2015 19. Alberto Santini, Henrik Alsing Friberg, and Stefan Ropke (2015). “A note on a model for quay crane scheduling with non-crossing constraints”. In: *Engineering Optimization* 47.6, pp. 860–865. doi: 10.1080/0305215X.2014.958731

Publications Submitted to journals

- 2024 20. Diego Delle Donne, Alberto Santini, and Claudia Archetti (2024). “Integrating Public Transport in Sustainable Last-Mile Delivery: Column Generation Approaches”. Submitted, second round of review in: *European Journal of Operational Research*
21. Alberto Santini, Claudia Archetti, and Minakshi Punam Mandal (2024). “Tactical workforce sizing and scheduling decisions for last-mile delivery”. Submitted, second round of review in: *European Journal of Operational Research*
22. Alberto Santini (2024). “A Note on Solving the Decision Version of the Berth Allocation Problem via Selective Graph Coloring”. Submitted, first round of review in: *IEEE Transactions on Intelligent Transportation Systems*

Publications Work in progress

- 2024 23. Alberto Santini and Vikrant Vaze (2024). “Integrated Schedule Planning for Regional Airlines Using Column Generation”. Work in progress, target journal: *Transportation Science*
24. Rossana Cavagnini, Siddig Murwan, Alberto Santini, and Michael Schneider (2024). “A Guide to Recent Developments in Location-Routing Problems”. Invited review in: *European Journal of Operational Research*
25. Enrico Malaguti, Paolo Paronuzzi, and Alberto Santini (2024). “Exact algorithms for a 0–1 Knapsack Problem with Group Fairness”. Work in progress, target journal: *To be decided*

Technical Reports

- 2015 26. Valentina Cacchiani, Alberto Santini, and Daniele Vigo (2015). *A study on metaheuristic approaches for the energy-efficient Train Timetabling Problem*. Tech. rep. OR-15-6. DEI, University of Bologna
- 2014 27. Valentina Cacchiani, Alberto Santini, and Daniele Vigo (2014). *A novel modelling approach for the Train Timetabling Problem*. Tech. rep. OR-14-27. DEI, University of Bologna

Conference Talks

- 2024 28. Alberto Santini and Vikrant Vaze (2024). “Integrated Schedule Planning for Regional Airlines Using Column Generation”. In: Optimization and Decision Sciences (Sept. 8–12, 2024). Badesi, Italy
29. Alberto Santini and Vikrant Vaze (2024). “Integrated Schedule Planning for Regional Airlines Using Column Generation”. In: 33rd European Conference on Operational Research (June 30–July 3, 2024). Copenhagen, Denmark

30. Alberto Santini, Minakshi Punam Mandal, and Claudia Archetti (2024). "Tactical staffing and workforce scheduling decisions for green last-mile delivery". In: *Odysseus Conference* (May 19–24, 2024). Carmona, Spain
- 2023 31. Alberto Santini and Enrico Malaguti (2023). "The min-Knapsack Problem with Compactness Constraints". In: *19th Meeting of the EURO Working Group on Cutting and Packing* (May 3–5, 2023). Bologna, Italy
32. Alberto Santini, Diego Delle Donne, and Claudia Archetti (2023). "Sustainable last-mile delivery using public transport". In: *6th Conference of Young Researchers of the Royal Spanish Society of Mathematics and Statistics* (Feb. 6–10, 2023). León, Spain
- 2022 33. Alberto Santini and Claudia Archetti (2022). "The hazardous orienteering problem". In: *32nd European Conference on Operational Research* (July 3–6, 2022). Helsinki, Finland
34. Alberto Santini and Claudia Archetti (2022). "The hazardous orienteering problem". In: *SEIO 2022* (June 7–10, 2022). Granada, Spain
35. Alberto Santini, Michael Schneider, Thibaut Vidal, and Daniele Vigo (2022). "Decomposition strategies for vehicle routing heuristics". In: *Route 2022* (May 22–25, 2022). Helsingor, Denmark
- 2021 36. Alberto Santini and Maxence Delorme (2021). "Energy efficient automated vertical farms". In: *Optimization and Decision Sciences* (Sept. 14–17, 2021). Rome, Italy
37. Alberto Santini, Michele Monaci, and Ciara Pike-Burke (2021). "The 0–1 Time-bomb Knapsack Problem". In: *31st European Conference on Operational Research* (July 11–14, 2021). Athens, Greece
- 2020 38. Alberto Santini, Ana Viana, Xenia Klimentova, and João Pedro Pedroso (2020). "Machine learning and heuristic approaches to the Probabilistic TSP with Crowdsourcing". In: *4th AIROYoung Workshop* (Feb. 5–7, 2020). Bolzano, Italy
39. Alberto Santini and Ana Viana (2020). "Crowdsourcing in last-mile delivery: machine learning and heuristic approaches to the Stochastic TSP with Crowdsourcing". In: *5th Conference of Young Researchers of the Royal Spanish Society of Mathematics and Statistics* (Jan. 27–31, 2020). Castelló, Spain
- 2018 40. Alberto Santini (2018). "A hybrid Machine Learning and ALNS approach to the Orienteering Problem". In: *EURO/ALIO International Conference on Applied Combinatorial Optimization* (June 25–27, 2018). Bologna, Italy
41. Alberto Santini (2018). "An ALNS heuristic for the Orienteering Problem". In: *29th European Conference on Operational Research* (July 8–11, 2018). Valencia, Spain
42. Alberto Santini and Christian Blum (2018). "Solving a class of longest subsequence problems via maximum cliques". In: *Optimization and Decision Sciences* (Sept. 10–13, 2018). Taormina, Italy
- 2017 43. Alberto Santini, Fabio Furini, and Enrico Malaguti (2017). "Exact and heuristic algorithms for the partition colouring problem". In: *Optimization and Decision Sciences* (Sept. 4–7, 2017). Sorrento, Italy
- 2016 44. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum (2016). "A comparison of acceptance criteria for the Adaptive Large Neighbourhood Search metaheuristic". In: *28th European Conference on Operational Research* (July 3–6, 2016). Poznań, Poland
45. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum (2016). "Poster: A comparison of acceptance criteria for the ALNS metaheuristic". In: *46th Annual Conference of the Italian Operational Research Society* (Sept. 6–9, 2016). Trieste, Italy
- 2015 46. Alberto Santini, Stefan Ropke, and Christian E.M. Plum (2015). "A rich maritime extension of the Vehicle Routing Problem". In: *45th Annual Conference of the Italian Operational Research Society* (Sept. 7–10, 2015). Pisa, Italy
47. Alberto Santini, Enrico Malaguti, and Silvano Martello (2015). "A maritime version of the Travelling Salesman Problem". In: *Odysseus Conference* (May 31–June 5, 2015). Ajaccio, France
- 2014 48. Alberto Santini, Enrico Malaguti, and Silvano Martello (2014). "The Travelling Salesman Problem with pickup, delivery and draught limits". In: *44th Annual Conference of the Italian Operational Research*

Awards and distinctions

- 2023 [INFORMS Journal on Computing featured article](#)
The paper “Decomposition strategies for vehicle routing heuristics” was a featured article in IJOC Volume 35 Issue 3.
- 2023 [Transportation Science meritorious service award](#)
To recognise “Associate Editors and reviewers who have offered exceptional service to the journal in the review process” during the year 2023.
- 2022 [Transportation Science meritorious service award](#)
To recognise “Associate Editors and reviewers who have offered exceptional service to the journal in the review process” during the year 2022.
- 2018 [Omega best paper award](#)
Won the Best Paper Award for a paper published in 2018 in the journal Omega. The paper was “The Traveling Salesman Problem with Pickup, Deliveries, and Draft Limits”.

Grants Personal or as P.I., competitive

- 2024–2029 [Ramon y Cajal Fellowship](#)
Five-year grant by the Spanish Government. Ranked 4th in the Mathematics panel, with a score of 96.5/100.
- 2021–2023 [Marie Skłodowska-Curie Fellowship](#)
Marie Skłodowska-Curie Action (MSCA grant number 945380, Cofund), with a project titled “SILD: Sustainable Integrated Last-mile Delivery”. Grant to join ESSEC Business School.
- 2021 [Juan de la Cierva Incorporación](#)
Three-year grant by the Spanish government. *Refused* because it was incompatible with the Marie Skłodowska-Curie fellowship. Ranked 5th out of 28 participants from all areas of Mathematics, with a score of 90/100.
- 2021 [BGSE Seed Grant](#)
Grant awarded by the Barcelona School of Economics; topic: “Sustainable Last-mile Delivery”.
- 2020–2021 [Planetary Wellbeing research grant](#)
PI of a research proposal with Gara Villalba (Universitat Autònoma de Barcelona) and Michael Schneider (RWTH Aachen University) on the optimisation of vertical farming in Barcelona’s public schools. Grant awarded by Universitat Pompeu Fabra.
- 2019–2021 [Juan de la Cierva Formación](#)
Two-year grant by the Spanish government. Ranked 1st out of 49 participants from all areas of Mathematics, with a score of 99/100.
- 2014–2016 [Ph.D. grant by the University of Bologna](#)
Ranked 1st out of 9 participants, with a score of 92/100.

Grants As part of a group, competitive

- 2019 [I+D+i 2019 \(Retos\)](#)
Part of the project “Optimización logística para el cuidado de la salud en el hogar y los servicios sociales” by the Spanish Ministry of Science.
- 2016 [PRIN \(Research Projects of Relevant National Interest\) 2016](#)
Part of the project “Transportation and Logistics Optimization in the Era of Big and Open Data”.

Grants Other

- 2021 [Renowned Guest Visitor Grant](#)
Granted by the Research Centre of ESSEC Business School.

2019	Yerun Mobility Award To visit University Paris Dauphine, sponsored by YERUN.
2018–2023	Association of European Operational Research Societies (EURO) To organise the EUROYoung Workshops.
2018	Erasmus+ Grant To visit the University of Bologna, through the SmartTransLog consortium.
2017	COST STSM Grant Short-Term Scientific Mission grant to conduct research at INESC-TEC under COST Action “European Network for Collaboration on Kidney Exchange Programmes”.
2016	Association of European Operational Research Societies (EURO) To organise the “EURO Young Researchers OR Webinars”.
2015	Marco Polo scholarship To visit the Technical University of Denmark for a 3-month research stay.

Teaching Ph.D. level

2019–2020	Business Analytics for Operations and Marketing Taught in a team. Universitat Pompeu Fabra, first-year course for Ph.D. students (M.Res. in Economics, Finance and Business).
2018–2021	Research Seminars Taught in a team. Universitat Pompeu Fabra, first-year course for Ph.D. students (M.Res. in Economics, Finance and Business).

Teaching Master's level

2022–2024	Deterministic Models and Optimisation Barcelona School of Economics, M.Sc. in Data Science, Data Science Methodology Programme.
2021–2022	Deterministic Models and Optimisation Taught together with Jessica Rodríguez-Pereira. Barcelona School of Economics, M.Sc. in Data Science, Data Science Methodology Programme.
2021–2024	Practical Data Science for Finance Barcelona School of Management, Universitat Pompeu Fabra, M.Sc. in Finance and Banking.
2019–2022	Practical Data Science for Management Barcelona School of Management, Universitat Pompeu Fabra, M.Sc. in Management.
2019–2023	Advanced Machine Learning RWTH Business School, M.Sc. in Data Analytics and Decision Science.
2018–2019	Data Science Projects RWTH Business School, M.Sc. in Data Analytics and Decision Science.
2018–2023	Machine Learning RWTH Business School, M.Sc. in Data Analytics and Decision Science.
2017	Optimisation methods for Big Data Analytics RWTH Aachen, Master's in Management, Business, and Economics.
2014–2018	Optimisation Algorithms (teaching assistant) Course taught by Paolo Toth. University of Bologna, M.Eng. in Computer Engineering.

Teaching Bachelor's level

2018–2021, 2024	Operations Management Universitat Pompeu Fabra, Bachelor's in International Business Economics.
2018–2019, 2024	Operations Management Universitat Pompeu Fabra, Bachelor's in Business Management Administration.
2021	Applied Machine Learning and Optimisation Universitat Pompeu Fabra, elective course for all last-year Bachelor's students of the Department of Economics.
2020	Applied Optimisation Techniques Universitat Pompeu Fabra, elective course for all last-year Bachelor's students of the Department of Economics.
2019	Revenue Management and Dynamic Pricing Universitat Pompeu Fabra, elective course for all last-year Bachelor's students of the Department of Economics.
2016–2017	Foundations of OR (teaching assistant) Course taught by Enrico Malaguti and Michele Monaci. University of Bologna, B.Eng. in Management Engineering.

Academic experience Scientific Organisations

2019–2021	Elected member of the Board of Directors Member of the board of directors of AIRO, the Italian Operational Research Association.
2018–present	Founder, Coordinator Founded EUROYoung, a group of young O.R. scientists from EURO member countries, with the aim of organising training events for early-stage researchers.
2016–2018	Coordinator Coordinator of AIROYoung, the youth chapter of the Italian Operational Research Association. During my tenure as coordinator, I organised two workshops securing funding from Italian and European institutions; I created a database of young talents in O.R. and of open positions, helping to match O.R. scientists with relevant opportunities; I helped enrol new young members into AIRO, from Italy and other European countries.
2016	Founder Founder of AIROYoung, the youth chapter of the Italian Operational Research Association.

Academic experience Organisation of Seminars, Workshops, and Courses

2024	Member of the Organising Committee The 1 st EUROYoung PhD School. Invited speakers: Michel Bierlaire, David Pisinger, Claudia Archetti, Elena Fernandez and Ola Jabali. Barcelona, Spain, 4–6 September 2024.
2023	Member of the Organising Committee The 3 rd EUROYoung Workshop. Invited speakers: Ivana Ljubić and Leo Liberti. Cergy (Paris), France, 5–6 June 2023.
2022	Member of the Organising Committee The 2 nd EUROYoung Workshop. Invited speakers: Renata Mansini and Pedro Amorim. Porto, Portugal, 25–26 June 2022.
2019	Organiser of a PhD and Postdoc course Organised a course for PhD and Postdocs of the Barcelona Graduate School of Mathematics, titled “An Introduction to Equilibrium Problems and their applications”. The course is taught by Mauro Passacantando.
2019	Member of the Organising Committee The 1 st EUROYoung Workshop. Invited speakers: Ana Viana and Federico Perea. Seville, Spain, 2–3 May 2019.
2019	Member of the Organising Committee The 3 rd AIROYoung Workshop and 1 st AIROYoung PhD School. Invited speakers: Teodor Crainic and Endre Boros. Rome, Italy, 26–29 Mar 2019.

- 2018–2019 [Coordinator of the “Operations and Marketing” seminar series](#)
This is a series of weekly seminars at the Department of Economics and Business of Universitat Pompeu Fabra, with invited speakers from all over the world.
- 2018 [Member of the Organising Committee](#)
The 2nd AIROYoung Workshop, on the theme “Logistics optimisation and applied operational research”. Invited speakers: Geir Hasle and Roberto Roberti. Cosenza, Italy, 03–05 Mar 2018.
- 2017 [Workshop Organiser](#)
Organised, together with Lavinia Amorosi, the 1st AIROYoung Workshop, on the theme “Emerging Optimization Problems on Complex Networks”. Invited speakers: Justo Puerto and Maria Grazia Scutellà. Rome, Italy, 16–17 Feb 2017.
- 2016 [EURO Young Researchers OR Webinars Organiser](#)
Organised a series of OR webinars by and for young researchers from all over the world, sponsored by EURO.
- 2015 [Seminars Organiser](#)
Organised of a series of doctoral seminars within the Operational Research group at DEI, University of Bologna, involving local and visiting researchers.

Academic experience Organisation of Conferences

- 2024 [Member of the Programme Committee](#)
ISCO2024, the International Symposium on Combinatorial Optimization. Tenerife, Spain, 22–24 May 2024.
- 2023 [Member of the Programme Committee \(ECOM track\)](#)
GECCO2023, the Genetic and Evolutionary Computation Conference. Lisbon, Portugal, 15–19 July 2023.
- 2022 [Session Chair](#)
“MILP in Logistics and Last-Mile Delivery” session at the EURO 2022 Conference. Espoo, Finland, 3–6 July 2022.
- 2022 [Session Chair](#)
“Recent advances in transportation and supply chain optimisation” session at the SEIO 2022 Conference. Granada, Spain, 07–10 June 2022.
- 2022 [Member of the Programme Committee](#)
ISCO2022, the International Symposium on Combinatorial Optimization. Online, 18–20 May 2022.
- 2022 [Member of the Programme Committee \(ECOM track\)](#)
GECCO2022, the Genetic and Evolutionary Computation Conference. Boston, United States, 9–13 July 2022.
- 2022 [Member of the Programme Committee](#)
ODS2022, Optimisation and Decision Science 2022. Florence, Italy, 30 August – 02 September 2022.
- 2021 [Member of the Programme Committee \(ECOM track\)](#)
GECCO2021, the Genetic and Evolutionary Computation Conference. Lille, France, 10–14 July 2021.
- 2020 [Member of the Programme Committee](#)
ODS2020, Optimisation and Decision Science 2020 with theme “Optimisation in Artificial Intelligence and Data Science”. Rome, Italy, 19 November 2020.
- 2020 [Member of the Programme Committee \(ECOM track\)](#)
GECCO2020, the Genetic and Evolutionary Computation Conference. Cancún, Mexico, 08–12 July 2020.
- 2019 [Member of the Programme Committee \(ECOM track\)](#)
GECCO2019, the Genetic and Evolutionary Computation Conference. Prague, Czech Republic, 13–17 July 2019.
- 2019 [Member of the Programme Committee](#)
HM2019, the 11th International Workshop on Hybrid Metaheuristics. Concepción, Chile, 16–18 January 2019.
- 2018 [Member of the Organising Committee and Session Chair](#)

	ODS 2018, Optimisation and Decision Science Conference. Chair of the “AIROYoung” session. Taormina, Italy, 10–13 September 2018.
2018	Session Chair “EURO Young” session at the EURO 2018 Conference. Valencia, Spain, 08–11 July 2018.
2018	Session Chair “AIROYoung” session at the EURO/ALIO 2018 Conference. Bologna, Italy, 25–27 June 2018.
2017	Session Chair “AIROYoung” session at the ODS 2017, Optimisation and Decision Science Conference. Sorrento, Italy, 04–07 September 2017.
2016	Poster Session Chair “Young OR Researchers Poster Session” at the AIRO 2016 Conference. Trieste, Italy, 06–09 September 2016.
2016	Session Chair “Methodological advancements in metaheuristics” session at the EURO 2016 Conference. Poznan, Poland, 03–06 July 2016.
2015	Session Chair “Exact Methods for Routing Problems” at the AIRO 2015 Conference. Pisa, Italy, 07–10 September 2015.

Academic experience Evaluation Committees and Reviews

2023, 2024	Member of the Best PhD Dissertation Award committee AIRO, the Italian Operational Research Society.
2020–now	Member of PhD defence committees At the University of Palermo (Italy), the Open University of Catalonia (Spain), Universitat Pompeu Fabra (Spain), Universitat Politècnica de Catalunya (Spain).
2018	Grant proposal evaluator “FONDECYT Initiation into Research” programme, Chilean National Science and Technology Commission.
2018–2020	Member of the permanent M.Sc. thesis defence committee Master’s in Statistics and Operational Research, Polytechnic University of Catalunya, Spain. Master’s in Management, Barcelona School of Management, Spain.
2014–present	Reviewer for several international journals, including: Operations Research, Transportation Science, INFORMS Journal on Computing, European Journal of Operational Research, Computers & Operations Research, Omega, Transportation Research: Part B, Transportation Research: Part C, Transportation Research: Part E, International Transactions in Operations Research, Networks, OR Spectrum, Operations Research Forum, Discrete Applied Mathematics, Optimization Letters, Transportation Letters, Informations Systems and Operational Research, Operations Research Perspectives, Expert Systems With Applications, IEEE Access, Journal of Heuristics, Applied Mathematical Modelling.

Academic experience Visiting Positions

2018	University of Bologna, Italy Visiting Paolo Toth and Daniele Vigo under an Erasmus+ grant from the SmartTransLog consortium.
2017	INSEC-TEC, Portugal Visiting as part of a Short-Term Scientific Mission for COST Action “European Network for Collaboration on Kidney Exchange Programmes”. Working with Ana Viana, João Pedro Pedroso, and Xenia Klimentova.
2016	Amazon Inc. Visiting Research Scientist in Seattle, USA. Working with Mauricio Resende and Andrew Goldberg.
2016	Vrije Universiteit Amsterdam Visiting Ph.D. Student at the Department of Information, Logistics and Innovation. Working with Wout Dullaert.

- 2015 [University of Calabria](#)
Visiting Ph.D. Student at the Department of Mechanical, Energy and Management Engineering. Working with Demetrio Laganà.
- 2015 [Danish Technical University \(DTU\)](#)
Visiting Ph.D. Student at the Department of Management Engineering. Working with Stefan Røpke.

Invited talks

- 2024 [“Shift stability and workers’ wellbeing in last-mile delivery scheduling”](#)
Internal Operational Research seminar series at the Department of Economics and Business, Universitat Pompeu Fabra.
- 2023 [“Two non-linear stochastic problems with catastrophic consequences”](#)
Invited seminar at the Laboratoire d’Informatique de Paris Nord. Paris, 22 March 2023.
- 2022 [“Decomposition methods for vehicle routing heuristics”](#)
Invited to present at the 3rd Spanish Young Statisticians and Operational Researchers Meeting. Elche, Spain, 21–23 September 2022.
- 2022 [“Blending ML and OR tools to solve a problem in crowdsourced grocery home delivery”](#)
Invited seminar at the Tilburg School of Economics and Management. Tilburg, the Netherlands, 07 July 2022.
- 2022 [“Delivering parcels, growing lettuce on Mars and transporting time-bombs using one single tool”](#)
Guest lecture at the Institute of Advanced Studies. Neuville, France, 15 March 2022.
- 2021 [“The 0–1 Time-bomb Knapsack Problem”](#)
Invited to the “Research Seminars” series at the Department of Information Systems, Decision Sciences and Statistics, ESSEC. Cergy, France, 15 December 2021.
- 2021 [“New challenges in supply chain optimisation”](#)
Invited to the OR-OM Seminar Series at ESSEC. Cergy, France, 1 December 2021.
- 2021 [“The importance of networking in career development”](#)
Invited to the WISDOM round table within the EURO 2021 conference.
- 2019 [“Crowdsourcing in last-mile delivery: machine learning and heuristic approaches to the Stochastic TSP with Crowdsourcing.”](#)
Invited to present at the seminar series of LAMSADE, University Paris Dauphine. Paris, France, 26 November 2019.
- 2016 [“A real-time conflict resolution algorithm for the train rescheduling problem.”](#)
Invited to present at: Vrije Universiteit, Amsterdam (Feb 2016); Danish Technical University (DTU), Kongens Lyngby (Oct 2016); DSB Training Centre, Nyborg (Oct 2016).
- 2015 [“TSP with pickups, deliveries, and draught limits.”](#)
University of Bologna. Part of a series of seminars held by Ph.D. students and young researchers.
- 2014 [“Data Enevelopment Analysis and OR applications in measuring efficiency.”](#)
University of Bologna. Part of the course “Resource Optimization”, M.Eng. in Management Engineering.

Outreach activities

- 2022 [“Il senso della scienza ovvero la bellezza delle scienze.”](#)
Workshop with high-school students. Liceo Scientifico Statale “Alessandro Volta”, Caltanissetta, Italy, 24 November 2022.
- 2014 [“Recent trends in Operational Research and practical business applications.”](#)
American University of Armenia; series of two seminars at the College of Science and Engineering. Yerevan, Armenia, 9–10 July 2014.

Supervised theses

- 2024 [Master's Thesis, Master's Programme in Data Science Methodology, Barcelona School of Economics](#)
Supervisor, "Putting workers' wellbeing at the centre of rostering decisions in last-mile delivery and retail", Jonny Codd, Clarice Mottet, Carlos Pérez.
- [Master's Thesis, Master's Programme in Data Science Methodology, Barcelona School of Economics](#)
Supervisor, "A branch-and-price algorithm for a rich vehicle routing problem with synchronisation", Xi Cheng, Yutai Ke.
- 2023 [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Understanding the propagation of glass defects in windshields before and after lamination using high-resolution geometric measurement data", Ju-Chin Hsiao.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Improving the performance of a deep learning industrial part recognition system", Sumedh Sunil Thanekar.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Portfolio optimization using the 'Smart Predict then Optimize' framework", Tejas Govind Choudekar.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Estimation of the resale value of electric cars using machine learning and interpretable models", Jeswin Aloysius.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Neural networks for disease end-point prediction", Karan Sanan.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Prediction of tyre uniformity for truck tyres using machine learning", Wei-Chi Huang.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Predicting purchase requisition processing time using machine learning", Khartikeyan Ramasubbu.
- 2022 [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Uncertainty modelling in industrial production processes: predicting aleatoric and epistemic uncertainty for quality assessment of nonwovens", Himanshu Patanwala.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Unsupervised anomaly detection in multivariate time series", Kevin Meda.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Predicting ghosting effect of HUD systems before wind-shield lamination", Ju-Chin Hsiao.
- 2021 [Master's Thesis, M.Sc. in Management, Barcelona School of Management, Universitat Pompeu Fabra](#)
Supervisor, "Micro-economic insights for realistic pricing in the Vehicle Routing Problem with Occasional Drivers", Helena Bonnin.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Generalisability of machine learning algorithms for selective assembly", Sourabh Hujare.
- [Master's Thesis, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)
Supervisor, "Machine learning applied to metamodelling of thermo-structural systems and their functional mock-up interface", Clinton Charles.
- 2020 [Master's Thesis, M.Res. in Economics, School of Economics and Business, Universitat Pompeu Fabra](#)
Co-supervisor, "Imitation, Principal Component Analysis, and the Effects of Modifications to eSports on Competitive Balance", Karim Carroum.
- [Master's Thesis, M.Sc. in Management, Barcelona School of Management, Universitat Pompeu Fabra](#)
Supervisor, "A simulation study of integrated real-time data resulting in a dynamic pricing model for crowdsourcing-to-customer last-mile deliveries", Otis van der Meij.
- [Project, M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)

Supervisor, “COVID-19 Pandemic: Comparison of forecasting methodologies and affecting factors for fatalities and transmission rates”, Peter Yacoub.

Project, [M.Sc. in Data Analytics and Decision Science, RWTH Business School](#)

Supervisor, “Machine learning for selective assembly with automatic adaption to use-case complexity”, Sourabh Hujare.

Bachelor’s Thesis, [School of Economics and Business, Universitat Pompeu Fabra](#)

Supervisor, “Congestion tax as the optimal policy tool to minimize congestion in the city of Barcelona”, Joel Sanginés-Uriarte Dooly and Adrià Trepà i Izquierdo.

Bachelor’s Thesis, [School of Economics and Business, Universitat Pompeu Fabra](#)

Supervisor, “Machine Learning for Price Discrimination”, Jan Czernek.

2019 [Erasmus+ Internship, incoming from the University of Twente](#)

Supervisor, “Production planning and optimisation of vertical farms”, Vinicius Greco de Lemos.

Master’s Thesis, [M.Sc. in Management, Barcelona School of Management, Universitat Pompeu Fabra](#)

Supervisor, “Demand forecasting model in food delivery, a heuristic approach to data science using Python and geanalysis”, Marc Herrera.

2017 [Project, M.Sc. in Management, Business, and Economics, RWTH Aachen](#)

Supervisor, “Improving document-level machine translation with word2vec”, Sean Eulenberg.

Master’s Thesis, [M.Sc. in Management, Business, and Economics, RWTH Aachen](#)

Co-supervisor, “A heuristic algorithm for the electric pickup and delivery problem”, Lutz Venhofen.

2016 [Master’s Thesis, M.Eng. in Management Engineering, University of Bologna](#)

Co-supervisor, “Embedding robustness in train rescheduling algorithms”, Alessandro Morandi.

Project, [M.Eng. in Computer Engineering, University of Bologna](#)

Co-supervisor, “A genetic algorithm for real-time energy optimisation of train timetables”, Francesco Di Lella.

2015 [Master’s Thesis, M.Eng. in Management Engineering, University of Bologna](#)

Co-supervisor, “Metaheuristic algorithms for energy optimisation in train timetabling and rescheduling”, Hang Xu.

Project, [M.Eng. in Computer Engineering, University of Bologna](#)

Co-supervisor, “A constructive heuristic for the dispatching problem on multi-track territories”, Giacomo Dall’Olio and Simone Laierno.

2014 [Master’s Thesis, M.Eng. in Management Engineering, University of Bologna](#)

Co-supervisor, “Valutazione della Performance di un caso di Customer Contact Desk attraverso l’applicazione della metodologia Data Envelopment Analysis”, Martina Carli.

Work experience

2016 [Amazon](#)

Research Scientist Intern. Seattle, USA.

2012–2013 [Procter & Gamble](#)

Strategic Sourcing Intern. Bruxelles, Belgium.

2012 [WISON Offshore & Marine](#)

Procurement Trainee. Shanghai, China.

2011–2012 [Amiiko](#)

Ruby on Rails Developer. Copenhagen, Denmark.

Other

Languages

Italian: mothertongue; English: fluent; French: very good; Spanish: very good; Catalan: very good; Armenian: constantly improving!

Volunteering	Spanish Red Cross; Italian Red Cross; Danish Red Cross; Big Brother / Big Sister Project Kongelunden, Copenhagen, Denmark; Associació per la Promoció del Transport Public, Barcelona, Spain.
Certifications	Chartered shipbroker according to Italian law (2012).