Alberto Santini

Contacts	Email: alberto.santini@upf.edu Website: santini.in
Current affiliation	Universitat Pompeu Fabra, Spain **Associate 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

2023–2024, 2017–2021	Universitat Pompeu Fabra, Spain **Tenure-track assistant professor** and "Juan de la Cierva" researcher at the Department of Economics and Business.
2021–2023	ESSEC Business School, France **Marie Skłodowska-Curie Fellow** at the Department of Information Systems, Decision Sciences and Statistics.
2017	RWTH Aachen University, Germany **Postdoctoral Researcher** at the Deutsche Post Chair for the Optimisation of Distribution Networks. 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 Kallehague. 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

2026
1. Rossana Cavagnini, Alberto Santini, and Michael Schneider (2026). "Recent Developments in Location Routing Problems: Deterministic, single-echelon, single-objective, single-period problems". Available on-line (in advance) in: **European Journal of Operational Research**. DOI: 10.1016/j.ejor.2025.09.040

2. Enrico Malaguti, Paolo Paronuzzi, and Alberto Santini (2026). "Algorithms and Complexity Results for the 0–1 Knapsack Problem with Group Fairness". Available on-line (in advance) in: **Optimization Letters**. DOI: 10.1007/s11590-025-02252-y

2025
3. Diego Delle Donne, Alberto Santini, and Claudia Archetti (2025). "Integrating Public Transport in Sustainable Last-Mile Delivery: Column Generation Approaches". In: **European Journal of Operational Research** 324 (1), pp. 75–91. DOI: 10.1016/j.ejor.2024.12.047

4. Minakshi Punam Mandal, Alberto Santini, and Claudia Archetti (2025). "Tactical workforce sizing and scheduling decisions for last-mile delivery". In: **European Journal of Operational Research** 323 (1), pp. 153–169. DOI: 10.1016/j.ejor.2024.12.006

5. Alberto Santini (2025). "Destination selection and flight scheduling for regional airlines at slot-constrained airports". In: **International Transactions in Operational Research** 32 (3), pp. 1400–1421. DOI: 10.1111/itor.13505

2024
6. 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

2023
7. 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

8. Alberto Santini and Claudia Archetti (2023). "The hazardous orienteering problem". In: **Networks** 81 (2), pp. 235–252. DOI: 10.1002/net.22129

2022
9. 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

10. Maxence Delorme and Alberto Santini (2022). "Energy-efficient automated vertical farms". In: **Omega** 109. Article ID 102611. DOI: 10.1016/j.omega.2022.102611

11. Alberto Santini, Ana Viana, Xenia Klimentova, and João Pedro Pedroso (2022). "The probabilistic Travelling Salesman Problem with crowdsourcing". In: **Computers & Operations Research** 142. Article ID 105722. DOI: 10.1016/j.cor.2022.105722

2021
12. 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

13. 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

14. 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   15. 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, Vínicius 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   16. 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

17. 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   18. 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

19. 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

20. 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

2017   21. 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

22. 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   23. 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

2026   24. Alberto Santini and Vikrant Vaze (2026). "Integrated Schedule Planning for Regional Airlines Using Column Generation". Submitted, second round of review in: **Transportation Science**

25. Rossana Cavagnini, Siddig Murwan, Alberto Santini, and Michael Schneider (2026). "A Guide to Recent Developments in Location-Routing Problems. Part II — Stochastic, multi-echelon, multi-objective, and multi-period problems". Submitted, second round of review in: **European Journal of Operational Research**

26. Alberto Santini (2026). "Solving the Berth Allocation Problem via Selective Graph Coloring". Submitted, first round of review in: **TOP — Transactions in Operations Research**

Technical Reports

2015   27. 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   28. 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

2025   29. Alberto Santini, Minakshi Punam Mandal, and Claudia Archetti (2025). "Tactical staffing and workforce scheduling decisions for green last-mile delivery". In: SEIO 2025 (June 10–13, 2025). Lleida, Spain

         30. Alberto Santini and Vikrant Vaze (2025). "Integrated Schedule Planning for Regional Airlines Using Column Generation". In: Sixth Symposium on Aviation Research (Mar. 20–21, 2025). Bari, Italy

         31. Alberto Santini, Enrico Malaguti, and Paolo Paronuzzi (2025). "The 0–1 Knapsack Problem with Group Fairness". In: Optimization and Decision Sciences (Sept. 1–4, 2025). Milan, Italy

2024   32. Alberto Santini and Vikrant Vaze (2024). "Integrated Schedule Planning for Regional Airlines Using Column Generation". In: Annual Workshop of the Transportation Group of the Spanish Society of Statistics and Operational Research (Nov. 28–29, 2024). Seville, Spain

         33. 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

         34. 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

         35. 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   36. 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

         37. 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   38. Alberto Santini and Claudia Archetti (2022). "The hazardous orienteering problem". In: 32nd European Conference on Operational Research (July 3–6, 2022). Helsinki, Finland

         39. Alberto Santini and Claudia Archetti (2022). "The hazardous orienteering problem". In: SEIO 2022 (June 7–10, 2022). Granada, Spain

         40. 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   41. Alberto Santini and Maxence Delorme (2021). "Energy efficient automated vertical farms". In: Optimization and Decision Sciences (Sept. 14–17, 2021). Rome, Italy

         42. 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   43. 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

44. 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   45. 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

46. Alberto Santini (2018). "An ALNS heuristic for the Orienteering Problem". In: 29th European Conference on Operational Research (July 8–11, 2018). Valencia, Spain

47. 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   48. 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   49. 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

50. 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   51. 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

52. 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   53. 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 Society (Sept. 2–5, 2014). Como, Italy

Awards and distinctions

2025   **SSRN Top Paper**
The preprint of "Integrated Schedule Planning for Regional Airlines Using Column Generation" was the top paper in SSRN for category "Transport" during Feb–Apr 2025.

2025, 2024,   **Transportation Science meritorious service award**
2023, 2022   To recognise "Associate Editors and reviewers who have offered exceptional service to the journal in the review process" during the year 2024.

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.

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

2025–2028 Single-PI "Generación de Conocimiento" Grant
Three-year grant by the Spanish Government. Project-title: "Fairness and social well-being in optimisation models".

2024–2029 Ramon y Cajal Fellowship
Five-year grant by the Spanish Government. Ranked 4th in the Mathemathics 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 Autonoma 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" funded 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" funded by the Italian Ministr of Research.

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 "Euro-

pean 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

2026   From Prediction to Action: Modern Prescriptive Analytics
        Barcelona School of Management, Universitat Pompeu Fabra, M.Sc. in Management.

2025   Foundations of Data Science
        Taught together with Lorenzo Cappello. Barcelona School of Economics, M.Sc. in Economics and Finance, Financial Economics Programme.

2022–2025   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.

2021–2025   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

2025	**From Prediction to Action: Modern Prescriptive Analytics** Universitat Pompeu Fabra, Barcelona Programme for Interdisciplinary Studies (BaPIS).
2018–2021, 2024–2025	**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

2024–now	**Coordinator** Coordinator of the Working Group on Transportation of the Spanish Statistics and Operational Research Society.
2018–2024	**Coordinator** Coordinated the activities of EUROYoung, including four international workshops, a Ph.D. school, and sessions and round tables at the EURO conferences.
2019–2021	**Elected member of the Board of Directors** Member of the board of directors of AIRO, the Italian Operational Research Association.
2018	**Founder** 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.

2025 Organiser
The 1st PhD School and the annual workshop of the Working Group on Transportation of the Spanish Statistics and Operational Research Society. Invited speaker: Roberto Roberti. Barcelona, Spain, 1–3 December 2025.

2024 Member of the Organising Committee
The 1st 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 3rd EUROYoung Workshop. Invited speakers: Ivana Ljubić and Leo Liberti. Cergy (Paris), France, 5–6 June 2023.

2022 Member of the Organising Committee
The 2nd 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 1st EUROYoung Workshop. Invited speakers: Ana Viana and Federico Perea. Seville, Spain, 2–3 May 2019.

2019 Member of the Organising Committee
The 3rd AIROYoung Workshop and 1st 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

2025   **Session Chair**
"Logistics and Last-Mile Delivery" session at the SEIO 2025 Conference. Lleida, Spain, 10–13 June 2025.

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 11$^{\text{th}}$ 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 Politecnica 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	"Using public transport to deliver parcels in large cities"
	Invited talk at the Department of Economics and Management of the University of Brescia, Italy. Brescia, 7 November 2024.
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. Barcelona, 2 July 2024.
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, 7 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.

Supervision Ph.D. students

2026–2030   Ph.D. Programme in Information and Communication Technologies
Supervisor of Amit Entin. Thesis title: TBD.

Supervision Visiting students

2026   Visiting Ph.D. student
Lorenzo Saccucci from the University of Rome "La Sapienza". Visit topic: exact methods for a vehicle routing problem with on-time arrivals.

2019   Visiting Erasmus+ intern
Vinicius Greco de Lemos from the University of Twente. Visit topic: production planning and optimisation of vertical farms.

Supervision Bachelor's and Master's theses

2025   Bachelor's Thesis, B.Sc. in International Business Economics, Universitat Pompeu Fabra
Supervisor, "Forecasting wealth and anticipating tax", Quim Roselló, Oriol Diaz.

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 Trepat i Izquierdo.

Bachelor's Thesis, School of Economics and Business, Universitat Pompeu Fabra
Supervisor, "Machine Learning for Price Discrimination", Jan Czernek.

2019   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 geoanalysis", 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). Ham Radio operator (EA3JEU).