

Alberto Santini

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Position [Postdoctoral Researcher](#)
Deutsche Post Chair for the Optimization of Distribution Networks
Chair held by Prof. Michael Schneider

Affiliation [RWTH Aachen](#)
School of Business and Economics
Kackertstraße 7 — D-52072 Aachen (Germany)

Education

2014-16 [University of Bologna, Italy](#)
PhD in Automatic Control and Operational Research
Supervisors: Silvano Martello, Daniele Vigo

2011-13 [University of Copenhagen, Denmark](#)
MSc in Mathematics, part of the Master of Excellence programme
Grade: 12/12

2008-10 [University of Catania, Italy](#)
BSc in Mathematics
Grade: 110/110 summa cum laude

2002-07 [Liceo Scientifico “A. Volta”, Caltanissetta, Italy](#)
Scientific Diploma
Grade: 100/100

Publications

Journal Papers (published or submitted)

- 2017
1. Alberto Santini, Stefan Ropke, and Christian E.M. Plum. A branch-and-price approach to the Feeder Network Design Problem. *European Journal of Operational Research (to appear)*, pages 1–27, 2017
 2. Enrico Malaguti, Silvano Martello, and Alberto Santini. The Travelling Salesman Problem with pickups, deliveries, and draft limits. *Omega (to appear)*, pages 1–17, 2017. doi:10.1016/j.omega.2017.01.005
 3. Andrea Bettinelli, Alberto Santini, and Daniele Vigo. A real-time conflict solution algorithm for the Train Rescheduling Problem. *Transportation Research, Part B (under revision)*, pages 1–28, 2017
 4. Fabio Furini, Enrico Malaguti, and Alberto Santini. Exact and euristic algorithms for the Partition Colouring Problem. *Computers & Operations Research (under revision)*, pages 1–17, 2017
 5. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum. Measuring the impact of acceptance criteria on the Adaptive Large Neighbourhood Search metaheuristic. *Journal of Heuristics (under revision)*, pages 1–25, 2017
- 2015
6. Alberto Santini, Henrik Alsing Friberg, and Stefan Ropke. A note on a model for quay crane scheduling with non-crossing constraints. *Engineering Optimization*, 47(6):860–865, 2015. doi:10.1080/0305215X.2014.958731

Publications Journal Papers (in preparation)

- 2017
7. Stefan Ropke and Alberto Santini. Parallel Adaptive Large Neighbourhood Search. *In preparation*, pages 1–16, 2017
 8. Enrico Bartolini, Armine Minasyan, Alberto Santini, and Michael Schneider. A branch-and-price algorithm for a rich Multi-Activity Multi-Skill Shift Scheduling Problem. *In preparation*, pages 1–25, 2017
 9. Andrew Goldberg, Mauricio Resende, and Alberto Santini. Algorithms for a rich Truckload Pickup and Delivery Problem. *In preparation*, pages 1–20, 2017
 10. Demetrio Laganà and Alberto Santini. Exact solution methods for the Constrained Shortest Path Tour Problem. *In preparation*, 2017

Technical Reports

- 2015
11. Valentina Cacchiani, Alberto Santini, and Daniele Vigo. A study on metaheuristic approaches to the energy-efficient Train Timetabling Problem. Technical Report OR-15-6, DEI, University of Bologna, 2015
- 2014
12. Valentina Cacchiani, Alberto Santini, and Daniele Vigo. A novel modelling approach to the Train Timetabling Problem. Technical Report OR-14-27, DEI, University of Bologna, 2014

Conference Talks

- 2017
13. Fabio Furini, Enrico Malaguti, and Alberto Santini. Exact and heuristic algorithms for the partition colouring problem. In *ODS 2017 Conference*, 2017
- 2016
14. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum. Poster: A comparison of acceptance criteria for the ALNS metaheuristic. In *AIRO 2016 Conference*, 2016
 15. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum. A comparison of acceptance criteria for the Adaptive Large Neighbourhood Search metaheuristic. In *EURO 2016 Conference*, 2016
- 2015
16. Enrico Malaguti, Silvano Martello, and Alberto Santini. A maritime version of the Travelling Salesman Problem. In *Odysseus 2015 Conference*, 2015
 17. Alberto Santini, Stefan Ropke, and Christian E.M. Plum. A rich maritime extension of the Vehicle Routing Problem. In *AIRO 2015 Conference*, 2015
- 2014
18. Enrico Malaguti, Silvano Martello, and Alberto Santini. The Travelling Salesman Problem with pickup, delivery and draught limits. In *AIRO 2014 Conference*, 2014

Academic experience Organisation

- SEP 2017
- [Session Chair](#)
“AIRO Young” session at the ODS 2017 Conference.
- FEB 2017
- [Workshop Organiser](#)
Organised, together with Lavinia Amorosi, the 1st AIRO Young Workshop, on the theme “Emerging Optimization Problems on Complex Networks”. Invited speakers: Justo Puerto and Maria Grazia Scutellà. Rome, 16-17 FEB 2017.
- 2016-2017
- [Founder and Coordinator](#)
Founder and coordinator of AIRO Young, the youth chapter of the Italian Operational Research Association.
- SEP 2016
- [Poster Session Chair](#)
“Young OR Researchers Poster Session” at the AIRO 2016 Conference.

JUL 2016	Session Chair “Methodological advancements in metaheuristics” at the EURO 2016 Conference.
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.
SEP 2015	Session Chair “Exact Methods for Routing Problems” at the AIRO 2015 Conference.
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 Teaching

2017	Teacher Course “Optimisation methods for Big Data Analytics” taught at RWTH Aachen (Summer Semester).
2016-17	Teaching assistant Course “Foundations of OR”, A-K cohort taught by Enrico Malaguti, L-Z cohort taught by Michele Monaci. M. Eng. in Management Engineering, University of Bologna.
2016-17	Teaching assistant
2015-16	Course “Optimisation Algorithms M” taught by Paolo Toth. M.Eng. in Computer Engineering, University of Bologna.
2014-15	

Academic experience Visiting Positions

Nov 2017	INSEC-TEC, Portugal Visiting Ana Viana, as part of a Short-Term Scientific Mission for COST Action “European Network for Collaboration on Kidney Exchange Programmes”.
JUL-OCT 2016	Amazon Inc. Visiting Research Scientist in Seattle, USA. Working with Mauricio Resende and Andrew Goldberg.
FEB 2016	Vrije Universiteit Amsterdam Visiting PhD Student at the Department of Information, Logistics and Innovation. Working with Wout Dul-laert.
Nov 2015	University of Calabria Visiting PhD Student at the Department of Mechanical, Energy and Management Engineering. Working with Demetrio Laganà.
MAR-MAY 2015	Danish Technical University (DTU) Visiting PhD Student at the Department of Management Engineering. Working with Stefan Røpke.

Grants

2017	COST STSM Grant Short-Term Scientific Mission grant to conduct research at INESC-TEX under COST Action “European Network for Collaboration on Kidney Exchange Programmes”. Funded: 1 500 Eur.
2016	PRIN (Research Projects of Relevant National Interest) 2016 Part of the group awarded for the project “Transportation and Logistics Optimization in the Era of Big and Open Data”. Total funded: 840 638 Eur.
2016	Association of European Operational Research Societies (EURO) Grant to organise the “EURO Young Researchers OR Webinars”. Funded: 1 000 Eur.

- 2015 [Marco Polo scholarship](#)
Grant to conduct research abroad. Funded: 1 878 Eur (three months).
- 2014-16 [PhD grant by the University of Bologna](#)
Ranked 1st out of 9 qualified participants (grade: 92/100). Funded: 40 915 Eur (three years).

Invited talks

- 2016 [“A real-time conflict resolution algorithm for the train rescheduling problem.”](#)
Invited to present at: Vrije Universiteit, Amsterdam (Feb 2016); Danish Technical University, Copenhagen (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 PhD students and young researchers.
- 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.
- 2014 [“Data Enevelopment Analysis and OR applications in measuring efficiency.”](#)
University of Bologna; part of the course in Resource Optimization, M.Eng. in Management Engineering.

Supervised projects and theses

- APR-SEP 2017 [Project, M.Sc. in Business Administration and Computer Science, RWTH Aachen](#)
Supervisor, “Improving document-level machine translation with word2vec”, Sean Eulenberg.
- APR-SEP 2017 [Master Thesis, M.Sc. in Business Administration and Computer Science, RWTH Aachen](#)
Co-supervisor, “A heuristic algorithm for the electric pickup and delivery problem”, Lutz Venhofen.
- SEP-DEC 2016 [Master Thesis, M.Eng. in Management Engineering, University of Bologna](#)
Co-supervisor, “Embedding robustness in train rescheduling algorithms”, Alessandro Morandi.
- FEB-APR 2016 [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.
- SEP-DEC 2015 [Master Thesis, M. Eng. in Management Engineering, University of Bologna](#)
Co-supervisor, “Metaheuristic algorithms for energy optimisation in train timetabling and rescheduling”, Hang Xu.
- MAR-JUN 2015 [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.
- AUG-NOV 2014 [Master 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.
- 2012-13 [Procter & Gamble](#)
Strategic Sourcing Intern. Bruxelles, Belgium.
- 2012 [WISON Offshore & Marine](#)
Procurement Trainee. Shanghai, China.

2011-12 [Amiiko](#)
Web Developer. Copenhagen, Denmark.

Other

LANGUAGES Italian: mothertongue
English: fluent
French: fluent
Danish: proficient
Armenian: studying

VOLUNTEERING Italian Red Cross
Danish Red Cross
International Rotaract Club of Copenhagen