

Alberto Santini

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Position [PhD student in Automatic Control and Operational Research](#)
Supervisors: Silvano Martello, Daniele Vigo

Affiliation [University of Bologna](#)
Electrical, Electronic and Information Engineering Department
Viale Risorgimento, 2 — 40136 Bologna (BO), Italy

Education

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

- 2016
1. Alberto Santini, Stefan Ropke, and Christian E.M. Plum. A branch-and-price approach to the Feeder Network Design Problem. *Submitted to EJOR*, pages 1–16, 2016
 2. Enrico Malaguti, Silvano Martello, and Alberto Santini. The Travelling Salesman Problem with pickups, deliveries, and draft limits. *Submitted to Omega*, pages 1–19, 2016
 3. Andrea Bettinelli, Alberto Santini, and Daniele Vigo. A real-time conflict solution algorithm for the Train Rescheduling Problem. *Submitted to Transportation Research, Part B*, pages 1–28, 2016
 4. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum. Measuring the impact of acceptance criteria on the Adaptive Large Neighbourhood Search metaheuristic. *In preparation*, pages 1–25, 2016
 5. Stefan Ropke and Alberto Santini. Parallel Adaptive Large Neighbourhood Search. *In preparation*, pages 1–16, 2016
 6. Fabio Furini, Enrico Malguti, and Alberto Santini. A branch-and-price algorithm for the Selective Graph Colouring Problem. *Submitted to Computers & Operations Research*, pages 1–17, 2016
 7. Eduardo Alvarez, Rodrigo Linfati, Armine Minasyan, Michele Monaci, and Alberto Santini. A nested branch-and-cut-and-price algorithm for the Multi-Activity Multi-Skill Shift Scheduling Problem. *In preparation*, pages 1–25, 2016
- 2015
8. 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

Publications Conference Proceedings

- 2016
9. Alberto Santini, Stefan Ropke, and Lars Magnus Hvattum. Poster: A comparison of acceptance criteria for the ALNS metaheuristic. In *AIRO 2016 Conference*, 2016
 10. 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

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| 2015 | 11. Enrico Malaguti, Silvano Martello, and Alberto Santini. A maritime version of the Travelling Salesman Problem. In <i>Odysseus 2015 Conference</i> , 2015 |
| | 12. Alberto Santini, Stefan Ropke, and Christian E.M. Plum. A rich maritime extension of the Vehicle Routing Problem. In <i>AIRO 2015 Conference</i> , 2015 |
| 2014 | 13. Enrico Malaguti, Silvano Martello, and Alberto Santini. The Travelling Salesman Problem with pickup, delivery and draught limits. In <i>AIRO 2014 Conference</i> , 2014 |

Publications Technical Reports

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| 2015 | 14. 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 | 15. 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 |

Academic experience Organisation

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| 2016 | Founder
Founder of the youth chapter of the Italian Operational Research Association (AIRO). |
| SEP 2016 | Poster Session Organiser
“Young OR Researchers Poster Session” at AIRO 2016 Conference. |
| JUL 2016 | Session Chair
“Methodological advancements in metaheuristics” at EURO 2016 Conference. |
| 2016 | EURO Young Researchers OR Webinars Organiser
Organised a series of OR webinars, sponsored by EURO. |
| SEP 2015 | Session Chair
“Exact Methods for Routing Problems” at 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

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| 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. |
| 2014-15
2015-16
2016-17 | Teaching assistant
Course “Optimisation Algorithms M” taught by Paolo Toth. M.Eng. in Computer Engineering, University of Bologna. |

Academic experience Visiting Positions

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| JUL-OCT 2016 | Amazon Inc.
Visiting Research Scientist in Seattle, USA. Supervisor: Mauricio Resende. |
| FEB 2016 | Vrije Universiteit Amsterdam
Visiting PhD Student at the Department of Information, Logistics and Innovation. Working with Wout Dullaert. |

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

2016	Association of European Operational Research Societies (EURO) Grant to organise the “EURO Young Researchers OR Webinars”. Funded: 1000 Eur.
2015	Marco Polo scholarship Grant to conduct research abroad. Funded: 1878 Eur (three months).
2014-16	PhD grant by the University of Bologna Ranked 1 st out of 9 qualified participants (grade: 92/100). Funded: 40915 Eur (three years).

Invited talks

FEB 2016	Vrije Universiteit, Amsterdam “A real-time conflict resolution algorithm for the train rescheduling problem.”
JAN 2015	University of Bologna “TSP with pickups, deliveries, and draught limits.” Part of a series of seminars held by PhD students and young researchers.
JUL 2014	American University of Armenia “Recent trends in Operational Research and practical business applications.” Series of two seminars, College of Sciences and Engineering.
MAY 2014	University of Bologna “Data Enevelopment Analysis and OR applications in measuring efficiency.” Part of the course in Resource Optimization, M.Eng. in Management Engineering.

Supervised projects and theses

FEB-APR 2016	Project, M.Eng. in Computer Engineering 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 Co-supervisor, “Metaheuristic algorithms for energy optimisation in train timetabling and rescheduling”, Hang Xu.
MAR-JUN 2015	Project, M.Eng. in Computer Engineering 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 Co-supervisor, “Valutazione della Performance di un caso di Customer Contact Desk attraverso l’applicazione della metodologia Data Envelopment Analysis”, Martina Carli.

Schools attended

OCT 2015	Combinatorial Optimization at Work Zuse Institut (Germany) <small>Lectures by Martin Grötschel, Thorsten Koch, Robert Bixby, Pierre Bonami, etc.</small>
JAN 2015	The Aussois Combinatorial Optimization Workshop Aussois (France) <small>Invited by Silvano Martello.</small>
MAY 2014	VeRoLog school on VRP University of Bologna (Italy) <small>Lectures by Olli Bräysy, Roberto Baldacci, and Daniele Vigo.</small>
FEB 2014	Paris Spring School in Column Generation Institut Henri Poincaré (France) <small>Lectures by Marco Lübbecke, Guy Desaulniers, Jacques Desrosiers, and Roberto Wolfler-Calvo.</small>
JUN-AUG 2012	International Summer Programme Copenhagen Business School (Denmark) <small>Lectures by Rolando Tomasini and Gary Schwartz.</small>
JUL-SEP 2011	Inter-university Summer School in Mathematics Perugia University (Italy) <small>Lectures by Vitali Milman, Yuli Eidelman, and Sandy Zabel.</small>
JUN 2011	NIP Summer School Aberdeen University (Scotland) <small>Lectures by Crispin Wright, Brian Wetherson, and Alan Weir.</small>
AUG-SEP 2010	Rome-Moscow school of Matrix Methods and Applied Linear Algebra Rome 2 University (Italy), Moscow State University (Russia) <small>Lectures by Evgeny Tyrtshnikov, Carmine Di Fiore, Paolo Zellini, Daniele Bertaccini, Hakim Ikramov, Raymond Chan, and Sergey Grudsky.</small>

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