

Davide Duma

Curriculum Vitae

Dipartimento di Informatica
Università degli Studi di Torino
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Personal data

Born 7 April 1987, Casarano (Italy)

Education

- 2014–present **Ph.D candidate in *Computer Science***, *Università degli Studi di Torino*, Thesis: “*Online optimization methods applied to the management of health services*”, Supervisor Roberto Aringhieri.
Research topics: online optimization, simulation, healthcare management, process modeling
- 2011–2014 **Master of *Mathematics***, *Università degli Studi di Torino*, Curriculum in *Numerical modeling*, Thesis: “*A simulation and optimization model for operating room planning*”, Supervisor Roberto Aringhieri.
Final grade 108/110
- 2006–2011 **Bachelor of *Mathematics and Computer Science***, *Università del Salento*, Curriculum in *Computer Science & Management*, Thesis: “*Approximation algorithms for the multiway cut problem*”, Supervisor Paolo Nobili.
Final grade 105/110

Summer Schools

- 2015 **ESI XXXII - EURO Summer Institute on Online Optimization**, Szeged (Hungary).
2015 **Short Course in Data Mining with Applications to Healthcare**, Cardiff (UK).
2015 **BISS 2015 - Bertinoro International Spring School**, Bertinoro (Italy).
2014 **ESI XXXI - EURO Summer Institute on Operational Research applied to Health in a Modern World**, *Attendance as guest*, Bard (Italy).

Work experience

- 2017 **Teaching assistant**, *Interdepartmental University School in Strategic Science*, Università degli Studi di Torino, Course in Operational Research.
- 2014 **Research fellow**, *Department of Computer Science*, Università degli Studi di Torino, Project: “*Clinical pathways: new organizational and management patient-centered models*”.
- 2013 **Teaching assistant**, *Department of Mathematics*, Università degli Studi di Torino, Preliminary course in Mathematics.

Conferences

- 2017 **3rd International Conference on Health Care Systems Engineering (HCSE 2017)**, Florence (Italy).
- 2016 **46th Annual Conference Italian Operations Research Society (AIRO 2016) – Emergency advances in logistics systems**, Trieste (Italy).
- 2016 **42nd ORAHS Conference – Finding better health-care decisions in new oceans of health data**, *Session Chair: Emergency Department II*, Pamplona (Spain).
- 2016 **28th European Conference on Operational Research (EURO 2016)**, Poznań (Poland).
- 2015 **45th AIRO Conference – Optimization for Energy, Environment and Sustainability**, Pisa (Italy).

- 2015 **41st ORAHS Conference – Networking Health: Facing the Challenges in Health Services Management**, Montréal (Canada).
- 2014 **4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2014)**, Vienna (Austria).

Publications

- 2017 **Patient-centred objectives as an alternative to maximum utilisation: comparing surgical case solutions**, *Roberto Aringhieri and Davide Duma*, Submitted to Optimization and Decision Science International Conference, CONFERENCE PAPER ACCEPTED.
- 2017 **Mining the patient flow through an Emergency Department to deal with overcrowding**, *Davide Duma and Roberto Aringhieri*, Third International Conference on Health Care Systems Engineering, CONFERENCE PAPER ACCEPTED.
- 2017 **The Real Time Management of operating rooms**, *Davide Duma and Roberto Aringhieri*, Operations Research Applications in Health Care Management, CHAPTER ACCEPTED.
- 2017 **Simple but effective heuristics for the 2-Constraint Bin Packing Problem**, *Roberto Aringhieri, Davide Duma, Andrea Grosso and Pierre Hosteins*, Journal of Heuristics, pp 1–13.
- 2016 **The optimization of a surgical clinical pathway**, *Roberto Aringhieri and Davide Duma*, Simulation and Modeling Methodologies, Technologies and Applications, Advances in Intelligent Systems and Computing (Springer), vol 402, pp 313–331.
- 2015 **An online optimization approach for the Real Time Management of operating rooms**, *Davide Duma and Roberto Aringhieri*, Operations Research for Health Care, vol 7, pp 40–51.
- 2015 **Comparing disease control policies for interacting wild populations**, *Iulia Martina Bulai, Roberto Cavoretto, Bruna Chialva, Davide Duma and Ezio Venturino*, Nonlinear Dynamics, vol 79, pp 1881–1900.
- 2014 **A hybrid model for the analysis of a surgical pathway**, *Roberto Aringhieri and Davide Duma*, Proceedings of the 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (HA-2014), pp 889–900, ISBN 978-989-758-038-3.
- 2013 **Do niches help in controlling disease spread in ecoepidemic models?**, *Iulia Martina Bulai, Bruna Chialva, Davide Duma and Ezio Venturino*, Proceedings of the 13th International Conference on Computational and Mathematical Methods in Science and Engineering, J. Vigo Aguiar, pp 320–339.

Awards

- 2014 **SIMULTECH Best Paper Award**, *Conference paper title: A hybrid model for the analysis of a surgical pathway*, authored by Roberto Aringhieri and Davide Duma.

Languages

Italian	Mothertongue
English	Intermediate

Computer Skills

OS	Microsoft Windows
Programming Languages	C, Java, L ^A T _E X
Software	AnyLogic, CPLEX, ProM, RapidMiner, MATLAB, Maple