

Roberto Aringhieri | CV

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Short bio

Roberto Aringhieri, Dr. Ph.D. is Professor of Operational Research and Management Science at the Department of Computer Science, University of Turin. He has multidisciplinary education background: he graduated in July 1996 in Computer Science at the University of Pisa, and he attended a Ph.D. program in “Mathematics for Economics Decisions” at the University of Pisa defending his thesis in June 2000. After the Ph.D., he was a research fellow at DISMI, University of Modena and Reggio Emilia, Italy (Dec 2000 - Nov 2002). From 2003 to 2018, he was Assistant Professor at the Department of Information Technologies (DTI), University of Milan. and then at the Department of Computer Science, University of Turin. From 2003, he is in charge of several academic courses, mainly in Operational Research, Combinatorial Optimization, Models and Methods for supporting decisions, and Algorithms and Data Structures.

His main skills are in the field of quantitative analysis using Operational Research methodologies and Simulation, and the design of efficient optimization algorithms. Following its educational background and its natural bent, his scientific career is characterized by the ability to change research topics successfully and productively, as shown in his list of papers. As well as other topics as Bioinformatics, Combinatorial Optimization and Simulation and Performance Evaluation, Roberto Aringhieri is working on Health Care Management Science, especially on emergency medical services, workforce management, operating room planning and clinical pathways optimization. He has been in charge of several pure and applied research projects. Among them, with Elena Tànfani he has been in charge of the project “*Clinical Pathways: New Patient Centered Organizational and Management Models*”, under the program “Futuro in Ricerca – 2008” (accepting rate $\leq 3\%$), funded for 433,000 euro. He published 82 papers in blind review, including 32 papers in refereed international journals, 41 in refereed conference proceedings, and 9 book chapters. Further, he published 6 editorials and 8 popular papers. At the end of 2023, he has been a speaker at over 55 scientific conferences, including 10 invited talks [89]–[98]. With Davide Duma, he was awarded the *Best Conference Paper* at International Conference “Simulation and Modeling Methodologies, Technologies and Applications”, Wien, 2014, with a paper titled “A hybrid model for the analysis of a surgical pathway”. Bibliometrics (Scopus, 29 June 2024): documents 70, citations 1384, h-index 19.

From 2015, he is member of the committee for the Ph.D. Program in Computer Science at the University of Turin. He organised of several international conferences (CTW 2008, ORAHS 2010, ESI XXXI 2014, ORAHS 2024), and member of the scientific committee of the international conference organised by the “EURO Working Group” (EWG) on “Operational Research Applied to Health Services” (ORAHS). From 2010, he is member of the EWG board, and from 2019 he is co-coordinator of the EWG. He is member of the program committee of the “International Conference on machine Learning, Optimization & Data science” (LOD). He organised several streams and/or sessions on health care topics at the following international conferences: European Conference on Operational Research (EURO), Conference of the International Federation of Operational Research Societies (IFORS), Winter Simulation Conference (track “Healthcare Applications”). Guest editor of 6 special issues on health care topics published on international journals. From 2016, he is Associate Editor of the international journal “Operations Research for Health Care”. From 2023, he is Health Care Systems Area Editor of the international journal “Flexible Services and Manufacturing Journal”.

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- [83] R. Aringhieri, E. Lanzarone, F. Maggioni, M. Reuter-Oppermann, G. Righini, and M.T. Vespucci. "Operations Research in the Red Zone". In: *Operations Research for Health Care in Red Zone*. Ed. by R. Aringhieri, E. Lanzarone, F. Maggioni, M. Reuter-Oppermann, G. Righini, and M.T. Vespucci. Vol. 10. AIRO Springer Series. Advance online publication 5 September 2023. Springer Nature, 2023, pp. 1–3. DOI: 10.1007/978-3-031-38537-7_1. URL: <http://hdl.handle.net/2318/1932830>.
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Invited talks

- [89] *TOP-ST-MIN: a new variant of the Team Orienteering Problem*. Karlsruhe Institute of Technology, Karlsruhe, Germany. Invited talk. Feb. 2023.
- [90] *Models for dealing with medical emergency: from the ambulance to the emergency department*. Winter School of Operational Research in Public Health Emergencies (ORPHES). Invited talk. Jan. 2022.
- [91] *Online optimization in health care: funny and challenging problems*. OR/MS for Healthcare and Gender, EURO WISDOM Forum Webinar. Invited talk. July 2020.
- [92] *Online optimization in health care delivery: overview and possible applications*. OR2019, Conference of the national Operations Research societies of Germany, Austria and Switzerland, Dresden, Germany. Invited talk. Sept. 2019.
- [93] *Alternative research trends in operating room planning*. 7th Workshop of the French Working Group on Operations Research and Health Care, Paris, France. Invited talk. June 2018.
- [94] *Emergency Medical Services I – Ambulance Management*. Summer School on Game Theory and Health Management – Campione d'Italia. Invited talk. Sept. 2013.
- [95] *Emergency Medical Services II – Workforce Management based on Forecasted Demand*. Summer School on Game Theory and Health Management – Campione d'Italia. Invited talk. Sept. 2013.
- [96] *Patient-centered Healthcare Delivery*. Workshop on "Health Services", Karlsruhe, Germany. Invited talk. Sept. 2011.
- [97] *Metaheuristics for Solving SONET Network Design Problems*. International Summerschool on Metaheuristics, Tenerife, Spain. Invited talk. Mar. 2003.
- [98] *A Linear Algorithm for The Hyper Wiener Number of Chemical Trees*. Dimacs Workshop on Discrete Mathematical Chemistry, Rutgers University, USA. Invited talk. Mar. 1998.

Popular papers

- [99] *Dall'ambulanza al pronto soccorso. Modelli quantitativi per la gestione del paziente di emergenza/urgenza*. Innovazione manageriale in sanità, AMAS, Genova. Invited talk. May 2022.
- [100] R. Aringhieri. "Modelli e metodi per la gestione della rete dell'emergenza-urgenza". In: *Politiche Sanitarie* 18.4 (2017), pp. 176–185.
- [101] R. Aringhieri and P. Cappanera. "Operations Management nei processi sanitari: case studies e opportunità di miglioramento". In: *Politiche Sanitarie* 18.4 (2017). Editorial, pp. 153–154.

- [102] *Modelli e metodi per la gestione di un sistema di emergenza sanitaria territoriale*. Operations Management nei processi sanitari: case studies e opportunità di miglioramento, Firenze, Italy. Invited talk. May 2017.
- [103] *Gestione delle sale operatorie: approcci di tipo tattico-operativo*. Approccio Lean alla gestione della Sala Operatoria. Invited talk. Dec. 2016.
- [104] R. Aringhieri, R. Berchi, G. Carello, F. Fragnelli, D. Morale, A. Pagliosa, G. Righini, and G. Sesana. "Il Ruolo della Ricerca Operativa nell'organizzazione di un sistema di pronto intervento di soccorso sanitario". In: *Scienza delle decisioni in Italia: applicazioni della ricerca operativa a problemi aziendali*. Ed. by A. Sciomachen and G. Felici. ECIG, Genova, 2008.
- [105] R. Aringhieri, M. Bruglieri, F. Malucelli, and M. Nonato. "Uno strumento di supporto alle decisioni per l'ottimizzazione della raccolta di rifiuti differenziati". In: *Rendiconti Cremonesi - Il contributo del Politecnico di Milano alla conoscenza delle dinamiche evolutive nel territorio di Cremona*. Ed. by Pier Luigi Paolillo. Politecnico di Milano – Libreria Clup, Nov. 2005, pp. 223–235.
- [106] R. Aringhieri, G. Gallo, F. Malucelli, and C. Artioli. "Un modello per la gestione del teleriscaldamento e la cogenerazione di energia elettrica nella città di Ferrara". In: *Logistica & Management* gennaio/febbraio (2001), pp. 75–93.