

Roberto Aringhieri

 Work:

 Email:



Place of birth:

Nationality: Italian

SHORT BIO

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 85 papers in blind review, including 35 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 2024, he has been a speaker at over 55 scientific conferences, including 10 invited talks. 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 2025): documents 73, citations 1571, h-index 21.

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 (2010), and from 2013 he is co-coordinator of the EWG. He is member of the program committee of the "International Conference on machine Learning, Optimization & Data Science" (IOLDS). 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".

Complete CV available at <https://di.unito.it/aringhieri>.

WORK EXPERIENCE

Università di Torino

City: Torino Country: Italy

[03/2024 - Current] **Full Professor**

Università di Torino

City: Torino Country: Italy

[12/2018 - 02/2024] **Associate Professor**

Università di Torino

City: Torino Country: Italy

[11/2008 - 11/2018] **Assistant Professor**

Università di Milano

City: Milano Country: Italy

[12/2002 - 10/2008] **Assistant Professor**

Università di Modena e Reggio Emilia

City: Reggio Emilia Country: Italy

[12/2000 - 11/2002] **Postdoc researcher**

EDUCATION AND TRAINING

[1996 - 2000] **PhD in Mathematics for Economic Decisions**

Università di Pisa

City: Pisa Country: Italy

[1990 - 1996] **Degree in Computer Science**

Università di Pisa

City: Pisa Country: Italy

LANGUAGE SKILLS

Mother tongue(s): Italian Other language(s): French, English

MAIN RESEARCH PROJECTS

2019-2024: *Operational Research for Health Care: From Theory to Practice*

Funded by Fondazione Cassa di Risparmio di Torino. Role: Principal Investigator.

- [2022 - 2024] **RISPOSTE: servizi digitali Per cONtraSTare l'Epidemia**
Funded by the program INFRA-P2. In collaboration with "Città della Salute e della Scienza" of Turin.
- [2021 - 2023] **CHAT: Circular Health for Industry**
Funded by the program "Artificial Intelligence, Man and Society". In collaboration with the Fondazione Bruno Kessler, and the hospitals "Città della Salute e della Scienza" and "Ospedale Cottolengo" of Turin.
- [2017 - 2019] **BECOME: Big data supporting Emergency Care imprOveMEnt**
Funded by Fondazione Cassa di Risparmio di Torino. Role: Principal Investigator.
- [2017 - 2018] **PRECISE: Improving the Emergency Care System Equity**
Funded by Università Italo-Francese under the mobility program "Galileo". Role: Principal Investigator.
- [2010 - 2015] **Clinical Pathways: New Patient Centered Organizational and Management Models**
Research program "Futuro in Ricerca 2008". Role: Research unit coordinator and co-PI.
- [2008 - 2009] **DECEMbRIA - Decisions for Emergency Medical Services**
Funded by Lombardy Region.

MAIN TEACHING ACTIVITIES

- [2009 - Current] **Ricerca Operativa**
Until the Academic Year 2022/23 the course was called "Matrix Calculus and Operations Research".
Link: <https://laurea.informatica.unito.it/do/corsi.pl/Show?id=nw57>
- [2012 - Current] **Modelli e Metodi per il Supporto alle Decisioni**
Link: <https://magistrale.informatica.unito.it/do/corsi.pl/Show?id=uft3>
- [2014 - 2023] **Ottimizzazione Combinatoria**

OTHER RELEVANT ACADEMIC ACTIVITIES

- [2023 - Current] **Health care systems Area Editor for Flexible Services and Manufacturing Journal**
- [2022 - Current] **MOTIVATE: MONitoraggio e Valutazione dell'impatto della ricerca e della Terza missione**
- [2019 - Current] **Co-coordinator of the European Working group on Operational Research Applied to Health Services (ORAHs)**
- [2019 - Current] **Member of Quality Assurance Board of the University of Turin**
- [2019 - Current] **Associate Editor for Operations Research for Health Care Journal**

- [2023 - 2024] Conference Chair of the ORAHS 2024 conference "Making an impact. Reflecting on 50 years of healthcare operational research"
- [2022 - 2023] General and Program Chair WHO-EURO Winter School of Operational Research in Public Health Emergencies (ORPHES)
- [2013 - 2014] General and Program Chair EURO Summer Institute XXXI (ESWI): OR applied to Health in a Modern World

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Referred papers on international journals

- [1] R. Aringhieri, D. Duma, and G. Squillace. "Online algorithms with foresight for radiotherapy patient scheduling". In: *Computers and Operations Research* 182.107132 (2025). Advance online publication 30 May 2025. Open Access. doi: 10.1016/j.cor.2025.107132. URL: <http://hdl.handle.net/2318/2077459>.
- [2] Matteo Di Cunzolo, Massimiliano Ronzani, Roberto Aringhieri, Chiara Di Francescomarino, Chiara Ghidini, Alberto Guastalla, and Emilio Sulis. "Robust solutions via optimisation and predictive process monitoring for the scheduling of the interventional radiology procedures". In: *International Transactions in Operational Research* 32.4 (2025). Advance online publication 8 December 2024. Open Access, pp. 2189–2214. doi: <https://doi.org/10.1111/itor.13584>. URL: <https://hdl.handle.net/2318/2037190>.
- [3] Alberto Guastalla, Roberto Aringhieri, and Pierre Hosteins. *The Team Orienteering Problem with Service Times and Mandatory & Incompatible Nodes*. Advance online publication 18 June 2025. Open Access. 2025. doi: 10.1016/j.cor.2025.107170. URL: <http://hdl.handle.net/2318/2083512>.
- [4] R. Aringhieri, S. Bigharaz, A. Druetto, D. Duma, A. Grosso, and A. Guastalla. "The daily swab test collection problem". In: *Annals of Operations Research* 335.3 (2024). Advance online publication 27 October 2022. Open Access, pp. 1449–1470. doi: 10.1007/s10479-022-05019-1. URL: <https://hdl.handle.net/2318/1879001>.
- [5] D. Duma and R. Aringhieri. "Real-time resource allocation in the Emergency Department: a case study". In: *Omega* 117 (2023). Advance online publication 26 January 2023. Open Access, p. 102844. doi: 10.1016/j.omega.2023.102844. URL: <http://hdl.handle.net/2318/1892154>.
- [6] R. Aringhieri, S. Bigharaz, D. Duma, and A. Guastalla. "Fairness in ambulance routing for post disaster management". In: *Central European Journal of Operations Research* 30 (2022). Advance online publication 26 October 2021. Open Access, pp. 189–211. doi: 10.1007/s10100-021-00785-y. URL: <http://hdl.handle.net/2318/1816139>.
- [7] R. Aringhieri, D. Duma, P. Landa, and S. Mancini. "Combining workload balance and patient priority maximisation in operating room planning through hierarchical multi-objective optimisation". In: *European Journal of Operational Research* 298.2 (2022). Advance online publication 24 July 2021, pp. 627–643. doi: 10.1016/j.ejor.2021.07.033. URL: <http://hdl.handle.net/2318/1806872>.
- [8] P. Hosteins, R. Scatamacchia, A. Grosso, and R. Aringhieri. "The connected critical node problem". In: *Theoretical Computer Science* 93 (2022). Advance online publication 16 May 2022, pp. 235–255. doi: 10.1016/j.tcs.2022.05.011. URL: <http://hdl.handle.net/2318/1879002>.
- [9] D. Duma and R. Aringhieri. "An ad hoc process mining approach to discover patient paths of an Emergency Department". In: *Flexible Services and Manufacturing Journal* 32 (2020). Advance online publication 7 December 2018, pp. 6–34. doi: 10.1007/s10696-018-9330-1. URL: <http://hdl.handle.net/2318/1684425>.
- [10] R. Aringhieri, A. Grosso, P. Hosteins, and R. Scatamacchia. "Polynomial and pseudo-polynomial time algorithms for different classes of the Distance Critical Node Problem". In: *Discrete Applied Mathematics* 253 (2019). Advance online publication 1 February 2018, pp. 103–121. doi: 10.1016/j.dam.2017.12.035. URL: <http://hdl.handle.net/2318/1662827>.
- [11] D. Duma and R. Aringhieri. "The management of non-elective patients: shared vs. dedicated policies". In: *Omega* 83 (2019). Advance online publication 14 March 2018, pp. 199–212. doi: 10.1016/j.omega.2018.03.002. URL: <http://hdl.handle.net/2318/1662830>.
- [12] R. Aringhieri, M. Bruglieri, F. Malucelli, and M. Nonato. "A Special Vehicle Routing Problem Arising in the Optimization of Waste Disposal: A Real Case". In: *Transportation Science* 52.2 (2018). Advance online publication 7 April 2017., pp. 277–299. doi: 10.1287/trsc.2016.0731. URL: <http://hdl.handle.net/2318/1596992>.
- [13] R. Aringhieri, D. Duma, and V. Fragnelli. "Modeling the rational behavior of individuals on an e-commerce system". In: *Operations Research Perspectives* 5.1 (2018). Advance online publication 24 December 2017. Open Access, pp. 22–31. doi: 10.1016/j.orp.2017.12.001. URL: <http://hdl.handle.net/2318/1662828>.
- [14] R. Aringhieri, D. Duma, A. Grosso, and P. Hosteins. "Simple but effective heuristics for the 2-Constraint Bin Packing Problem". In: *Journal of Heuristics* 24.3 (2018). Advance online publication 15 March 2017, pp. 345–357. doi: 10.1007/s10732-017-9326-0. URL: <http://hdl.handle.net/2318/1627345>.

- [15] R. Aringhieri, M.E. Bruni, S. Khodaparasti, and J.T. van Essen. "Emergency Medical Services and beyond: Addressing new challenges through a wide literature review". In: *Computers and Operations Research* 78 (2017). Advance online publication 22 September 2016., pp. 349–368. doi: 10.1016/j.cor.2016.09.016. URL: <http://hdl.handle.net/2318/1596991>.
- [16] B. Addis, R. Aringhieri, A. Grosso, and P. Hosteins. "Hybrid Constructive Heuristics for the Critical Node Problem". In: *Annals of Operations Research* 238.1 (2016). Advance online publication 12 February 2016, pp. 637–649. doi: 10.1007/s10479-016-2110-y. URL: <http://hdl.handle.net/2318/1555950>.
- [17] R. Aringhieri, G. Carello, and D. Morale. "Supporting decision making to improve the performance of an Italian Emergency Medical Service". In: *Annals of Operations Research* 236.1 (2016). Advance online publication 5 November 2013., pp. 131–148. doi: 10.1007/s10479-013-1487-0. URL: <http://hdl.handle.net/2318/139504>.
- [18] R. Aringhieri, A. Grosso, P. Hosteins, and R. Scatamacchia. "A general Evolutionary Framework for different classes of Critical Node Problems". In: *Engineering Applications of Artificial Intelligence* 55 (2016). Advance online publication 7 July 2016, pp. 128–145. doi: 10.1016/j.engappai.2016.06.010. URL: <http://hdl.handle.net/2318/1583153>.
- [19] R. Aringhieri, A. Grosso, P. Hosteins, and R. Scatamacchia. "Local Search Metaheuristics for the Critical Node Problem". In: *Networks* 67.3 (2016). Advance online publication 19 February 2016, pp. 209–221. doi: 10.1002/net.21671. URL: <http://hdl.handle.net/2318/1509060>.
- [20] P. Landa, R. Aringhieri, P. Soriano, E. Tānfani, and A. Testi. "A hybrid optimization algorithm for surgeries scheduling". In: *Operations Research for Health Care* 8 (Mar. 2016). Advance online publication 21 January 2016, pp. 103–114. doi: 10.1016/j.orhc.2016.01.001. URL: <http://hdl.handle.net/2318/1546252>.
- [21] R. Aringhieri, R. Cordone, and A. Grosso. "Construction and improvement algorithms for dispersion problems". In: *European Journal of Operational Research* 242 (2015). Advance online publication 7 October 2014, pp. 21–33. doi: 10.1016/j.ejor.2014.09.058. URL: <http://hdl.handle.net/2318/155343>.
- [22] R. Aringhieri, P. Landa, P. Soriano, E. Tānfani, and A. Testi. "A two level Metaheuristic for the Operating Room Scheduling and Assignment Problem". In: *Computers & Operations Research* 54 (Feb. 2015). Advance online publication 6 September 2014, pp. 21–34. doi: 10.1016/j.cor.2014.08.014. URL: <http://hdl.handle.net/2318/155349>.
- [23] D. Catanzaro, R. Aringhieri, M. Di Summa, and R. Pesenti. "A Branch-Price-and-Cut Algorithm for the Minimum Evolution Problem". In: *European Journal of Operational Research* 244.3 (2015). Advance online publication 16 February 2015, pp. 753–765. doi: 10.1016/j.ejor.2015.02.019. URL: <http://hdl.handle.net/2318/1509014>.
- [24] D. Duma and R. Aringhieri. "An online optimization approach for the Real Time Management of operating rooms". In: *Operations Research for Health Care* 7 (2015). Advance online publication 16 September 2015, pp. 40–51. doi: 10.1016/j.orhc.2015.08.006. URL: <http://hdl.handle.net/2318/1532560>.
- [25] R. Aringhieri, D. Catanzaro, and M. Di Summa. "Optimal solutions for the Balanced Minimum Evolution Problem". In: *Computers & Operations Research* 38.12 (2011), pp. 1845–1854. doi: 10.1016/j.cor.2011.02.020. URL: <http://hdl.handle.net/2318/86826>.
- [26] R. Aringhieri and R. Cordone. "Comparing Local Search Metaheuristics for the Maximum Diversity Problem". In: *Journal of the Operational Research Society* 62.2 (2011). Advance online publication 28 July 2010, pp. 266–280. doi: 10.1057/jors.2010.104. URL: <http://hdl.handle.net/2318/75442>.
- [27] R. Aringhieri. "Composing medical crews with Equity and Efficiency". In: *Central European Journal of Operations Research* 17.3 (2009), pp. 343–357. doi: 10.1007/s10100-009-0093-3. URL: <http://hdl.handle.net/2318/56134>.
- [28] R. Aringhieri, M. Bruglieri, and R. Cordone. "Optimal results and tight bounds for the Maximum Diversity Problem". In: *Foundations of Computing and Decision Sciences* 34.2 (2009), pp. 73–85. URL: <http://hdl.handle.net/2318/61806>.
- [29] R. Aringhieri, R. Cordone, and Y. Melzani. "Tabu Search vs. GRASP for the Maximum Diversity Problem". In: *4OR* 6.1 (2008), pp. 45–60. doi: 10.1007/s10288-007-0033-9. URL: <http://hdl.handle.net/2318/55620>.
- [30] R. Aringhieri, E. Damiani, S. De Capitani Di Vimercati, S. Paraboschi, and P. Samarati. "Fuzzy Techniques for Trust and Reputation Management in Anonymous Peer-to-Peer Systems". In: *Journal of the American Society for Information Science and Technology* 57.4 (2006), pp. 528–537. doi: 10.1002/asi.20307. URL: <http://hdl.handle.net/2318/55698>.
- [31] R. Aringhieri and M. Dell'Amico. "Comparing Metaheuristic Algorithms for the SONET Network Design Problems". In: *Journal of Heuristics* 11.1 (Jan. 2005), pp. 35–57. doi: 10.1007/s10732-005-6998-7. URL: <http://hdl.handle.net/2318/55619>.
- [32] R. Aringhieri. "Solving Chance-Constrained Programs combining Tabu Search and Simulation". In: *Experimental and Efficient Algorithms*. Ed. by C. C. Ribeiro and S. L. Martins. Vol. 3059. Lecture Notes in Computer Science. Springer-Verlag Heidelberg, 2004, pp. 30–41. doi: 10.1007/978-3-540-24238-5_3. URL: <http://hdl.handle.net/2318/55503>.
- [33] R. Aringhieri, P. Hansen, and F. Malucelli. "Chemical Trees Enumeration Algorithms". In: *4OR* 1 (2003), pp. 67–83. doi: 10.1007/s10288-002-0008-9. URL: <http://hdl.handle.net/2318/55616>.

- [34] R. Aringhieri and F. Malucelli. "Optimal Operations Management and Network Planning of a District Heating System with a Combined Heat and Power Plant". In: *Annals of Operations Research* 120 (2003), pp. 173–199. doi: 10.1023/A:1023334615090. URL: <http://hdl.handle.net/2318/55617>.
- [35] R. Aringhieri, P. Hansen, and F. Malucelli. "A Linear Algorithm for The Hyper Wiener Index of Chemical Trees". In: *Journal of Chemical Information and Computer Science* 41.4 (2001), pp. 958–963. doi: 10.1021/ci0001536. URL: <http://hdl.handle.net/2318/55615>.

Referred papers on international conferences.

- [36] R. Aringhieri, M. Di Cunzolo, M. Dutto, L. Genga, A. Guastalla, M. Locatelli, L. Pellegrini, G. Ruffini, E. Sulis, L.C. Tagliabue, and A. Boccuzzi. "Simulation, optimization, and process mining: practical applications in healthcare". In: *Proceedings of the 3rd National Conference on Artificial Intelligence (Ital-IA 2023)*. Vol. 2952. 2023, pp. 160–165. URL: <https://ceur-ws.org/Vol-3486/>.
- [37] M. Di Cunzolo, A. Guastalla, R. Aringhieri, E. Sulis, I.A. Amantea, M. Ronzani, C. Di Francescomarino, and C. Ghidini. "Combining process mining and optimization: a scheduling application in healthcare". In: *1st International Workshop on Data-Driven Business Process Optimization, Business Process Management Conference*. Vol. 460. Lecture Notes in Business Information Processing. Advance online publication 9 February 2023. Springer Nature, 2023, pp. 197–209. doi: 10.1007/978-3-031-25383-6_15. URL: <http://hdl.handle.net/2318/1932810>.
- [38] R. Aringhieri, S. Branchi, C. Di Francescomarino, C. Ghidini, A. Guastalla, and E. Sulis. "Workshift scheduling using optimization and process mining techniques: an application in healthcare". In: *2022 Winter Simulation Conference (WSC)*. Vol. 2022-December. Advance online publication 23 January 2023. IEEE, 2022, pp. 1116–1127. doi: 10.1109/WSC57314.2022.10015405. URL: <http://hdl.handle.net/2318/1892907>.
- [39] M. Ronzani, R. Ferrod, C. Di Francescomarino, E. Sulis, R. Aringhieri, G. Boella, E. Brunetti, L. Di Caro, M. Dragoni, C. Ghidini, and R. Marinello. "Unstructured Data in Predictive Process Monitoring: Lexicographic and Semantic Mapping to ICD-9-CM Codes for the Home Hospitalization Service". In: vol. 13196 LNAI. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 2022, pp. 700–715.
- [40] R. Aringhieri, S. Bigharaz, D. Duma, and A. Guastalla. "Novel applications of the team orienteering problem in health care logistics". In: *Optimization in Artificial Intelligence and Data Sciences*. Ed. by L. Amorosi, P. Dell'Olmo, and I. Lari. Vol. 8. AIRO Springer Series. Advance online publication 2 March 2022. Springer Nature, 2021, pp. 235–245. doi: 10.1007/978-3-030-95380-5_21. URL: <http://hdl.handle.net/2318/1892908>.
- [41] R. Aringhieri, G. Boella, E. Brunetti, L. Di Caro, C. Di Francescomarino, M. Dragoni, R. Ferrod, C. Ghidini, R. Marinello, M. Ronzani, and E. Sulis. "Leveraging structured data in Predictive Process Monitoring: The case of the ICD-9-CM in the scenario of the Home Hospitalization Service". In: *Proceedings of the Workshop on Towards Smarter Health Care: Can Artificial Intelligence Help?* Vol. 3060. 2021, pp. 48–60. URL: <http://ceur-ws.org/Vol-3060/>.
- [42] R. Aringhieri, G. Boella, E. Brunetti, L. Di Caro, C. Di Francescomarino, M. Dragoni, R. Ferrod, C. Ghidini, R. Marinello, M. Ronzani, and E. Sulis. "Towards the application of process mining for supporting the home hospitalization service". In: *Proceedings of the 1st Italian Forum on Business Process Management*. Vol. 2952. 2021, pp. 33–38. URL: <http://ceur-ws.org/Vol-2952/>.
- [43] R. Aringhieri. "Online Optimization in Health Care Delivery: Overview and Possible Applications". In: *Operations Research Proceedings 2019*. Operations Research Proceedings. Advance online publication 25 September 2020. Springer Nature, 2020, pp. 357–363. doi: 10.1007/978-3-030-48439-2_43. URL: <http://hdl.handle.net/2318/1766384>.
- [44] R. Aringhieri, D. Duma, and G. Squillace. "Pattern-based online algorithms for a general patient-centred radiotherapy scheduling problem". In: *Health Care Systems Engineering. HCSE 2019*. Vol. 316. Springer Proceedings in Mathematics and Statistics. Advance online publication 16 April 2020. Springer, Cham, 2020, pp. 251–262. doi: 10.1007/978-3-030-39694-7_20. URL: <http://hdl.handle.net/2318/1766381>.
- [45] P. Ballarini, D. Duma, A. Horváth, and R. Aringhieri. "Petri Nets Validation of Markovian Models of Emergency Department Arrivals". In: *Application and Theory of Petri Nets and Concurrency*. Vol. 12152. Advance online publication 30 June 2020. Cham: Springer International Publishing, 2020, pp. 219–238. ISBN: 978-3-030-51831-8. doi: 10.1007/978-3-030-51831-8_11. URL: <http://hdl.handle.net/2318/1766377>.
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- [47] R. Aringhieri, G. Bonetta, and D. Duma. "Reducing Overcrowding at the Emergency Department Through a Different Physician and Nurse Shift Organisation: A Case Study". In: *New Trends in Emerging Complex Real Life Problems*. Ed. by P. Daniele and L. Scrimali. Vol. 1. AIRO Springer Series. Advance online publication 30 December 2018. Springer Nature, 2018, pp. 43–53. doi: 10.1007/978-3-030-00473-6_6. URL: <http://hdl.handle.net/2318/1696839>.

- [48] R. Aringhieri, D. Dell'Anna, D. Duma, and M. Sonnessa. "Evaluating the dispatching policies for a regional network of emergency departments exploiting health care big data". In: *International Conference on Machine Learning, Optimization, and Big Data*. Ed. by G. Nicosia, P. Pardalos, G. Giuffrida, and R. Umeton. Vol. 10710. Lecture Notes in Computer Science. Advance online publication 21 December 2017. Springer International Publishing, 2018, pp. 549–561. DOI: 10.1007/978-3-319-72926-8_46. URL: <http://hdl.handle.net/2318/1656211>.
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- [50] R. Aringhieri, D. Duma, and F. Polacchi. "Integrating Mental Health into a Primary Care System: A Hybrid Simulation Model". In: *New Trends in Emerging Complex Real Life Problems*. Ed. by P. Daniele and L. Scrimali. Vol. 1. AIRO Springer Series. Advance online publication 30 December 2018. Springer, 2018, pp. 55–63. DOI: 10.1007/978-3-030-00473-6_7. URL: <http://hdl.handle.net/2318/1696859>.
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Editorials

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Invited talks

- [92] *TOP-ST-MIN: a new variant of the Team Orienteering Problem*. Karlsruhe Institute of Technology, Karlsruhe, Germany. Invited talk. Feb. 2023.
- [93] *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.
- [94] *Online optimization in health care: funny and challenging problems*. OR/MS for Healthcare and Gender, EURO WISDOM Forum Webinar. Invited talk. July 2020.
- [95] *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.
- [96] *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.
- [97] *Emergency Medical Services I – Ambulance Management*. Summer School on Game Theory and Health Management – Campione d'Italia. Invited talk. Sept. 2013.

- [98] *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.
- [99] *Patient-centered Healthcare Delivery*. Workshop on "Health Services", Karlsruhe, Germany. Invited talk. Sept. 2011.
- [100] *Metaheuristics for Solving SONET Network Design Problems*. International Summerschool on Metaheuristics, Tenerife, Spain. Invited talk. Mar. 2003.
- [101] *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

- [102] *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.
- [103] R. Aringhieri. "Modelli e metodi per la gestione della rete dell'emergenza-urgenza". In: *Politiche Sanitarie* 18.4 (2017), pp. 176–185.
- [104] R. Aringhieri and P. Cappanera. "Operations Management nei processi sanitari: case studies e opportunità di miglioramento". In: *Politiche Sanitaria* 18.4 (2017). Editorial, pp. 153–154.
- [105] *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.
- [106] *Gestione delle sale operatorie: approcci di tipo tattico-operativo*. Approccio Lean alla gestione della Sala Operatoria. Invited talk. Dec. 2016.
- [107] 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.
- [108] 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.
- [109] 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.