

Prof. MARCELLA SAMÀ Curriculum Vitae

WORK EXPERIENCE

2023 – on going	Associate Professor in Operations Research at Roma Tre University, Department of Civil, Computer Science and Aeronautical Engineering
2020 – 2023	Assistant Professor at Roma Tre University, Department of Engineering
2017 - 2019	On/Off consultant for Swiss Federal Railways (SBB/FFS/CFF)
2016 - 2019	Post-Doc at Roma Tre University, Department of Engineering
July-December 2012	Young assistant student at Roma Tre University, Department of Engineering
2012	Alitalia – Revenue Management & E-business

EDUCATION

2013 – 2016

PhD in Automation and Computer Engineering at “Università degli Studi di Roma Tre”, scientific sector Operation Research.

Thesis “Models and algorithms for the real-time railway and air traffic flow management problems”

Winner of the Anna Valiccek Medal for Innovative Research in Airline Operations Research, awarded by AGIFORS.

September 2013 – March 2014 Visiting student at TU Delft, Delft, The Netherlands (partially funded by EU COST scheme (TU1004)).

October 2014 – March 2015 Visiting student at IFSTTAR, Lille, France (winner of a research scholarship provided by Ambassade de France en Italie for the period January-March).

October 2015 – November 2015 Visiting student at Universitaet der Bundeswehr, Munich, Germany (DAAD scholarship with the program Forschungsstipendien - Kurzstipendien, 2015).

2009 – 2011

Master’s Degree in Automation and Management Engineering at “Università degli Studi di Roma Tre”, final grade 110/110 cum Laude (equivalent to 1st).

Thesis “Development of advanced static and dynamic techniques of air traffic control optimization”

Scholarship by Accenture reserved to the two best master students of year 2010-2011.

2006 – 2009

Bachelor’s Degree in Computer Engineering at “Università degli Studi di Roma Tre”, final grade 108/110 (equivalent to 1st).

Thesis “Benchmark of Bayesian Filters”

LANGUAGES

Italian:	Mother tongue;
English:	Fluent in both oral and written language (C1 level)
French:	Intermediate level in both oral and written language (B1 level).

TEACHING ACTIVITY

A.A. 2022-2023	Teacher for the courses of “Linear Algebra and Discrete Mathematics”, “Operation Research I”, and of “Project Management”, bachelor’s degree in Computer Science Engineering at Roma Tre University.
A.A. 2021-2022	Teacher for the courses of “Linear Algebra and Discrete Mathematics”, and of “Operation Research I”, bachelor’s degree in Computer Science Engineering at Roma Tre University.
A.A. 2020-2021	Teacher for the course of “Linear Algebra and Discrete Mathematics”, Teaching Assistant for the course of “Operation Research I”, bachelor’s degree in Computer Science Engineering at Roma Tre University.
A.A. 2019-2020	Teacher for the course of “Linear Algebra and Discrete Mathematics”, Teaching Assistant for the course of “Operation Research I”, bachelor’s degree in Computer Science Engineering at Roma Tre University.
A.A. 2018-2019	Teacher for the course of “Linear Algebra and Computer Science Fundamentals”, bachelor’s degree in Ocean Engineering, Teaching Assistant for the course of “Operation Research I”, bachelor’s degree in Computer Science Engineering and for the course of “Public Transport Optimization”, master’s degree in Automation and Management Engineering at Roma Tre University.
A.A. 2017-2018	Teaching Assistant for the courses of “Operation Research I”, “Linear Algebra and Discrete Mathematics”, bachelor’s degree in Computer Science Engineering and for the course of “Public Transport Optimization”, master’s degree in Automation and Management Engineering at Roma Tre University.
A.A. 2016-2017	Teaching Assistant for the course of “Operation Research I”, bachelor’s degree in Computer Science Engineering and for the course of “Public Transport Optimization”, master’s degree in Automation and Management Engineering at Roma Tre University.
A.A. 2012-2013	Teaching Assistant for the course of “Operation Research I”, bachelor’s degree in Computer Science Engineering at Roma Tre University.

SCIENTIFIC RESEARCH

Papers on Scientific Journals with SCOPUS/ISI index [A]:

[A26] Chai, S., Yin, J., D’Ariano, A., Samà, M., Tang, T., (2023) Scheduling of Coupled Train Platoons for Metro Networks: A Passenger Demand-Oriented Approach. **Transportation Research Record**, 2677 (2), 1671 – 1689.

[A25] Pascariu, B., Samà, M., Pellegrini, P., D’Ariano, A., Rodriguez, J., Pacciarelli, D., (2023) Effective train routing selection for real-time traffic management: Improved model and ACO parallel computing. **Computers & Operations Research**, 2022, 145, 105859

[A24] Meloni, C., Pranzo, M., Samà, M. (2022) Evaluation of VaR and CVaR for the makespan in interval valued blocking job shops. **International Journal of Production Economics**, 247, 108455.

[A23] Tessitore, M.L., Samà, M., D’Ariano, A., H elouet, L., Pacciarelli, D. (2022) A simulation-optimization framework for traffic disturbance recovery in metro systems. **Transportation Research, Part C**, 2022, 136, 103525

[A22] Tang, L., D’Ariano, A., Xu, X., Li, Y., Ding, X., Samà, M. (2021) Scheduling local and express trains in suburban rail transit lines: Mixed-integer nonlinear programming and adaptive genetic algorithm. **Computers & Operations Research**, 2021, 135, 105436

[A21] Meloni, C., Pranzo, M., Samà, M. (2021) Risk of delay evaluation in real-time train scheduling with uncertain

dwell times. **Transportation Research, Part E**, 2021, 152, 102366

- [A20] Dellino, G., Meloni, C., Pranzo, M., Sama, M. (2021) Expected Shortfall for the Makespan in Activity Networks with Fuzzy Durations. **IEEE Transactions on Fuzzy Systems**, 2021
- [A19] Samà, M., D'Ariano, A., Palagachev, K., Gerdt, M., (2019) Integration methods for aircraft scheduling and trajectory optimization at a busy terminal manoeuvring area, **OR Spectrum**, 41(3), 641–681
- [A18] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D., (2018) Coordination of scheduling decisions in the management of airport airspace and taxiway operations, **Transportation Research, Part A**, 114 (B) 398–411.
- [A17] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D., (2017) Coordination of scheduling decisions in the management of airport airspace and taxiway operations, **Transportation Research Procedia**, 23 (1) 246–262.
- [A16] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D., (2017). On the tactical and operational train routing selection problem. **Transportation Research Part C**, 76 (1) 1-15.
- [A15] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D., (2017). A variable neighbourhood search for fast train scheduling and routing during disturbed railway traffic situations. **Computer & Operations Research**, 78 (1) 480-499.
- [A14] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D., (2017). Scheduling models for optimal aircraft traffic control at busy airports: Tardiness, priorities, equity and violations considerations. **OMEGA**, 67 (1) 81-98.
- [A13] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D., (2017). Metaheuristics for efficient aircraft scheduling and re-routing at busy terminal control areas, **Transportation Research Part C**, 80 (1) 485-511.
- [A12] Corman, F., D'Ariano, A., Marra, A.D., Pacciarelli, D., Samà, M., (2016). Integrating Train Scheduling and Delay Management in Real-time Railway Traffic Control. **Transportation Research Part E**, 105 (1) 213-239.
- [A11] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D., (2016). Ant colony optimization for the real-time train routing selection problem. **Transportation Research Part B**, 85 (1) 89-108
- [A10] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D., (2015). A Routing Filter for the Real-Time Railway Traffic Management problem based on Ant Colony Optimization. **Transportation Research Procedia**, 10, 534-543
- [A9] Corman, F., Xin, J., Negenborn, R.R., D'Ariano, A., Samà, M., Toli, A., Lodewijks, G., (2016). Optimal scheduling and routing of free-range AGVs at large scale automated container terminals, **Periodica Polytechnica Transportation Engineering**, 44(3) 145– 154.
- [A8] Samà, M., Meloni, C., D'Ariano, A., Corman, F., (2015). A multi-criteria decision support methodology for real-time train scheduling. **Journal of Rail Transport Planning & Management**, 5(3) 146–162
- [A7] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D., (2015). Air Traffic Optimization Models for Aircraft Delay and Travel Time Minimization in Terminal Control Areas, **Public Transport: Planning and Operations**, 7 (3), 321-337
- [A6] D'Ariano, A., Samà, M., D'Ariano, P., Pacciarelli, D., (2014). Evaluating the applicability of advanced techniques for practical real-time train scheduling, **Transportation Research Procedia**, 3 279–288.
- [A5] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D., (2014). Optimal aircraft scheduling and routing at a terminal control area during disturbances, **Transportation Research, Part C**, 47(1) 61-85.
- [A4] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D., (2014). Comparing Centralized and Rolling Horizon Approaches for Optimal Aircraft Traffic Control in Terminal Areas, **Transportation Research Record, Journal of the Transportation Research Board**, 2449 45–52.
- [A3] Samà, M., D'Ariano, A., Pacciarelli, D., (2013). Rolling Horizon Approach for Aircraft Scheduling in the Terminal Control Area of Busy Airports, **Transportation Research, Part E**, 60(1) 140–155.

[A2] Samà, M., D'Ariano, A., Pacciarelli, D., (2013). Rolling Horizon Approach for Aircraft Scheduling in the Terminal Control Area of Busy Airports, **Procedia Social and Behavioral Sciences**, **80** 531–552, Elsevier Ltd.

[A1] Samà, M., D'Ariano, A., Pacciarelli, D., (2012). Optimal aircraft traffic flow management at a terminal control area during disturbances, **Procedia Social and Behavioral Sciences**, **54** 460–469, Elsevier Ltd.

Chapters or Papers on other Scientific Journals [B]:

[B5] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. (2021) Train routing selection problem: Ant colony optimization versus integer linear programming **IFAC-PapersOnLine**, 2021, 54(2), pp. 167–172

[B4] A. Dreves, M. Gerdts, M. Samà, A. D'Ariano, Free Flight Trajectory Optimization and Aircraft Scheduling, **Lecture Notes in Mobility**, Springer Verlag, Heidelberg, Germany, 2019.

[B3] M. Samà, K. Palagachev, A. D'Ariano, M. Gerdts, D. Pacciarelli, Terminal Control Area Aircraft Scheduling and Trajectory Optimization Approaches, **ITM Web of Conferences**, 14, 1-7 DOI: 10.1051/itmconf/20171400008.

[B2] Tripathy, M., Samà, M., Corman, F., Lodewijks, G. Impact of collaborative decision making in optimized air traffic control: a game theoretical approach. In: A. Paiais, M. Ruthmair, S. Voss (Eds.), **Computational Logistics, Lecture Notes in Computer Science** 9855 397–410, Springer - Verlag Berlin Heidelberg, 2016.

[B1] Corman, F., Pacciarelli, D., D'Ariano, A., Samà, M. Railway Traffic Rescheduling Taking into Account Minimization of Passengers Discomfort, In: F. Corman, S. Voss and R.R. Negenborn (Eds.), **Computational Logistics, Lecture Notes in Computer Science** 9335 602–616, Springer - Verlag Berlin Heidelberg, 2015.

Conference Papers on Proceedings [C]:

[C35] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Evaluating the influence of train routing selection in real-time railway traffic management. 15th International Conference on Advanced Systems in Public Transport (CASPT2022), 6-10 November, 2022, Tel Aviv, Israel.

[C34] Meloni, C., Pranzo, M., Samà, M. Risk evaluation of a real-time Railway Traffic Management solution under uncertain dwell times Triennial Symposium on Transportation Analysis (TRISTAN), June 19-25, 2022, Mauritius Island.

[C33] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Generalization of the train routing selection problem for real-time traffic management, Triennial Symposium on Transportation Analysis (TRISTAN), June 19-25, 2022, Mauritius Island.

[C32] B Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J., Performance evaluation of a parallel ant colony optimization for the real-time train routing selection problem in large instances, European Conference on Evolutionary Computation in Combinatorial Optimisation (EvoCOP), 20-22 April 2022, Seville, Spain.

[C31] Chai, S. Yin, J. D'Ariano, A. Samà, M. Tang, T. Scheduling of Virtual Coupled Train Platoon for Metro Networks: A Passenger Demand Oriented Approach, Proceedings of the 100th Transportation Research Board Annual Meeting (TRB 2021), (pp. 1–15), Washington DC, USA.

[C30] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A. An improved approach for train routing selection in complex rail networks, The 9th International Conference on Railway Operations Modelling and Analysis (**RailBeijing 2021**), (pp. 1–20), November 3-7, 2021, Beijing, China.

[C29] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D. Assessment of Disturbance Recovery Strategies in a Busy Metro System, The 9th International Conference on Railway Operations Modelling and Analysis (**RailBeijing 2021**), (pp. 1–20), November 3-7, 2021, Beijing, China.

[C28] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J., Train routing selection problem: Ant colony optimization versus integer linear programming, 16th IFAC Symposium on Control in Transportation Systems (**CTS 2021**), (pp. 1–6), June 8-10, 2021, Lille, France.

[C27] Meloni, C., Pranzo, M., Samà, M., Conditional Value-at-Risk of the Completion Time in Fuzzy Activity Networks. 17th International workshop on Project Management and Scheduling (PMS 2020/2021) 21-23 April 2021, Toulouse, France.

- [C26] Chang, Y., Niu, Y., Wang, Y., Luan, X., D'Ariano, A., Samà, M. Train Rescheduling for an Urban Rail Transit Line under Disruptions, Proceedings of the 8th International Conference on Railway Operations Modelling & Analysis (**RailNorrköping 2019**), 17-20 June 2019, Norrköping, Sweden.
- [C25] Samà, M., D'Ariano, A., Pacciarelli, D., Pellegrini, P., Rodriguez, J. Applications of train routing selection methods for real-time railway traffic management, Proceedings of the 21st IEEE International Conference on Intelligent Transportation Systems, (**IEEE-ITSC 2018**) 3-7 November 2018, Maui, Hawaii, USA.
- [C24] Samà, M., D'Ariano, A., Pacciarelli, D., Palagachev, K., Gerds, M. Optimal Aircraft Scheduling and Flight Trajectory in Terminal Control, Proceedings of the 5th International Conference on Models and Technologies for Intelligent Transportation Systems, **MT-ITS 2017**, (pp. 1–6), 26–28 June 2017, Naples, Italy.
- [C23] D'Ariano, A., Pacciarelli, D., Samà, M., Corman, F. Microscopic Delay Management: Minimizing Train Delays and Passenger Travel Times during Real-Time Railway Traffic Management, Proceedings of the 5th International Conference on Models and Technologies for Intelligent Transportation Systems, **MT-ITS 2017**, (pp. 1–6), 26–28 June 2017, Naples, Italy.
- [C22] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D. Ant Colony Optimization for train routing selection: operational vs tactical application, Proceedings of the 5th International Conference on Models and Technologies for Intelligent Transportation Systems, **MT-ITS 2017**, (pp. 1–6), 26–28 June 2017, Naples, Italy.
- [C21] Corman, F., D'Ariano, A., Samà, M., Pacciarelli, D. Strategic interactions in passenger oriented railway traffic control, 17th Swiss Transport Research Conference (**STRC**) 2017, 17–19 May 2017, Monte Verità, Switzerland.
- [C20] Samà, M., D'Ariano, A., Pacciarelli, D., Corman, F. Real-time near-optimal train scheduling and routing in complex railway networks, **First Triennial Conference of INFORMS Transportation and Logistics Society**, (pp. 1–6), 26–29 July 2017, Chicago, Illinois, USA.
- [C19] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D. Coordination of scheduling decisions in the management of airport airspace and taxiway operations, Proceedings (Lectern Presentation) of the 22nd International Symposium on Transportation & Traffic Theory (**ISTTT**), (pp. 1–19), 24–26 July 2017, Chicago, Illinois, USA.
- [C18] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D. The potential of the routing selection problem in real-time railway traffic management, Proceedings of the 7th International Conference on Railway Operations Modelling and Analysis (**ICROMA**), (pp. 1–18), 4–7 April 2017, Lille, France.
- [C17] Samà, M., Palagachev, K., D'Ariano, A., Gerds, M., Pacciarelli, D. Terminal Control Area Aircraft Scheduling and Trajectory Optimization Approaches, Proceedings of the 12th International Conference on APPLIED mathematical programming and MODelling (**APMOD 2016**), (pp. 1–8), 8–10 Giugno 2016, Brno, Czech Republic.
- [C16] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D. Scheduling models for optimal aircraft traffic control at busy airports: tardiness, priorities, equity and violations considerations, Proceedings of the 20th Air Transport Research Society (**ATRS**) World Conference, June 23-26, 2016, Rhodes, Greece.
- [C15] Samà, M., D'Ariano, A., Corman, F., Pacciarelli, D. Lower and upper bound algorithms for the real-time train scheduling and routing problem in a railway network, Proceedings of the 14th IFAC Symposium on Control in Transportation Systems, (**CTS2016**), 18-20 Maggio, 2016, Istanbul, Turkey.
- [C14] Corman, F., Pacciarelli, D., D'Ariano, A., Samà, M. Railway Traffic Rescheduling with Minimization of Passengers Discomfort, Proceedings of the 6th International Conference on Computational Logistics (**ICCL2015**), (pp. 1–15), 23-25 Settembre 2015, Delft, Olanda.
- [C13] Samà, M., D'Ariano, A., Toli, A., Pacciarelli, D., Corman, F. Metaheuristics for real-time near-optimal train scheduling and routing, Proceedings of the 16th International IEEE Conference on Intelligent Transportation Systems (**IEEE-ITSC2015**), (pp. 1–6), 15-18 Settembre 2015, Las Palmas de Gran Canaria, Canary Islands, Spagna.
- [C12] Corman, F., D'Ariano, A., Pacciarelli, D., Sabene, F., Samà, M. Train Delay and Passenger Travel Time Minimization in Real-Time Railway Traffic Management, 13th International Conference on Advanced Systems for Public Transport, (**CASPT2015**), 19–23 Luglio 2015, Rotterdam, Olanda.

[C11] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D. A Routing Filter for the Real-Time Railway Traffic Management problem based on Ant Colony Optimization, Proceedings of the 18th meeting of the Euro Working Group on Transportation (**EWGT2015**), 14–16 Luglio 2015, Delft, Olanda.

[C10] Samà, M., D'Ariano, A., Toli, A., Pacciarelli, D., Corman, F. A variable neighborhood search for optimal scheduling and routing of take-off and landing aircraft, 4th International Conference on Models and Technology for Intelligent Transportation Systems, (**MT-ITS2015**), 3–5 Giugno 2015, Budapest, Ungheria.

[C9] Corman, F., Xin, J., Toli, A., Negenborn, R.R., D'Ariano, A., Samà, M., Lodweijks, G. Optimizing hybrid operations at large-scale automated container terminals, 4th International Conference on Models and Technology for Intelligent Transportation Systems (**MT-ITS2015**), 3–5 Giugno 2015, Budapest, Ungheria.

[C8] Samà, M., Meloni, C., D'Ariano, A., Corman, F. A multi-criteria decision support system for real-time train rescheduling, Proceedings of the 6th International Conference on Railway Operations Modelling and Analysis (**RailTokyo2015**), (pp. 1–20), 23–26 Marzo 2015, Chiba Institute of Technology, Tokyo, Giappone. *Selected among the best papers on a total of 116 accepted.*

[C7] D'Ariano, A., Samà, M., D'Ariano, P., Pacciarelli, D. Evaluating the applicability of advanced techniques for practical real-time train scheduling, 17th meeting of the Euro Working Group on Transportation (**EWGT2014**), (pp. 1–9), 2–4 Luglio 2014, Siviglia, Spagna.

[C6] Samà, M., D'Ariano, A., D'Ariano, P., Pacciarelli, D. Detailed scheduling models for optimal aircraft traffic control at busy airports, Accepted for presentation at the 1st International Conference on Engineering and Applied Sciences Optimization (**OPTI2014**), (pp.1–14), 4–6 Giugno 2014, Kos, Grecia.

[C5] Samà, M., D'Ariano, P., D'Ariano, A., Pacciarelli, D. Comparing Centralized and Rolling Horizon Approaches for Optimal Aircraft Traffic Control in Terminal Areas, Proceedings of the 93th Transportation Research Board Annual Meeting (**TRB2014**), (pp. 1–15), Washington DC, USA.

[C4] Corman, F., Sabene, F., Pacciarelli, D., Samà, M., D'Ariano, A. Railway Traffic Control with minimization of passengers' discomfort, Proceedings of the 3rd International Conference on Models and Technology for Intelligent Transportation Systems, (**MT-ITS2013**), (pp. 1–10), 2–4 Dicembre 2013, Dresden, Germania.

[C3] Samà, M., D'Ariano, P., D'Ariano, A., Pacciarelli, D. Air Traffic Optimization Models for Aircraft Delay and Travel Time Minimization in Terminal Control Areas, Proceedings of the 3rd International Conference on Models and Technology for Intelligent Transportation Systems, (**MT-ITS2013**), (pp. 1–10), 2–4 Dicembre 2013, Dresden, Germania.

[C2] Samà, M., D'Ariano, A., Pacciarelli, D. Rolling Horizon Approach for Aircraft Scheduling in the Terminal Control Area of Busy Airports, Accepted for publication and plenary presentation at the 20th International Symposium on Transportation and Traffic Theory (**ISTTT2013**), 17-19 Luglio, 2013, Noordwijk, Olanda.

[C1] Samà, M., D'Ariano, A., Pacciarelli, D. Optimal aircraft traffic flow management at a terminal control area during disturbances, Proceedings of the 15th meeting of the Euro Working Group on Transportation (**EWGT2012**), 10–12 Settembre, 2012, Parigi, Francia.

Other talks at conference and seminars [D]:

[D40] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J., Effective train routing selection for real-time traffic management: improved model and ACO parallel computing, 14th Metaheuristics International Conference, Ortigia-Syracuse, Italy, 11-14 July 2022

[D39] Meloni, C., Pranzo, M., Samà, M., Risk evaluation of real-time Railway Traffic Management solutions under uncertain dwell times. 32nd European Conference on Operational Research, Espoo, Finland, 3-6 July 2022.

[D38] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Solving the train routing selection problem for different rescheduling solution approaches and objective functions, 32nd European Conference on Operational Research, Espoo, Finland, 3-6 July 2022.

[D37] Meloni, C., Pranzo, M., Samà, M., Risk evaluation considering uncertain dwell times of real-time Railway Traffic Management Solutions. 51th Annual Conference of the Italian Operations Research Society, Florence, Italy, 30 August -

2 September, 2022

- [D38] Tessitore, M., Sartor, G., Samà, M., Mannino, C., Pacciarelli, D. Identifying Railway Timetable Fragility, 51th Annual Conference of the Italian Operations Research Society, Florence, Italy, 30 August - 2 September, 2022
- [D37] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Improving train punctuality by optimized train route selection in decision support systems, International Conference on Optimization and Decision Science, 51th Annual Conference of the Italian Operations Research Society, Florence, Italy, 30 August - 2 September, 2022
- [D36] Chai, S., Yin, J., D'Ariano, A., Samà, M., Tang, T. Scheduling of Virtual Coupled Train Platoon for Metro Networks: A Passenger Demand Oriented Approach. 101st Transportation Research Board Annual Meeting (TRB2022), Washington DC, 9-3 January, 2022.
- [D35] Samà, M. A general overview of the real-time rescheduling problem. PhD School Railbeijing 2021, 7 November 2021.
- [D34] Samà, M., D'Ariano, A., Pacciarelli, D. Effective Pruning Strategies for the Alternative Graph Model. INFORMS Annual Meeting (**INFORMS2021**) Anaheim, 24-27 October, 2021.
- [D33] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Effective Train Routing Selection for Real-time Traffic Management: Improved Model and ACO Parallel Computing. INFORMS Annual Meeting (**INFORMS2021**) Anaheim, 24-27 October, 2021.
- [D32] Samà, M., D'Ariano, A., Pranzo, M., Pacciarelli, D. Optimal microscopic train timetabling: a Swiss case study. International Conference on Optimization and Decision Science (**ODS2021**), Roma, 14-17 Settembre 2021
- [D31] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D. A Simulation-Optimization Framework for Traffic Disturbance Recovery in Metro Systems, International Conference on Optimization and Decision Science (**ODS2021**), Roma, 14-17 Settembre 2021
- [D30] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Performance evaluation of an ant colony optimization for the train route selection problem. 24th Euro Working Group on Transportation Meeting (**EWGT 2021**) Aveiro, 8-10 September 2021.
- [D29] Samà, M., D'Ariano, A., Pranzo, M., Pacciarelli, D. Optimal microscopic train timetabling: a Swiss case study. The 31st European Conference on Operational Research (**EURO2021**), Atene (Online), 11-14 Luglio 2021
- [D28] Samà, M., D'Ariano, A., Pranzo, M., Pacciarelli, D. Optimal microscopic train timetabling: a Swiss case study. The 31st European Conference on Operational Research (**EURO2021**), Atene (Online), 11-14 Luglio 2021
- [D27] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D., A Simulation-Optimization Framework for Traffic Disturbance Recovery in Metro Systems, The 31st European Conference on Operational Research (**EURO2021**), Atene, 11-14 Luglio 2021
- [D26] Pascariu, B., Samà, M., Pellegrini, P., D'Ariano, A., Pacciarelli, D., Rodriguez, J. Ant colony optimization: improved performance for train routing in complex rail networks. The 31st European Conference on Operational Research (**EURO2021**), Atene, 11-14 Luglio 2021
- [D25] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D. Combining Simulation and Optimization for Traffic Disturbance Recovery in a Busy Metro System, International Conference on Optimization and Decision Science (**ODS2020**), Roma (Online), 19 Novembre 2020
- [D24] Samà, M., D'Ariano, A., Pacciarelli, D. An advanced methodology for microscopic train timetabling: Application of state-of-the-art techniques to a Swiss case study, 23rd EURO Working Group on Transportation (**EWGT 2020**), 16–18 September 2020, Paphos, Cyprus.
- [D23] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D. Combining Simulation and Optimization for Traffic Disturbance Recovery in a Busy Metro System, 23rd EURO Working Group on Transportation (**EWGT 2020**), 16–18 September 2020, Paphos, Cyprus.

- [D22] Tessitore, M.L., Samà, M., D'Ariano, A., Hèlouet, L., Pacciarelli, D. Assessment of Disturbance Recovery Strategies in a Busy Metro System, 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (**MFTS 2020**), 6-8 July, 2020, Luxembourg.
- [D21] Liu, S.Q., D'Ariano, A., Samà, M., Chung, S.H., Erhan, K., Masoud, M., Jin, X. A Novel Modelling Approach for Aircraft Scheduling at Airport Terminals, 24th Air Transport Research Society (**ATRS 2020**) World Conference, July 2nd 5th, 2020, Sydney Australia.
- [D20] Samà, M., D'Ariano, A., Pacciarelli, D., Pranzo, M. Effective pruning strategies for heuristic and exact train scheduling algorithms, International Conference on Optimization and Decision Science 2109, AIRO ODS 2019, 4-7 September 2019, Genova, Italy.
- [D19] Samà, M., D'Ariano, A., Pacciarelli, D., Pranzo, M. Models and algorithms for the real-time train scheduling and routing problem, International Conference on Optimization and Decision Science (**ODS2018**), organized by AIRO, 10-13 September 2018, Taormina, Italy.
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- [D7] Samà, M., Pellegrini, P., D'Ariano, A., Rodriguez, J., Pacciarelli, D. Ant colony optimization for the real-time train

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RESEARCH PROJECT

“Optimal closed-loop control of railway traffic in conventional Projects and high speed networks” (n° RCS2017K010), financed by the State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University.

Italian project “ShareLab - Sharing Economy in a Living Lab”, financed by Roma Tre University.

Italian project “Development of heuristic algorithms for the optimization of urban public transport electrification subject to investment constraints”, financed by ENEA.

VARIOUS

Member of the organising committee for the 2nd European European Conference on Stochastic Optimization (ECSO 2017), which has taken place in Rome from 20 to 22 Settembre 2017, sponsored by the EURO Working Group on Stochastic Optimization (EWGSO).

Chair of the organising committee for the 6th AIRO Young Workshop (6AYW), which will take place in Rome from the 23 to the 25 February 2022, sponsored by AIRO.

Reviewer for International Scientific Journal, among which: Transportation Research; Omega; Transportation Research Part B; Transportation Research Part C; Transportation Research Part E; Computer and Operation Research; Networks; IEEE Transactions on Automation Science and Engineering; Flexible Services and Manufacturing Journal; Journal of Rail Transport Planning and Management; Journal of Air Transportation Management; Journal of Advanced Transportation; Simulation Modelling Practice and Theory; Transportmetrica A: Transport Science; Discrete Applied Mathematics; etc.

Associate Editor for IEEE Transactions on Intelligent Transportation Systems and Guest Editor for Transportation Research Part E.

Referee for the evaluation of Research Proposals for Agence Nationale de la Recherche (ANR)