

# Brief curriculum vitae of Andrea D'Ariano

Place of Birth: Rome, Italy  
Date of Birth: 14/04/1979  
Country of residence: Italy  
Marital status: Married with Medical Doctor  
at Rete Ferroviaria Italiana (RFI)  
Children: 2 son, 1 daughter  
Function: Associate Professor  
Università degli Studi "RomaTre"  
Dipartimento di Ingegneria  
Sezione di Informatica e Automazione  
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<http://www.researcherid.com/rid/M-5211-2015>  
<http://orcid.org/0000-0002-7184-0459>  
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- ACTUAL POSITION     ◇ **Associate Professor**  
Founding Member of Engineering Department  
Italian Scientific Sector: Operations Research - MAT/09, 01/A6  
Dipartimento di Ingegneria, Università degli Studi "RomaTre" ([www.ingegneria.uniroma3.it](http://www.ingegneria.uniroma3.it))
- ◇ **Italian Scientific Habilitation 2018**  
**Full Professor in Operations Research**  
**Qualification Period: from 24/09/2018 till 24/09/2024**
- SOME PAST POSITIONS     ◇ **Three-year contract as "Post-doctoral Researcher"** funded by the Italian Ministry of Research and Education, Grant number RBIP06BZW8, project FIRB *Advanced tracking system in intermodal freight transportation*, from May 2008 till April 2011.  
Dipartimento di Informatica e Automazione, Università degli Studi "RomaTre"  
([www.inf.uniroma3.it](http://www.inf.uniroma3.it))
- ◇ **Four-year contract as "Ph.D. Researcher"**  
Scientific Director: Prof.Dr.-Ing. Ingo A. Hansen  
Time Period: From May 2004 till April 2008  
Department of Transport and Planning, Delft University of Technology ([www.tudelft.nl](http://www.tudelft.nl))
- ◇ **Six-month contract as "Young Research Assistant"**  
Scientific Director: Prof.Dr.-Ing. Ingo A. Hansen  
Time Period: From November 2003 till April 2004  
Department of Transport and Planning, Delft University of Technology
- EDUCATION     ◇ **Title of Ph.D. Researcher**  
Title achieved in April 2008 at Delft University of Technology  
TRAIL: Netherlands Research School on Transport, Infrastructure and Logistics ([www.rstrail.nl](http://www.rstrail.nl))  
Thesis Title: *Improving Real-time Train Dispatching: Models, Algorithms and Applications*  
PhD Thesis downloadable from web site [www.darenet.nl](http://www.darenet.nl)
- ◇ **Professional Italian Title of Engineer** achieved in 2004
- ◇ **Bachelor in Computer Science Engineering,**  
**Master in Automation and Management Engineering** achieved in July 2003

RECENT  
RESEARCH  
PROJECTS

- ◇ (Coordinator) Chinese project “Optimal closed-loop control of railway traffic in conventional and high speed networks” (contract No RCS2017K010), financed by State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University.
- ◇ (Advisory Board) Luxemburg project “ANTOINE: Anticipatory Train Optimization with Intelligent management”, FNR-BRIDGES funded project.
- ◇ (External Expert) Swiss project “DADA: Dynamic data driven Approaches for stochastic Delay propagation Avoidance in railways” 1.3 MCHF 2019-2024. SNSF Eccellenza.
- ◇ (Researcher) Italian project “ShareLab - Sharing Economy in a Living Lab”, financed by Roma Tre University.
- ◇ (Researcher) Italian project “Development of heuristic algorithms for the optimization of urban public transport electrification subject to investment constraints”, financed by ENEA.
- ◇ (External Expert) Luxemburg project “Electrified COoperative Bus System”, FNR-CORE project eCoBus C16/IS/11349329 (<https://ecobus.lu/>).
- ◇ (Researcher) German project “Aircraft trajectory optimization and Airport Collaborative Decision Making” financed by German academic exchange service (DAAD), Funding Program Number 57130097.
- ◇ (Researcher) Italian project “Models and algorithms for the optimization of aircraft take-off and landing operations at terminal control areas”, financed by Dipartimento di Ingegneria, Università degli Studi Roma Tre.
- ◇ (External Expert) Dutch project “ShipDrive: A Novel Methodology for Integrated Modeling, Control, and Optimization of Hybrid Ship Systems”, financed by Dutch Technology Foundation STW project no. project 13276.
- ◇ (Researcher) Chinese project “Dynamic railway traffic management with consideration of passenger behaviors” (contract No RCS2012K004), financed by State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University.
- ◇ (Researcher) Italian project “Analisi e sviluppo di algoritmi di ottimizzazione in tempo reale dell’orario ferroviario”, financed by Alstom Ferroviaria Bologna.
- ◇ (Researcher) Italian project “GENESI - Rete integrata per il trasferimento di tecnologie e metodologie per la GENerazione di Sviluppo Industriale in sistemi di produzione”, co-financed by Ministero dello Sviluppo Economico (Bando RIDITT).
- ◇ (Researcher) Italian project “Optimization Models and algorithms for scheduling trains and for coordinating railway traffic circulation”, financed by Dipartimento di Informatica e Automazione, Università degli Studi Roma Tre.
- ◇ (External Expert) European COST Action TransITS TU1004: Modelling Public Transport Passenger Flows in the Era of ITS.
- ◇ (External Expert) European project “Optimal Networks for Train Integration Management across Europe (ONTIME)”, EU FP7, (<http://www.ontime-project.eu>).
- ◇ (External Expert) Dutch project “Model-predictive railway traffic management”, STW project no. 11025, (<http://www.stw.nl/Projecten/D/dwv/11025.htm>).
- ◇ (External Expert) Dutch project “Railway innovation and opportunities of ERTMS in the Netherlands”, Dutch Parliament, ([www.tweedekamer.nl/kamerleden/commissies/tc-spoor](http://www.tweedekamer.nl/kamerleden/commissies/tc-spoor)).
- ◇ (Post-Doctoral Researcher) Italian project “Sistema avanzato di tracciatura delle merci nei trasporti intermodali” del FIRB, Ministero dell’Università e della Ricerca, Grant number RBIP06BZW8 ([www.miur.it](http://www.miur.it)).
- ◇ (Post-Doctoral Researcher) Dutch project “Reliability of transport chains” ([www.transumo.nl](http://www.transumo.nl)).
- ◇ (PhD Researcher) Dutch project “Towards Reliable Mobility” ([www.citg.tudelft.nl](http://www.citg.tudelft.nl)).
- ◇ (PhD Researcher) Dutch project “Next Generation Infrastructures” ([www.nginfra.nl](http://www.nginfra.nl)).

- ◇ (Young Research Assistant) European project “COMBINE2- enhanced COntrol center for fixed and Moving Block sIgNalling systEm 2”, European Commission, Grant number IST-2001-34705 ([www.combine2.org](http://www.combine2.org)).
- REVIEWER  
AND  
EVALUATOR
- ◇ Expert Group Coordinator/Rapporteur for the European Commission: STRIA Roadmap on Network and Traffic Management Systems.
  - ◇ Expert/Rapporteur for the European Commission [Candidature number: EX2006C125327], including: Trans-European Transport Network Executive Agency, Innovation and Networks Executive Agency, Research Executive Agency, Directorate-General for Research and Innovation, Directorate-General for Mobility and Transport, Shift2Rail Joint Undertaking, SESAR, INTERREG, Horizon 2020, FP7.
  - ◇ Referee for the evaluation of Research Proposals, including: Ministero dell'Università e della Ricerca (MUR), New Zealand Ministry of Business, Innovation & Employment; Swiss National Science Foundation (SNSF), Switzerland; French National Research Agency (ANR); The Croatian Agency for Science and Higher Education (AZVO); Technology Foundation STW: Dutch funding agency for academic research in the field of Applied Sciences; Erasmus Research Institute of Management (ERIM), Erasmus University Rotterdam, the Netherlands; Czech Science Foundation; Romanian National Council for Development and Innovation; Georgian National Science Foundation; Shota Rustaveli National Science Foundation.
  - ◇ Reviewer for numerous international scientific journals, including: Interfaces; Transportation Science; Transportmetrica A: Transport Science; Transportation Research – Part A–B–C–E; EURO Journal on Transportation and Logistics; European Journal of Operational Research; Operational Research: An International Journal; International Transactions in Operational Research; Asia-Pacific Journal of Operational Research; Discrete Applied Mathematics; Applied Mathematics and Computation; Applied Mathematical Modelling; Mathematical Problems in Engineering; Omega; Networks and Spatial Economics; Journal of Scheduling; Journal of Heuristics; Journal of Global Optimization; 4OR – A Quarterly Journal of Operations Research; Journal of the Operational Research Society; Annals of Operations Research; Information Sciences; Control Engineering Practice; Annual Reviews in Control; Computational and Mathematical Organization Theory; Research in Transportation Economics; Computer-Aided Civil and Infrastructure Engineering; Journal of Intelligent Manufacturing; Public Transport: Planning and Operations; Engineering Optimization; Computers & Industrial Engineering; Computers & Chemical Engineering; Integrated Computer-Aided Engineering; Journal of Systems Science and Systems Engineering; Engineering Applications of Artificial Intelligence; Neural Computing and Applications; Journal of Advanced Transportation; Journal of Intelligent Transportation Systems: Technology, Planning, and Operations; Chinese Journal of Aeronautics; Journal of Transportation Engineering, Part A: Systems; Journal of Aerospace Technology and Management; Journal of Air Transport Management; IET Intelligent Transportation Systems; IEEE Transactions on Intelligent Transportation Systems; IEEE Transactions on Vehicular Technology; IEEE Transactions on Automation Science and Engineering; IEEE Transactions on Industrial Informatics; IEEE Transactions on Systems, Man, and Cybernetics – Part B; Journal of Systemics, Cybernetics, and Informatics; Expert Systems with Applications; Journal of Medical Systems; Sensors; Journal of Artificial Intelligence & Data Mining; IEEE Magazine on ITS; PROMET - Traffic & Transportation; Transport Policy; Journal of Traffic and Transportation Engineering; International Journal of Production Research; Production Planning & Control; Journal of Cleaner Production; European Journal of Industrial Engineering; Simulation Modelling Practice and Theory; Biotechnology & Bioengineering; Scientia Iranica Journal; Journal of Applied Mechanical Engineering; Journal of Rail Transport Planning & Management; Journal of Air Transportation; International Journal of Computer Mathematics; Lecture Notes in Computer Science; Journal of Modern Computer Networks; Journal of Modern Transportation; PLOS ONE; Electronics and Telecommunications Research Institute Journal; Int. J. of Information Technology and Decision Making.

- ◇ Reviewer of Book Proposals for Elsevier.
- ◇ Reviewer for several international events, including:  
International Symposiums on Transportation and Traffic Theory (ISTTT), International Conferences on Optimization and Decision Science, TRAIL Congresses, IFAC Symposiums on Information Control Problem in Manufacturing, IFAC World Congress, IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), IFAC Symposium on Control in Transportation Systems, IFAC Symposium on Dynamics and Control of Process Systems, IFAC Conference on Manufacturing Modelling, Management and Control, IFAC Conference on Foundations of Systems Biology in Engineering, International Conferences on Industrial Engineering and Operations Management (IEOM), IIE Annual Conferences, IEEE Conferences on Intelligent Transportation Systems, International Conferences on Information Technology Interfaces, IEEE Forums on Integrated and Sustainable Transportation Systems, European Control Conferences, Meetings of European Working Group on Transportation (EWGT), Meetings of Transportation Research Board of U.S.A. National Academies (TRB), World Conferences on Transportation Research (WCTR), International Multi-Conferences on Complexity, Informatics and Cybernetics, Americas Conference on Information Systems, International Conferences on Models and Technologies for Intelligent Transportation Systems (MT-ITS), Workshops on Algorithmic Approaches for Transportation Modelling, Optimization and Systems (ATMOS), International Conferences of Chinese Transportation Professionals.

- COMMITTEE MEMBER AND EDITOR
- ◇ Coordinator of the AIRO Chapter: Optimization in Public Transport and Shared Mobility: [www.airo.org/index.php/it/attivita/sezioni-tematiche/airo-optimization-in-public-transport](http://www.airo.org/index.php/it/attivita/sezioni-tematiche/airo-optimization-in-public-transport)
  - ◇ Coordinator of the special issue “Simulation and Optimization for Railway Operations Management” of Journal of Advanced Transportation.
  - ◇ Deputy Editor-in-Chief of IET Intelligent Transport Systems by IET Digital Library
  - ◇ Associate Editor of Journal of Advanced Transportation by Wiley & Hindawi
  - ◇ Associate Editor of Journal of Rail Transport Planning & Management by Elsevier
  - ◇ Member of the Editorial Board Editors of Transportation Research Part B by Elsevier
  - ◇ Member of the Editorial Advisory Board of Transportation Research Part E by Elsevier
  - ◇ Member of the Editorial Board of Journal of Intelligent Transportation Systems: Technology, Planning, and Operations by Taylor & Francis
  - ◇ Member of Rail Group (Railroad Operating Technologies Committee) of Transportation Research Board (TRB), Washington, D.C.
  - ◇ Member of Aviation Group (Aviation Economics and Forecasting Committee) of Transportation Research Board (TRB), Washington, D.C.
  - ◇ Member of Doctoral Committees at Delft University of Technology.
  - ◇ Member of 2019 Scientific Committee for INFORMS Rail Applications Section (RAS) “Student Research Paper Award”.
  - ◇ TRAIL International Review Committee Member.
  - ◇ International Program Committee Member (named Associate Editor) for the International IEEE Conferences on Intelligent Transportation Systems 2010-2020 (continuously).
  - ◇ Organizer of Sessions at Several OR Conferences, including ODS AIRO, EURO, INFORMS.
  - ◇ Coordinator of special sessions for air and rail research streams at the 2nd International Conference on Models and Technologies for Intelligent Transportation Systems 2011.
  - ◇ International Program Committee Member for the 2015 IEEE International Conference on Vehicular Electronics and Safety (IEEE VES 2015).
  - ◇ International Program Committee Member for the 14th IFAC Symposium on Control in Transportation Systems (CTS 2016).

- ◇ Member of the Scientific Review Committee of TRISTAN 2016.
- ◇ Member of Technical Program Committee of The International Conference on Computer Engineering and Information System (CEIS 2016).
- ◇ Member of Technical Program Committee of The International Conference on Economic Development and Management Engineering (EDME 2016).
- ◇ Member of Technical Program Committee of The 2017 International Conference on Economics, Management Engineering and Marketing (EMEM 2017).
- ◇ Member of the Scientific Committee of Euro Working Group on Transportation (EWGT 2017-2020).
- ◇ International Program Committee Member for the 6th International Conference on Operations Research and Enterprise Systems (ICORES 2017).
- ◇ International Program Committee Member for the 20th-21st World Congress of the International Federation of Automatic Control (IFAC 2017-2020).
- ◇ Member of the Scientific Committee of the 3rd-4th-5th-6th-7th International Conferences on Models and Technologies for Intelligent Transportation Systems 2013-2015-2017-2019-2021.
- ◇ International Program Committee Member (named Associate Editor) for the 2017 IEEE International Conference on Vehicular Electronics and Safety (IEEE ICVES 2017).
- ◇ Member of Technical Program Committee of The 2017 International Conference on Applied Mathematics, Modelling and Statistics Application (AMMSA 2017).
- ◇ Member of Technical Program Committee of The Sixth International Conference on Intelligent Systems and Applications (INTELLI 2017).
- ◇ Member of Technical Program Committee of The Seventh International Conference on Mobile Services, Resources, and Users (MOBILITY 2017).
- ◇ Member of Technical Program Committee of the International Workshop on Intelligent & Sustainable Urban Transportation (ISUT'2017).
- ◇ Member of the Organizing Committee of the European Conference of Stochastic Optimization 2017 (ECSO 2017).
- ◇ Coordinator of the special session "Optimization in public transport management" at the 5th International Conference on Models and Technologies for Intelligent Transportation Systems 2017 (MT-ITS 2017).
- ◇ Coordinator of the special session "Railway Optimization" at the International Conference on Optimization and Decision Science 2017 (AIRO ODS 2017).
- ◇ Coordinator of the special session "Stochastic and Robust Optimization for Railway Operations Management" at the 2nd European Conference of Stochastic Optimization (ECSO 2017).
- ◇ Coordinator of the Round-Table on "Operations Research in the Railway Industry" at EURO/ALIO International Conference 2018 on Applied Combinatorial Optimization.
- ◇ International Program Committee Member for the 7th-8th-9th-10th International Conferences on Operations Research and Enterprise Systems (ICORES 2018-19-20-21).
- ◇ International Program Committee Member for the 15th-16th IFAC Symposium on Control in Transportation Systems (CTS 2018-2021).
- ◇ Member of Technical Program Committee of The Seventh International Conference on Intelligent Systems and Applications (INTELLI 2018).
- ◇ Member of Technical Program Committee of 2018 IEOM Paris Conference in Industrial Engineering and Operations Management (IEOM 2018).
- ◇ Member of Technical Program Committee of The 8th International Conference on Industrial Engineering and Systems Management (IESM 2019).

- ◇ Member of Technical Program Committee of The 8th-9th International Conferences on Railway Operations Modelling & Analysis (ICROMA 2019-2021).
- ◇ Coordinator of the special session “Optimization in Public Transport and Shared Mobility” at the 30th European Conference on Operational Research (EURO 2019).
- ◇ Member of Technical Program Committee of The 2020 Forum on Integrated and Sustainable Transportation Systems (Forum-ISTS2020).

PERSONAL  
PRIZES AND  
MAGAZINE  
CITATIONS

- ◇ Selected as one of the top papers at the 21st IEEE International Conference on Intelligent Transportation Systems, IEEE ITSC 2018 (<https://www.ieee-itsc2018.org/>).
- ◇ Selected as one of the top papers at the 13th International Conference on Advanced Systems for Public Transport, CASPT 2015 ([www.caspt.org/](http://www.caspt.org/)).
- ◇ Selected as one of the top papers at the 4th Internat. Conference on Models and Technology for Intelligent Transportation Systems, MT-ITS 2015 (<http://mt-its2015.bme.hu/>).
- ◇ Selected as one of the top papers at the 6th International Conference on Railway Operations Modelling and Analysis “Rail Tokyo 2015” (<http://www.iaror.org/>).
- ◇ Selected as one of the top papers at the 5th International Seminar on Railway Operations Modelling and Analysis “Rail Copenhagen 2013” (<http://www.iaror.org/>).
- ◇ Finalist for the “Best Paper Award” at IEEE International Conference on Networking, Sensing and Control 2011 (<http://sinfras.com/conferences/icnsc2011/>).
- ◇ **IEEE Intelligent Transportation Systems Society Dissertation Prize** ([ewh.ieee.org/tc/its/](http://ewh.ieee.org/tc/its/)) and citation in IEEE ITS Magazine, year 2009 ([www.mrt.uni-karlsruhe.de/itsmag/](http://www.mrt.uni-karlsruhe.de/itsmag/)).
- ◇ **First prize at RAS (PhD) Student Paper Competition 2007** ([www.informs-ras.org/](http://www.informs-ras.org/)), Railroad Application Section of INFORMS, and citation in OR/MS Today ([www.orms-today.com](http://www.orms-today.com)) and Railway Age Magazine ([www.railwayage.com](http://www.railwayage.com)).
- ◇ Award as “**Best Young ( $\leq 35$  years) Researcher**” at **RAILHANNOVER 2007**, organized by International Association of Railway Operations Research ([www.iaror.org](http://www.iaror.org)).
- ◇ Second prize at RAS (PhD) Student Paper Competition 2006 ([www.informs-ras.org](http://www.informs-ras.org)), Railroad Application Section of INFORMS.
- ◇ Finalist for the “Best Scientific Paper Competition” at TRAIL Congress 2006, only paper nominated from the sections focused on railway operations research ([www.rstrail.nl](http://www.rstrail.nl)).
- ◇ Finalist for the “Best Paper” at RAILDELFT Seminar 2005 ([www.jror.nl/seminars](http://www.jror.nl/seminars)).
- ◇ Finalist for the “Best Paper” at TRAIL Congress 2004 ([www.rstrail.nl](http://www.rstrail.nl)).

BEST  
MASTER  
AND PHD  
STUDENTS

- ◇ Francesco Corman performed a master thesis project on railway traffic optimization obtaining the prize “Galluzzi” 2006 for the best master thesis in Engineering and the prize “AIRO 2007” ([www.airo.org](http://www.airo.org)) for the best master thesis in Operations Research. Francesco also performed a PhD project on the optimization and coordination of railway traffic obtaining the nomination in the “**2012 EURO Doctoral Dissertation Award**” (EDDA) Competition. PhD Thesis downloadable from web site [www.darenet.nl](http://www.darenet.nl)
- ◇ Paolo D’Urgolo performed a master thesis project on air traffic optimization obtaining the prize “AIRO 2010” ([www.airo.org](http://www.airo.org)) for the best master thesis in Operations Research.
- ◇ Giacomo Zaninotto performed a master thesis project on the optimization of public transport management obtaining the prize “AIRO 2013” ([www.airo.org](http://www.airo.org)) for the best master thesis in Operations Research.
- ◇ Marcella Samà performed a PhD project on the development of optimization models and algorithms for rail/air traffic management obtaining the First Prize “**Anna Valicek 2016**” organized by Airline Group of the International Federation of Operational Research Societies (AGIFORS) (<http://www.agifors.org/>) and the acknowledgment of the INFORMS Aviation Application Section. She also got the “**Lorenzo Brunetta 2018**” Prize as the Best PhD

Thesis in the period 2015-2017 on topics related to Operations Research. PhD Thesis available here: <http://phd.dia.uniroma3.it/2016-xxvii-xxviii-ciclo-ph-d-thesis/>

- ◇ Pengli Mo performed a PhD project on the integrated optimization of subway operations, with consideration of asymmetric passenger demands, operating costs, energy-efficient train scheduling and rolling stock circulation planning. He obtained the “**First prize at RAS (PhD) Student Paper Competition 2020**” ([connect.informs.org/railway-applications](http://connect.informs.org/railway-applications)), Railroad Application Section of INFORMS.
- ◇ A selection of students that collaborated to the scientific research and are co-authors of publications: Giorgio Medeossi, Michele Scotti, Marco Pistelli, Gianluca Giacco, Pavle Kecman, Rune Larsen, Twan Dollevoet, Paolo D’Ariano, Federico Sabene, Alessandro Toli, Jianbin Xin, Konstantin D. Palagachev, Alessio D. Marra, Gabriele Centulio, Karim Kecir, Federico Parisi, Georgios Laskaris, Erika Picarelli, Yongxiang Zhang, Xin Hong, Dian Wang.

GENERAL  
SCIENTIFIC  
INTERESTS

- ◇ Graph Optimization Theory
- ◇ Combinatorial Optimization
- ◇ Linear Algebra and Geometry
- ◇ Scheduling and Routing Problems
- ◇ Multi-Objective Optimization
- ◇ Game Theory
- ◇ Centralized and Distributed Systems
- ◇ Intelligent Transport Systems
- ◇ Multi-Modal Transport Systems
- ◇ Road Engineering
- ◇ Railway Engineering
- ◇ Airspace Engineering
- ◇ Marine/Maritime Engineering

GENERAL  
APPLIED  
RESEARCH  
INTERESTS

- ◇ Optimization of Public Transport and Shared Mobility
- ◇ Railway Traffic Planning and Control (e.g. Dutch, Italian, UK, French, Danish, Norwegian, Swiss, and Chinese railways)
- ◇ Air Traffic Management (e.g. major Italian and Dutch airports)
- ◇ Bus Scheduling (e.g. Italy and Luxemburg)
- ◇ Supply Chain and Logistics Management (e.g. courier express, container management)
- ◇ Industrial Production (e.g. Italian pharmaceutical industry)
- ◇ Radio Frequency IDentification (RFID)
- ◇ European Railway Traffic Management System (ERTMS)
- ◇ Single European Sky ATM Research (SESAR)

BRIEF  
OUTLINE OF  
RESEARCH  
CONTRIBUTIONS

- ◇ **Railway Traffic Optimization:** Development of innovative systems for operative decision making [A5, A9, A7, A34, A37, B4, B13, C1, C2, C11, C53, C55, C62], decision support systems and traffic simulators [A48, B6, C16, C18, C24, C84], scheduling algorithms [A2, B4, C4], routing algorithms [A4, A8, A38, A40, A41, A45, B4, C10, C14, C59, C61, C63, C66, C68, C70, C74], train speed control [A1, A53, B1, B4, C3, C7], architectures for the traffic control in busy and complicated stations [A14, B8, C19, C22], distributed approaches for the management and coordination of large networks [A10, A11, A17, A21, A29, B11, B12, C21, C35, C36, C38], disruption handling and emergency situations [A19, C25, C30, C31, C40, C85], optimization of rolling stock planning [A27, A25, C33, C39, C54], analysis of timetable robustness to traffic disturbances [A26, A28, C34, C42], development of new

railway plans by optimization methods [A30, A25, C43], capacity studies [A23, C45, C51, C83], train scheduling and infrastructure maintenance [A47, A52], optimization of metro systems [A49, C75].

- ◇ **Innovative Policies for Railway Traffic Management:** Detailed models for dynamic traffic management in the Netherlands [B10, C8, C13, C47], flexible timetables [A3, C5, C12], green-wave strategy [A6, C9, C15], dynamic management of connected services [A16, C23, C27], cooperation techniques between traffic controllers and train operating companies [A13, A43, B3, B14, C6, C17, C29, C49, C56, C60, C69, C71, C76, C80, C81].
- ◇ **Air Traffic Control:** Decision Support Systems for sequencing and routing of arriving and departing aircraft in busy airports: optimization models and frameworks [A15, A22, A24, A31, A36, A42, C37, C44, C46, C48, C50, C52, C64, C67, C79], scheduling algorithms [A35, C26], routing algorithms [A20, A32, A44, C32, C41, C57], aircraft scheduling and trajectory optimization [A54, B15, B16, C65, C72], coordination of airport airspace and taxiway operations [A46, A50].
- ◇ **Bus Scheduling:** Scheduling of electric and hybrid buses [A51, C73, C77, C78], mixed-fleet multi-terminal bus scheduling [A56].
- ◇ **Transportation Districting:** Simultaneous node and link districting problem with integrity, contiguity, balance, and independence considerations [A55].
- ◇ **Industrial Production Optimization Problems:** Evaluation of RFID technology use in production scheduling environments [A18, B9, C20].
- ◇ **Logistics Optimization Problems:** Application of RFID technology for the improvement of warehouse operations at an Italian courier express company [A12, C28]. Real-time container management in a complex maritime terminal container [A39, C58]. Optimal routing of sanitation vehicles in congested roads [C82]. Optimal transportation scheduling for Australian sugarcane industry [C86].

JOURNAL  
ARTICLES  
LISTED IN  
SCOPUS  
AND ISI  
DATABASES  
[A]

[A56] E. Picarelli, M. Rinaldi, A. D'Ariano, F. Viti (2020), Model and Solution Methods for the Mixed-Fleet Multi-Terminal Bus Scheduling Problem, **Transportation Research Procedia**, **47**, 275–282, ISSN: 2352-1465

[A55] D. Wang, J. Zhao, A. D'Ariano, Q. Peng (2020), Simultaneous Node and Link Districting in Transportation Networks: Model, Algorithms and Railway Application, **European Journal of Operational Research**, ISSN: 0377-2217 ([doi.org/10.1016/j.ejor.2020.10.013](https://doi.org/10.1016/j.ejor.2020.10.013))

[A54] M. Samà, A. D'Ariano, K. Palagachev, M. Gerdtts (2019), Integration methods for aircraft scheduling and trajectory optimization at a busy terminal manoeuvring area, **OR Spectrum**, **41(3)**, 641–681, ISSN: 0171-6468 ([doi.org/10.1007/s00291-019-00560-1](https://doi.org/10.1007/s00291-019-00560-1))

[A53] P. Mo, L. Yang, A. D'Ariano, J. Yin, Y. Yao, Z. Gao (2020), Energy-efficient Train Scheduling and Rolling Stock Circulation Planning in a Metro Line: A Linear Programming Approach, **IEEE Transactions on Intelligent Transportation Systems**, **21(9)**, 3621–3633, ISSN: 1524-9050 ([doi.org/10.1109/TITS.2019.2930085](https://doi.org/10.1109/TITS.2019.2930085))

[A52] Y. Zhang, A. D'Ariano, B. He, Q. Peng (2019), Microscopic optimization model and algorithm for integrating train timetabling and track maintenance task scheduling, **Transportation Research, Part B**, **127(1)** 237–278, ISSN: 0191-2615

[A51] M. Rinaldi, E. Picarelli, A. D'Ariano, F. Viti (2020), Mixed-Fleet Single-Terminal Bus Scheduling Problem: Modelling, Solution Scheme and Potential Applications, **Omega**, **96**, 102070, ISSN: 0305-0483 ([doi.org/10.1016/j.omega.2019.05.006](https://doi.org/10.1016/j.omega.2019.05.006))

[A50] M. Samà, A. D'Ariano, F. Corman, D. Pacciarelli (2018), Coordination of scheduling decisions in the management of airport airspace and taxiway operations, **Transportation Research, Part A**, **114(B)** 398–411, ISSN: 0965-8564

[A49] Y. Wang, A. D'Ariano, J. Yin, L. Meng, T. Tang, B. Ning (2018) Passenger demand oriented train scheduling and rolling stock circulation planning for an urban rail transit line, **Transportation Research, Part B**, **118(1)** 193–227, ISSN: 0191-2615



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- [A47] A. D'Ariano, L. Meng, G. Centulio, F. Corman (2019), Integrated stochastic optimization approaches for tactical scheduling of trains and railway infrastructure maintenance, **Computers & Industrial Engineering**, **127(1)** 1315–1335, ISSN: 0360-8352
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- [D35] A. D'Ariano, Detailed rescheduling models, algorithms and examples via alternative graphs, Timetabling and Capacity Management Course, Part B.1 Rescheduling modelling, 15 May 2013, Technical University of Denmark.
- [D34] D. Pacciarelli, F. Corman, A. D'Ariano, M. Pranzo, Dispatching and coordination in multi-area railway traffic management, Workshop on Innovative Approaches in Real-Time Railway Operations, organized by Prof. D. Huisman, 11 January 2013, Rotterdam.
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- [D32] G.L. Giacco, A. D'Ariano, D. Pacciarelli, Mixed-integer linear-programming formulations for a railway rolling stock circulation problem, AIRO 2012, 4-7 September 2012, Vietri sul Mare, Italia.
- [D31] A. D'Ariano, Scheduling and routing models, algorithms and policies for rail/air traffic management, RWTH Aachen University (<http://www.rwth-aachen.de/>), organized by Prof. M. Oeser, 12 July 2012, Aachen, Germany.
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- [D15] D. Pacciarelli, F. Corman, A. D'Ariano and M. Pranzo, A tabu search algorithm for real-time railway traffic optimization, XXXIX Annual Conference of the Italian Operations Research Society, AIRO 2008, 8-10 September 2008, Ischia, Italy.
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- [D13] A. D'Ariano, Real-time dispatching and network schedules, 1st International Summer Course on Railway Timetable Optimisation, Delft University of Technology, organized by Prof. I.A. Hansen, 14-18 July 2008, Delft, The Netherlands.
- [D12] F. Corman, S. Wegele and A. D'Ariano, Comparing the effectiveness of two real-time train rescheduling systems in case of perturbed traffic conditions, Railway Workshop (Transport Research Centre Delft), organized by Prof. I.A. Hansen, 17-18 June 2008, Delft, The Netherlands.
- [D11] A. D'Ariano, Improving real-time train dispatching: Models, algorithms and applications, DIA Workshop (Dipartimento di Informatica e Automazione, Roma Tre University), organized by Prof. F. Nicolò, 16-17 June 2008, Roma, Italia.
- [D10] A. D'Ariano, Improving real-time train dispatching: Models, algorithms and applications, NS Seminar (OR Group di Prof. L. Kroon at the Dutch Railways [www.ns.nl](http://www.ns.nl)), 10 January 2008, Utrecht, The Netherlands.
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- [D3] M. Pranzo, A. D'Ariano and D. Pacciarelli, A branch and bound algorithm for scheduling trains in a railway network, XXXVII Annual Conference of the Italian Operations Research Society, AIRO 2006, 12-15 September 2006, Cesena, Italy.
- [D2] M. Pranzo, A. D'Ariano and D. Pacciarelli, A branch and bound algorithm for scheduling trains in a railway network, INFORMS International Meeting 2006, 25-28 June 2006, Hong Kong.
- [D1] A. D'Ariano, Improving train dispatching performance: Models, algorithms and applications, Workshop on "Reliability of Travel Times" at TRAIL Research School, organized by Prof. H. van Zuylen, 13 February 2006, Delft, The Netherlands.

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- [E4] S. Kearns, H. Albrecht, A. D'Ariano, G. Franco, J. Tzanidaki, STRIA Roadmap: Network and Traffic Management Systems, Activity Report of Horizon 2020 Commission expert group to assist the Strategic Research and Innovation Agenda (STRIA) initiative (E03420), Volume 4, 43 Pages.

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*TEACHING:*

- UNIVERSITÀ  
DEGLI STUDI  
ROMA TRE
- ◇ Bachelor Degree in Computer Science Engineering:  
Professor for the course “Geometry and Combinatorics” [MAT-09] since a.y. 2017/2018.  
<http://moodle3.ing.uniroma3.it/moodle/>
  - ◇ Bachelor Degree in Computer Science Engineering:  
Professor for the course “Operations Research” [MAT-09] since a.y. 2010/2011.  
Lectures on Graph Optimization Theory.  
<http://moodle3.ing.uniroma3.it/moodle/>
  - ◇ Master Degree in Automation and Management Engineering:  
Professor for the course “Optimization of Public Services” [MAT-09] since a.y. 2012/2013.  
<http://moodle3.ing.uniroma3.it/moodle/>
  - ◇ Master Degree in Automation and Management Engineering:  
Professor for the course “Logistics Optimization” [MAT-09] since a.y. 2010/2011.  
Lectures on Job Shop Scheduling and Applications.  
<http://moodle3.ing.uniroma3.it/moodle/>
  - ◇ Support to the written and/or oral evaluation of students for the exams: Operations Research, Combinatorial Optimization, Optimization of Public Services, Logistics Optimization, Scheduling of Production Systems, Industrial Automation, Models and methods for Simulation, Models of Production Systems, Simulation of Industrial and Logistic Processes.
  - ◇ Supervisor and evaluator of Bachelor and Master students.
  - ◇ Member of Teaching Commissions for the evaluation of Bachelor and Master students.
  - ◇ Member of the Engineering Department Council, Board of Studies in Computer Science and Automation, Doctoral School in Computer Science and Automation.
- DELFT  
UNIVERSITY  
OF TECH-  
NOLOGY
- ◇ Author of various lectures during the period 2004–2008 for the Master course “Railway Traffic Management” (Reference code: CT 5803). Invited by Prof. I.A. Hansen.
  - ◇ Lectures at the “1st Summer Course on Railway Timetable Optimisation” organized by Prof. I.A. Hansen in 2008.
  - ◇ Assistance in the organization and divulgation of International Seminars and Workshops jointly organized by TU Delft and IAROR in 2004–2014.
- KATHOLIEKE  
UNIVER-  
SITEIT  
LEUVEN
- ◇ Author of various lectures in the academic year 2011/2012 for Master courses “Logistical organisation of public transportation” and “Distribution Logistics” of “Master of Science in Engineering: Traffic, Logistics and Intelligent Transport Systems” (Reference codes: H0816A, H00N3A). Invited by Prof. D. Cattrysse.
  - ◇ Lectures on “scheduling problems with finite capacity” at the doctoral school, March 2012.
- UNIVERSITE  
DU LUXEM-  
BOURG
- ◇ Erasmus+ Staff Mobility Program in the academic year 2015/2016 and invited lecturer in the academic year 2017/2018 for the Master in Logistics and Supply Chain Management organized in partnership with the “Massachusetts Institute of Technology Center for

Transportation & Logistics (MIT CTL)“: Various lectures of Operations Research and applications in transportation and logistics. Invited by Prof. Francesco Viti.

UNIVERSITY COLLEGE LONDON ◇ Erasmus+ Staff Mobility Program in the academic years 2016/2017 and 2018/2019. “Cities partnerships Programme” in the academic year 2018/2019: Various lectures of Operations Research and applications for Master students and Young Researchers/Practitioners. Invited by Prof. Taku Fujiyama. <http://www.ucl.ac.uk/railway-research/JSSCourse>

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II ◇ FS Mobility Academy in the academic year 2018/2019: Various lectures on “Optimization Methods for Train Rescheduling” for Master students and Young Researchers/Practitioners. Invited by Prof. Vincenzo Punzo and Luca D’Acierno. Autumn and Winter 2018-2019.

BEIJING JIAOTONG UNIVERSITY ◇ Golden School in the academic year 2018/2019: Various lectures on “Railway Traffic Optimization: Literature, Models, Solution Methods, and Applications” for Master and PhD students. Invited by Prof. Lingyun Meng and Lixing Yang. October-early November 2019.

CITATIONS:

**Google Scholar: total number of citations = 4592; h-index = 36**

**Scopus: total number of citations = 2735; h-index = 31**

[A2] is the most cited article on Scopus (after 1995) and ISI regarding “train scheduling” (excluding surveys)

[A8] is the most cited article on Scopus (after 1995) and ISI regarding “train routing” (excluding surveys)

LAST

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**12 November 2020**