

Prof. Nicola Sacco, Ph.D.

Curriculum vitae



Basic Information

Nicola Sacco, born on 4/12/1976, graduated in “Electronic Engineering” and received the Ph.D. in “Automatics and Computer Sciences for Transport Systems” at the Polytechnic of Turin, in 2000 and 2004, respectively.

Presently, he is **Full Professor of Transport Engineering** at the Department of Mechanics, Energy, Management, and Transportation Engineering (DIME), University of Genoa since December 2018.

In addition, Nicola Sacco is:

- Chair of the Master Programme in Gestione della Sicurezza delle Reti e dei Sistemi di Trasporto, since June 2022
- Ph.D. committee member of the Ph.D. programmes in “Logistics and Transport” and in “Machine Energy Systems, Environmental and Transport Engineering” of University of Genoa
- Member of CIELI (Italian Centre of Excellence on Logistics, Transports, and Infrastructures) of University of Genoa
- Member of SIDT (Italian Society of Transportation Faculty)

Previously, he has been:

- Chair of the International Master Programme in Safety Engineering for Transport, Logistics, and Production, November 2017-October 2023
- Associate Professor of Transport Engineering at the Department of Mechanics, Energy, Management, and Transportation Engineering (DIME), University of Genoa, from 1/06/2015 to 31/12/2018
- Assistant Professor of Transport Engineering at the Department of Mechanics, Energy, Management, and Transportation Engineering (DIME), University of Genoa, from 02/11/2011 to 31/05/2015
- Post-doc Research Fellow of Transport Engineering at the Department of Machines, Energy Systems and Transportation Engineering (DIMSET), University of Genoa, from 01/12/2006 to 29/10/2011
- Post-doc Research Fellow of Automatic Control at the Department of Automatic Control and Computer Science (DAUIN), Polytechnic of Turin, from 15/09/2004 to 31/08/2006
- Ph.D. Student working on “Performance optimisation of urban traffic networks via hybrid Petri nets” from 01/01/2001 to 31/12/2003

Teaching and Advising Activities

Since November 2011, Nicola Sacco is/has been lecturer of:

- Transport Systems Planning (since 2020)
- Maritime Transport Systems and Logistics (since 2022)
- Advanced Design of Transport Systems (since 2022)
- Maritime Transport (until 2023)
- Theory and Analysis of Transport Systems (until 2019)

- Planning and Design of Transport Systems (until 2021)
- Technics and Economics of Transport Systems (until 2017)
- Safety and Security of Transport Systems (until 2016)

Since November 2011, Nicola Sacco has been advisor of more than 30 students in their final Bachelor, Master, and Doctorate dissertations

Research Activity

Research Topics

Currently Nicola Sacco carries out research in of modelling, analysing and optimising Transport and Logistics systems. The research activity is documented by around 70 scientific papers published in international journals, in chapters of international books and in proceedings of international conferences, all peer-reviewed. More in detail, the research activities are focused on the following topics:

- Performance evaluation of urban networks with autonomous vehicles
- Performance optimization Ride-Sharing systems and Car-Sharing systems
- Predictive maintenance of railway infrastructure
- Innovative Logistics frameworks: Physical Internet and Crowd-shipping
- Modeling, control, and optimization of urban traffic networks
- Analysis and optimization of logistics systems and freight transport

Research Projects

- **ERJU NEXUS (Founded by European Commission - 2024-2026):** “Next-gen technologies for enhanced metro operations”
- **FLEXI MOBILITY (Funded by Regione Liguria 2024-2025):** “Flexi Mobility System: un sistema integrato per la progettazione e la gestione di servizi flessibili di mobilità”
- **MOBIQUITY (Funded by Regione Liguria 2024-2025):** “Soluzioni condivise per una mobilità sicura ed inclusiva”
- **PNRR MOST (Founded by Italian Ministry of Education, University, and Research in 2010):** “Sustainable Mobility National Centre – Spoke 10: Logistics”
- **ERJU ACADEMICS4RAIL (Founded by European Commission - 2024-2026):** “Building a community of railway scientific researchers and academia for ERJU and enabling a network of PhDs (academia teaming with industry)”
- **MORTHANTHIS (Funded by Regione Liguria 2021-2023):** “A new MObility REgulation THinking ANd THoroughly Innovative inSpired”
- **H2020 OMICRON (Founded by European Commission - 2021-2024):** “Towards a more automated and optimized maintenance, renewal and upgrade of roads by means of robotised technologies and intelligent decision support tools”
- **ERASMUS+ KA2 STAFFER (Founded by European Commission - 2020-2024):** “Skill Training Alliance For the Future European Rail system”
- **S2R DAYDREAMS (Founded by European Commission - 2021-2023):** “Development of prescriptive Analytics based on Artificial Intelligence for iAMS”
- **PRIN 2020 (Founded by Italian Ministry of Education, University, and Research in 2020):** “DigiT-CCAM (Digital Twins for Cooperative Connected and Automated Mobility)”
- **H2020 DTF (Founded by European Commission - 2018-2019):** “DocksTheFuture”
- **H2020 RCMS (Founded by European Commission - 2015-2017):** “Rethinking Container Management Systems”
- **PRA 2015 (founded by University of Genoa):** “Generalized Ride Sharing: new algorithms for fare optimization”

- **PRA 2014 (founded by University of Genoa):** “Stochastic optimization of urban traffic lights”
- **PLUG-IN (Founded by Italian Ministry of Education, University, and Research in 2013):** “Platform for urban mobility and processing of heterogeneous traffic information”
- **PRA 2013 (founded by University of Genoa):** “Models for the evaluation and control of the optimal state of transport systems”
- **PRA 2012 (founded by University of Genoa):** “Sensitivity analysis of the traffic light regulation according to the project methodologies”
- **ACIS (Founded by Italian Ministry of Education, University, and Research in 2009):** “Advanced Cooperative Infomobility Systems”
- **PRIN 2009 (Founded by Italian Ministry of Education, University, and Research in 2010):** “Guidelines for the analysis and design of urban transport networks: methods and models for the project of intersection control at the local level”
- **PRIN 2006 (Italian Ministry of Education, University, and Research in 2006):** “Advanced Maritime Operation & Railways Evolution (AMORE)”

Prizes

- Best Presentation at “International Conference on Logistic and Transportation”, Istanbul, March 2013.
- EurAgEng Outstanding Paper Awards 2010 for the paper [45].

Patent

OLMI, Roberto; DI TERLIZZI, Domenico; DABBENE Fabrizio; DELLA CROCE, Federico; GHIRARDI, Marco; SACCO, Nicola; (2015) Device and method for optimising the movement of automated-guided vehicles, and the like. International Application Number: PCT/IB2014/063349

Further Research Activities

Nicola Sacco is also a scientific reviewer for the following international journals:

- IEEE Transaction on Intelligent Transportation Systems
- IEEE Conference on Intelligent Transportation Systems
- IET Journal of Intelligent Transport Systems
- EURO Journal on Transportation and Logistics
- Elsevier Transportation Research Part C
- Elsevier Transportation Research Procedia
- Elsevier Procedia: Social & Behavioral Sciences

Papers

Complete list at <https://iris.unige.it/cris/rp/rp07281>

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