

Monday 17th September

9:00 - 9:15 **Opening Session**
Bernhard Friedrich

9:15 - 10:15 **Mohamed Mezghani**
“Urban mobility is changing, public transport too”

10:30 - 12:30 M11: Public Transport Planning and Operation

Session Chair : **Seghir Zerguini**

Room RR 58.2

10:30 **On Pedestrian Traffic Management in Railway Stations: Simulation Needs and Model Assessment**

Marin Dubroca-Voisin, Bachar Kabalan, Fabien Leurent

11:00 **Assessment of Commuter Train Timetables Including Transfers**

Jennifer Warg, Abderrahman Ait Ali, Jonas Eliasson

11:30 **Automated Evaluation of Pre-Planned Operational Concepts for Disruptions in Commuter Railway Transport**

Anna-Katharina Brauner

12:00 **Developing a Train Timetable According to Track Maintenance Plans: a Stochastic Optimization of Buffer Time Schedules**

Mostafa Bababeik, Seghir Zerguini, Mohammad Farjad-Amin, Navid Khademi, Morteza Bagheri

10:30 - 12:30 M12: Land Use and Transport Interactions

Session Chair : **Michele Ottomanelli**

Room RR 58.3

10:30 **Land Use Oriented Discrete Road Network Design**

Zhongqi Wang, Qi Han, Bauke de Vries

11:00 **A Dynamic Link-based Eco-indicator for Supporting Equitable Traffic Management Strategies**

Carlos Sampaio, Jorge M. Bandeira, Eloisa Macedo, Mariana Vilaça, Claudio Guarnaccia, Bernard Friedrich, Helder Relvas, Sandra Rafael, Vera Rodrigues, Margarida C. Coelho

11:30 **Validation of a Simulation System Exploring Land Use Impacts on Travel Behavior**

Xiaoming Lyu, Qi Han, Bauke de Vries

12:00 **An Urban Bikeway Network Design Model for Inclusive and Equitable Transport Policies**

Leonardo Caggiani, Rosalia Camporeale, Mario Binetti, Michele Ottomanelli

10:30 - 12:30 M13: City Logistics

Session Chair: Jan Fabian Ehmke
Room RR 58.4

- 10:30 **Evaluation of Delivery Cost Approximation for Attended Home Deliveries**
Charlotte Köhler, Jarmo Haferkamp
- 11:00 **Interactive Simulation to Explore New Distribution Schemes for Urban Deliveries**
Arthur Gaudron, Simon Tamayo, Arnaud de La Fortelle
- 11:30 **A Bi-Level Programming Formulation for City Logistic Planning Considering Retailer Restocking Activities**
Taufiq Nugroho, Anthony Whiteing, Chandra Ballijepali
- 12:00 **Cost-Efficient and Reliable City Logistics Vehicle Routing with Satellite Locations under Travel Time Uncertainty**
Patrick-Oliver Groß, Jan Fabian Ehmke, Dirk Christian Mattfeld

12:30 - 13:30 Lunch

13:30 - 15:30 M21: Public Transport Planning and Operation

Session Chair: Jorge Bandeira
Room RR 58.2

- 13:30 **Public Engagement for Designing New Transport Services: Investigating Citizen Preferences from a Multiple Criteria Perspective**
Matteo Ignaccolo, Giuseppe Inturri, Nadia Giuffrida, Michela Le Pira, Vincenza Torrisi
- 14:00 **Structural design of a hierarchical urban transit network integrating modal choice and environmental impacts**
Fabien Leurent, Sheng Li, Hugo Badia
- 14:30 **A Mixed Method for Railway Capacity Allocation**
Emanuel Broman, Jonas Eliasson
- 15:00 **Assessing Traffic-Related Environmental Impacts Based on Different Traffic Monitoring Applications**
Joao Teixeira, Eloisa Macedo, Paulo Fernandes, Jorge Bandeira, Nagui Roupail, Margarida Coelho

13:30 - 15:30 M22: Human Factors and Travel Behavior

Session Chair: Antonio Couto
Room RR 58.3

- 13:30 **Exploring the Impact of User Preferences on Autonomous Vehicle Modal Share: A Multi-Agent Simulation Approach**
Joseph Kamel, Reza Vosooghi, Jakob Puchinger, Feirouz Ksontini, Göknur Sirin

- 14:00 **Faster or Slower? Valence Framing of Car Drivers' Urban Route Choices**
Madlen Ringhand, Mark Vollrath
- 14:30 **Using Alert-Based Data to Analyze Driver Inattention**
Sara Ferreira, Zafeiris Kokkinogenis, Antonio Couto
- 15:00 **A Conceptual Framework for Forecasting Car Drivers On-Street Parking Decisions**
Annum Khaliq, Peter van der Waerden, Davy Janssens, Geert Wets

13:30 - 15:30 M23: Vehicle Routing and Route Planning

Session Chair : Jacek Żak

Room RR 58.4

- 13:30 **Same-Day Delivery with Pickup-Stations**
Marlin Ulmer, Sebastian Streng
- 14:00 **Service Network Design with Mixed Autonomous Fleets**
Yannick Oskar Scherr, Bruno Albert Neumann Saavedra, Dirk Christian Mattfeld, Mike Hewitt
- 14:30 **The Restaurant Meal Delivery Problem: Dynamic Pick-Up and Delivery with Deadlines and Random Ready Times**
Barrett W. Thomas, Marlin Ulmer, Ann Campbell, Nicholas Woyak
- 15:00 **Multiple Criteria Optimization of the Carpooling Problem**
Jacek Żak, Maciej Hojda, Grzegorz Filcek

15:30 - 16:00 Coffee Break

16:00 - 17:30 M31: Shared Mobility

Session Chair: Monika Sester

Room RR 58.2

- 16:00 **Analyzing the Potential of User-Based Relocations on a Freefloating Carsharing System in Cologne**
Katrin Lippoldt, Tanja Niels, Klaus Bogenberger
- 16:30 **Usage of E-Scooters in Urban Environments**
Cornelius Hardt, Klaus Bogenberger
- 17:00 **Investigating the Impact of Sustainable Transport Modes on Greenhouse Emissions: a System Dynamic Approach**
Paola Astegiano, Francesca Fermi, Angelo Martino

16:00 - 17:30 M32: Transport Modeling and Control

Session Chair: Jörg Müller

Room RR 58.3

- 16:00 **Automatic Driving in Urban Roads with Mixed Traffic: A Strategy with Human Drivers as Platoon Leaders**
Shengyue Yao, Bernhard Friedrich
- 16:30 **A Network Design Optimization Problem for a Ro-Ro Transport System in the Mediterranean Area**
Paolo Fadda, Gianfranco Fancello, Simona Mancini, Patrizia Serra
- 17:00 **Household Vehicle Holdings Decisions in Response to Changing Mobility Needs**
Gaofeng Gu, Dujuan Yang, Tao Feng, Harry Timmermans

16:00 - 17:30 M33: Planning and Operation

Session Chair: Mirko Barthauer

Room RR 58.4

- 16:00 **Presorting and Pre-signaling: A New Intersection Operation Mode for Autonomous and Human-Operated Vehicles**
Mirko Barthauer, Bernhard Friedrich
- 16:30 **Validation of Multiple Sensor Systems Based on a Telematics Platform for Intelligent Freight Wagons**
Hagen Ußler, Oliver Michler, Günter Löffler
- 17:00 **START - Sustainable Transport Awareness Recommendation Tool**
Luís Miguel Azevedo Duarte, Teresa Galvão, Marta Ferreira

19:00 Welcome Reception

Tuesday 18th September

9:15 - 10:15 **Hani Mahmassani**
“Network Models for the Emerging New Mobility Landscape: Autonomous, Connected, Electric, Shared (ACES)”

10:30 - 12:30 **T11: Road Safety**
 Session Chair: **Vittorio Astarita**
 Room RR 58.2

10:30 **Freeway Rear-End Collision Risk Estimation with Extreme Value Theory Approach. A Case Study**
*Gregorio Gecchele, Federico Orsini, **Massimiliano Gastaldi**, Riccardo Rossi*

11:00 **Studying Crash Avoidance Maneuvers Prior to an Impact Considering Different Types of Driver’s Distractions**
*Ahmadreza Mahmoudzadeh, **Hesamoddin Razi-Ardakani**, Mohammad Kermanshah*

11:30 **Identification Determinant Variables of the Injury Severity Crashes at Road-Railway Level Crossing in Indonesia**
*Tri Tjahjono, **Yodya Yola Pratiwi**, Robby Yudo Purnomo*

12:00 **Surrogate Safety Measures from Traffic Simulation Models a Comparison of Different Models for Intersection Safety Evaluation**
***Vittorio Astarita**, Demetrio Carmine Festa, Vincenzo Pasquale Giofrè, Giuseppe Guido*

10:30 - 12:30 **T12: Big Data in Transportation**
 Session Chair: **Carlos Llorca**
 Room RR 58.3

10:30 **Mining Railway Traffic Control Logs**
***Felix Mannhardt**, Andreas D. Landmark*

11:00 **Continuous Compilation of Directional Counts at Intersections Fusing Floating Car Data and Section Counts**
*Anysia Mayerhofer, **Walid Fourati**, Bernhard Friedrich*

11:30 **Passenger Trajectory Generation and Characterization Using Modern Datasets: a Bibliographical Review**
***Xiaoyan Xie**, Fabien Leurent*

12:00 **Validation of an Agent-Based Travel Demand Model with Floating Car Data**
***Carlos Llorca**, Sasan Amini, Ana Tsui Moreno, Rolf Moeckel*

10:30 - 12:30 T13: Air Transport Operations

Session Chair: Bruno F. Santos

Room RR 58.4

- 10:30 **Resource Planning for Aircraft Refueling in Airport Parking Area**
Pasquale Carotenuto, Stefano Giordani, Alessio Salvatore, Andrea Biasini
- 11:00 **Mutual Influence on Air Transport Routes Network in the Context of a Liberalized Aviation Market**
Jose F. Zea, Oscar Diaz Olariaga
- 11:30 **Variable Neighborhood Search to Solve an Airline Fleet Sizing and Assignment Problems**
Slavica Dožić, Ana Jelović, Milica Kalić, Mirjana Čangalović
- 12:00 **Optimizing the Prices for Airlines Flight Passes**
Bruno F. Santos, Myrthe M.D. Gillis

12:30 - 13:30: Lunch

13:30 - 15:30 T21: Transportation Economics and Financing

Session Chair: Sven Maertens

Room RR 58.2

- 13:30 **Are the Maldives, the Seychelles and Mauritius Dependent on the Bosphorus-Gulf Carriers? - Risk Analysis and Mitigation Measures.**
Stephan Bingemer, Wolfgang Grimme, Sven Maertens
- 14:00 **Method for an Economical Assessment of Urban Transport Systems**
Assadollah Saighani, Carsten Sommer
- 14:30 **Options for Traffic Growth at Smaller European Airports Under the Restrictions Set by the European Commission's Guidelines on State Aid**
Wolfgang Grimme, Sven Maertens, Adél Schröpfer
- 15:00 **Traffic Impacts of EU Horizontal Air Service Agreements**
Sven Maertens, Wolfgang Grimme

13:30 - 15:30 T22: Simulation and Optimization of Transportation Systems

Session Chair: Giulio Erberto Cantarella

Room RR 58.3

- 13:30 **A Stochastic Congested Strategy-Based Transit Assignment Model with Hard Capacity Constraints**
Esteve Codina, Francisca Rosell
- 14:00 **Passenger-Centric Airport Management Via New Modelling Techniques for Simulating Passengers**
Olaf Milbredt, Florian Rudolph, Erik Grunewald

14:30 **Employing Helicopters in the Modelling of Last Mile Distribution System in Large-Scale Disasters**
Iran Rosa Xavier, Renata Albergaria de Mello Bandeira, Leandro de Oliveira Silva, Adriano de Paula Fontainhas Bandeira, Vânia Barcellos Gouvêa Campos

15:00 **Algorithms for Solving Probit-Based Stochastic Assignment**
Giulio Erberto Cantarella, Massimo Di Gangi, Antonio Polimeni

13:30 - 15:30 T23: Transport Planning and Traffic Engineering:

Session Chair: António Lobo

Room RR 58.4

13:30 **Empirical Analysis of Level of Service Based on Users Perception at Manual Toll Booth Operation in India**

Ashish Dhamaniya, Yogeshwar Vijaykumar Navandar, Dilip A Patel

14:00 **Assessing Transportation Systems Resilience: a Proposal of Indicators**

Camila Maestrelli Leobons, Vânia B. G. Campos, Renata Albergaria M. Bandeira

14:30 **Speed Prediction in Segments of Two-Lane Highways**

António Lobo, Marco Amorim, Carlos Rodrigues, António Couto

15:00 **Predicting and Optimizing Traffic Flow at Toll Plazas**

Robert Neuhold, Filippo Garolla, Oliver Sidla, Martin Fellendorf

15:30 - 16:00 Coffee Break

16:00 - 17:30 T31: Air Transport Operations

Session Chair: Wolfgang Grimme

Room RR 58.2

16:00 **Airport Passenger Arrival Process: Estimation of Earliness Arrival Functions**

Caterina Malandri, Maria Nadia Postorino, Luca Mantecchini, Filippo Paganelli

16:30 **Analysis of the Behavior of Air Passenger Demand Through System Dynamics**

Diana Tascon Hoyos, Oscar Diaz Olariaga

17:00 **The Evolution of Air Transport Networks and Impacts on Shortest Travel Times between NUTS-3 Regions a Case Study for Intra-European Trips Originating in Germany**

Wolfgang Grimme, Holger Pabst

16:00 - 17:30 T32: Decision Support Analysis and Operations Research

Session Chair: Erel Avineri

Room RR 58.3

- 16:00 **Solving a Biorefinery Location Problem Case in Spain: Robustness in Strategic Decisions.**
Adrián Serrano-Hernández, Luis Cadarso, Javier Faulin
- 16:30 **Optimal Road Project Portfolio Selection Problem with Local Budget Constraints**
Erel Avineri
- 17:00 **Metaheuristic Sensitivity to Objective in Transit Network Design**
Aleksander Trifunović, Inbal Haas, Bernhard Friedrich

16:00 - 17:30 T33: Transport Modeling and Control

Session Chair: Ana L. C. Bazzan

Room RR 58.4

- 16:00 **A Combined Freight and Passenger Planes Cargo Allocation Model**
Oren Nahum, Yuval Hadas, Assaf Kalish
- 16:30 **Bee Colony Optimization-Based Model for Solving Dynamic and Discrete Berth Allocation Problem**
Luigi Pio Prencipe, Mario Marinelli, Mauro Dell'Orco
- 17:00 **Stream Equivalency Factor for Mixed Traffic at Urban Signalized Intersections**
Pinakin Patel, Ashish Dhamaniya, Yogeshwar Vijaykumar Navandar

19:00 Social Dinner

Wednesday 19th September

Constantinos Antoniou

9:15 - 10:15 “Model-Based Big Data Transportation Analytics *or* Big data transport analytics 2.0”

10:30 - 12:30 W11: Energy Consumption and Emission Modeling

Session Chair: Giuseppe Musolino

Room RR 58.2

- 10:30 **Energy and Fleet Modelling within the TRIMODE Integrated Transport Model Framework for Europe**
Pelopidas Siskos, Pantelis Capros, Georgios Zazias, Davide Fiorello, Klaus Noekel
- 11:00 **Modelling Noise Reductions Using Electric Buses in Urban Traffic. A Case Study in the City of Stuttgart.**
Felix Laib, Andreas Braun, Wolfgang Rid
- 11:30 **Environmental Effects of Road Geometric and Operational Features**
Federica Nobili, Francesco Bella, David Llopis-Castelló, Francisco Javier Camacho-Torregrosa, Alfredo García
- 12:00 **Passengers and Freight Mobility with Electric Vehicles: a Methodology to Plan Green Transport and Logistic Services near Port Areas**
Giuseppe Musolino, Corrado Rindone, Antonino Vitetta

10:30 - 12:30 W12: Innovative Solutions

Session Chair: Yasuo Asakura

Room RR 58.3

- 10:30 **Adoption of Dynamic Ridesharing System under Influence of Information on Social Network**
Phathinan Thaithatkul, Toru Seo, Takahiko Kusakabe, Yasuo Asakura
- 11:00 **Exploring Urban Mobility and Points-of-Interest Data to Discover Potential Commercial Partnerships**
Marta Campos Ferreira, Teresa Galvão Dias, João Falcão e Cunha
- 11:30 **Multimodal Choice Model for E-Mobility Scenarios**
Marina Ferrara, Carlo Liberto, Marialisa Nigro, Martina Trojani, Gaetano Valenti
- 12:00 **Fusing Mobile Phone Data with Other Data Sources to Generate Input OD Matrices for Transport Models**
Lidia Montero, Xavier Ros-Roca, Ricardo Herranz, Jaume Barceló

10:30 - 12:30 W13: Traffic Flow Modeling

Session Chair: Yukimasa Matsumoto
Room RR 58.4

- 10:30 **Impacts of Large Scale Truck Platooning on Dutch Highways**
Dujuan Yang, Anique Kuijpers, Gamze Dane, Tom van der Sande
- 11:00 **Sensitivity Analysis of a Transit Bottleneck Model**
Fabien Leurent, Cyril Pivano
- 11:30 **Insights into the Congestion Patterns on Alpine Motorways Based on Separate Traffic Lanes Analysis**
Bartosz Bursa, Markus Mailer
- 12:00 **Reinforcement Learning of Driver Receiving Traffic Signal Information for Passing through Signalized Intersection at Arterial Road**
Yukimasa Matsumoto, Kazuya Nishio

12:30 - 13:30 Lunch

13:30 - 15:00 W21: Vehicle Routing and Route Planning

Session Chair: Jaume Barceló
Room RR 58.2

- 13:30 **A Stochastic Service Network Design Model for Bike Sharing Systems**
Bruno Albert Neumann Saavedra, Dirk Christian Mattfeld, Teodor Gabriel Crainic, Bernard Gendron
- 14:00 **Dynamic Traffic Information for Electric Vehicles as a Basis for Energy-Efficient Routing**
Lisa Kessler, Klaus Bogenberger
- 14:30 **Combining Adaptation at Supply and Demand Levels in Microscopic Traffic Simulation: a Multiagent Learning Approach**
Liza L. Lemos, Ana L. C. Bazzan

13:30 - 15:00 W22: Innovative Solutions

Session Chair: Sebastian Vogt
Room RR 58.3

- 13:30 **Estimation of Origin-Destination Matrices by Fusing Detector Data and Floating Car Data**
Sebastian Vogt, Walid Fourati, Tobias Schendzielorz, Yichen Mao, Bernhard Friedrich
- 14:00 **Using Floating Car Data for the Assessment of External Costs of Transport**
Livia Mannini, Ernesto Cipriani, Umberto Crisalli, Andrea Gemma
- 14:30 **Deep Learning of User Behavior of Mixed Traffic in Shared Spaces**
Hao Cheng, Monika Sester

13:30 - 15:00 W23: Simulation and Optimization of Transportation Systems

Session Chair: Constantinos Antonio

Room RR 58.4

- 13:30 **Comparison of Nonlinear Estimation Methods for Highway Traffic Estimation with Connected Vehicles**
Mariano Angel Rizzo, Neila Bhourri, Pablo Andrés Lotito, Aldo Rubiales
- 14:00 **Adaptive Traffic Signal Control for Real-World Scenarios in Agent-Based Transport Simulations**
Theresa Thunig, Nico Kühnel, Kai Nagel
- 14:30 **Towards an Integrated Longitudinal and Lateral Movement Data-Driven Model for Mixed Traffic**
Vasileia Papathanasopoulou, Constantinos Antoniou

15:15 Closing Session

Bernhard Friedrich, Dirk Mattfeld, Riccardo Rossi