**XXIII Seminario Scientifico SIDT**
Società Italiana dei Docenti di Trasporti
Dipartimento di Ingegneria Civile - Università degli Studi di Salerno
11-13 SETTEMBRE 2019

**TRANSPORTATION SYSTEMS FOR SMART, SUSTAINABLE, INCLUSIVE AND SECURE COMMUNITIES**

**SCIENTIFIC COMMITTEE**
Giulio E. CANTARELLA, Università degli Studi di Salerno
Armando CARTENI, Università degli Studi di Napoli “Federico II”
Antonio COMI, Università di Roma “Tor Vergata”
Bruno DALLA CHIARA, Politecnico di Torino
Angela DI FEBBRARO, Università di Genova
Demetrio C. FESTA, Università della Calabria
Massimiliano GASTALDI, Università degli Studi di Padova
Livia MANNINI, Università degli Studi di Roma Tre
Antonio MUSSO, Sapienza Università di Roma
Marialisa NIGRO, Università degli Studi Roma Tre
Antonio VITETTA, Università degli Studi “Mediterranea” di Reggio Calabria

**LOCAL ORGANIZING COMMITTEE**
Giulio E. CANTARELLA
Stefano DE LUCA
Roberta DI PACE
Facundo STORANI
Lucas CISTERNAS

**TECHNICAL ORGANIZING COMMITTEE**
Rossella DEL REGNO
Orlando GIANNATTASIO

**Transport modeling and control**
- Demand modelling and travel behavior
- Model calibration and simulation
- Dynamic network modeling
- Simulation and optimization of transportation systems
- Control and management of transportation systems
- Traffic flow modeling and short-term predictions
- Vehicle routing and route planning
- Human factors, Minds and Cognition
- Energy consumption and emission modeling

**Transportation Planning and operation**
- Rail Operations and Management
- Public transport
- Multi-modal transportation and terminals
- Airport and air transport operations
- Port and maritime operations
- City logistics
- Land use and transport interactions

**Innovative services**
- Mobility as a Service
- Smart cities and smart mobility
- Urban mobility innovations
- Shared mobility
- Data collection methods for passenger and freight

**Innovative technologies**
- Interoperability and interconnection of transport systems
- Automated and intelligent Vehicles
- ITS and big data
- Traveler information systems
- Connected Freight Electromobility
- Applications of IoT to transportation

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11TH SEPTEMBER - WEDNESDAY

13.00 - 14.15 REGISTRATION

14.15 - 15.00

WELCOME:
ANTONIO MUSSO – PRESIDENTE SIDT
STEFANO DE LUCA – COMITATO ORGANIZZATORE UNISA
Michele BRIGANTE – ORDINE INGEGNERI DI SALERNO

15.00 - 18.40 SIDT YOUNG RESEARCHERS
CHAIR: ROBERTA DI PACE

New features of the zombie driver software for the evaluation of traffic safety levels
Vincenzo Pasquale Giofré

A hybrid traffic flow model for the optimisation of urban networks
Facundo Storani

The combination of random utility models (CoRUM) for accommodating taste heterogeneity and flexible substitution pattern across alternatives
Fiore Tinessa

Dry ports and related environmental benefits: a case study in Italy
Angela Carboni, Federico Orsini

Advanced vehicles: challenges for transportation systems engineering
Orlando Giannattasio

A network design model for road freight transportation using eHighway system
Aleksandra Colovic

An urban multimodal transportation model for future electromobility scenarios
Marina Ferrara

17.00 - 17.30 Coffee break

18.40 - 20.30

Assemblea dei soci
Elezioni del Presidente e del Consiglio direttivo

21.00 Free dinner
12th September - Thursday

8.00 - 8.45  REGISTRATION

8.45 - 9.00  WELCOME:
ANTONIO MUSSO – PRESIDENTE SIDT

9.00 - 11.00  PLENARY: CHALLENGES AND PERSPECTIVES IN TRANSPORTATION ENGINEERING
CHAIR: GIULIO E. CANTARELLA

Smart, sustainable and integrated transport: how to get there?
The European research and innovation system
Angela Di Febraro

Technologies and services for mobility and transportation: challenges and opportunities for research
Cino Bifulco, Bruno dalla Chiara

Research perspective on transportation planning and project appraisal
Pierluigi Coppola

11.00 - 11.15  Coffee break
11.15 - 13.15 INNOVATIVE METHODS AND APPLICATIONS FOR SUSTAINABLE PUBLIC TRANSPORT
CHAIR: STEFANO GORI

Evaluating equity in public transport investments: the external benefits on property values
Mariano Gallo

Equity measures for the identification of public transport needs
Stefano Gori, Livia Mannini, Marco Petrelli

Intelligent agent and Markovian decision problems: some applications in intelligent transit systems
Agostino Nuzzolo

An analysis of operational transport integration in selected countries
Davide Shingo Usami, Martina Gregori, Luca Persia, Letizia Petrichella, Alessandra Raffone

The willingness to pay for autonomous vehicles in public transport services: a real case application in Naples, Italy
Armando Carteni

Integration between activity-based demand models and multimodal assignment: some empirical evidences
Ernesto Cipriani, Umberto Crisalli, Andrea Gemma, Livia Mannini

13.15 - 15.00 Light Lunch
12th September - Thursday

15.00 - 17.00

Innovative Methods and Applications for Sustainable Weak Users Transport
Chair: Michele Ottomanelli

Analyzing an urban bike network by comparing traditional counting methods with GPS traces from smartphone
Federico Rupi, Joerg Schweizer, Cristian Poliziani

Calibration of bicycle link-cost functions using GPS traces and stochastic optimization methods
Joerg Schweizer, Federico Rupi, Cristian Poliziani

An analysis of dynamic demand patterns in free-floating bike sharing schemes based on GPS traces
Cristian Poliziani, Federico Rupi, Joerg Schweizer

The optimal location of bike lanes and the introduction of bike sharing system to promote cycling mobility: the case study of the go2school project
Gabriele D’Orso, Marco Migliore

A novel distributed system of e-vehicle charging stations based on pumps used as turbine
Gabriella Balacco, Mario Binetti, Leonardo Caggiani, Michele Ottomanelli

Agent-based simulation to modelling pedestrian behaviours
Carlo Liberto, Stefano Carrese, Marialisa Nigro, Cristiano Zarelli

17.00 - 17.15
Coffee break

17.00 - 17.15
Coffee break
12\textsuperscript{th} September - Thursday

17.15 - 19.35

**Methods and Models for Greener and Safer Transportation II**

Chair: Cristina Pronello

Nudge theory for a rational decision-making process in transportation planning: an application for a new carpool service

Ennio Cascetta, Armando Cartenì, Ilaria Henke

Accounting for attitudes and perceptions influencing users’ willingness to purchase electric vehicles through an hybrid choice modelling approach based on analytic hierarchy process

Stefano de Luca, Roberta Di Pace, Francesca Bruno

A new route choice formulation able to accommodate target correlation structures with an implicit enumeration algorithm: the CoNL route choice model

Fiore Tinessa, Andrea Papola, Vittorio Marzano

Assessing travelers’ risk perception: case study of an Italian railway station

Pierluigi Coppola, Fulvio Silvestri

A quali-quantitative market segmentation based on citizens’ perceptions towards road pricing

Valentina Rappazzo, Cristina Pronello

Users’ benefits from modal transfer with discrete choice models: a state of the art survey

Paolo Delle Site

Advanced airport passenger information system

Stefano de Luca, Roberta Di Pace

Gala Dinner – MUSEO DIOCESANO

17.15 - 19.35

**Technologies and Methods for Railway Transport**

Chair: Stefano Ricci

Requirement specifications for railway measuring and monitoring system

Marco Antognoli, Cristiano Marinacci, Stefano Ricci, Luca Rizzetto

Intelligent wheelsets for the trains of the future: the role of in-service wheel-rail force measurement

Flavio Velletrani, Riccardo Licciardello

On exploiting multimodal solutions for mitigating the impact of service disruptions on rail transport attractiveness

Alice Consilvio, Angela di Febbraro, Nicola Sacco

Rail service rescheduling in the case of fleet unavailability: a metro system analysis with the adoption of energy-saving strategies

Marilisa Botte, Luca D’Acerno

Integrating yard, network and optimisation models towards real-time optimisation of rail freight yard operations

Riccardo Licciardello, Ronghui Liu, Paola Pellegrini, Miloš Zat’ko

Role of urban rail networks in shaping city dynamics: an insight into international experiences

Cristiana Piccioni, Antonio Musso

A capacity evaluation of a freight railway node based on a timetable-saturation approach. Application to the Novara case study

Bianca Pascariu, Nicola Coviello

Gala Dinner – MUSEO DIOCESANO
13TH SEPTEMBER - FRIDAY

9.00 - 11.00

INNOVATIVE METHODS AND APPLICATIONS FOR SUSTAINABLE ROAD TRANSPORT
CHAIR: ITALO MELONI

Passenger travel demand models: preliminary estimations with big data (FCD)
Antonello Croce, Giuseppe Musolino, Corrado Rindone, Antonino Vitetta
A robust methodology for od matrix estimation based on floating car data using revealed path shares for large scale network
Anna Mitra, Alessandro Attanasi, Lorenzo Meschini, Guido Gentile
Clustering o-d flows to improve the effectiveness of o-d matrix updating procedures
Ciro Buonocore, Vittorio Marzano, Andrea Papola, Fulvio Simonelli, Fiore Tinessa
Demand estimation for road traffic flow simulations using data fusion: a case study of an urban intersections system in Turin
Angela Carboni, Riccardo Ceccato, Andrea Chicco, Francesco Deflorio, Marco Diana
Applications and challenges of IoT in the field of transportation
Eleonora Sottile, Giovanni Tuveri, Italo Meloni
A panel data analysis of tour-based university students’ travel behaviour
Eleonora Sottile, Giovanni Tuveri, Italo Meloni

11.00 - 11.15
Coffee break

13TH SEPTEMBER - FRIDAY

9.00 - 11.00

TECHNOLOGIES AND METHODS FOR SUSTAINABLE FREIGHT TRANSPORT
CHAIR: AGOSTINO NUZZOLO

Towards a conceptual data model for freight transport services in a Laas logic
Roberto Carroccia, Andrea Campagna, Riccardo Licciardello, Luca Persia, Marco Borasio, Luigi Maritano, Alessandra Raffone
Monitoring operations at freight intermodal terminals: traffic detection by scanning on-board devices
Angela Carboni, Alberto Gallizia, Francesco Deflorio, Bruno dalla Chiara
How much truck platooning will be a game changer for freight mode choice policy-making? an empirical assessment on a real case study in Italy
Vittorio Marzano, Fulvio Simonelli, Fiore Tinessa, Chiara Fiori, Andrea Papola
Modelling and simulation of a new urban freight distribution system based on automatic van platooning and fixed split up locations
Marino Lupi, Antonio Pratelli, Alessandro Farina
Aggregate delivery tour modelling through AVM data: some experimental evidences
Agostino Nuzzolo, Antonio Comi, Antonio Polimeni
Uncertainty management of an energy consumption model for electric freight vehicles
Chiara Fiori, Marcello Montanino, Vittorio Marzano, Vincenzo Punzo

11.00 - 11.15
Coffee break
13\textsuperscript{th} \textbf{September - Friday}

\textbf{11.15 - 13.15}

\textbf{Methods and models for greener and safer transportation III}

\textbf{Chair: Gaetano Fusco}

Large-scale road safety evaluation using extreme value theory
Federico Orsini, Gregorio Gecchele, Massimiliano Gastaldi, Riccardo Rossi

Data envelopment analysis for road safety analysis in urban network: a comparative study using CCR and BBC models
Gianfranco Fancello, Michele Carta, Paolo Fadda

Calibration of volume-delay functions for steady-state road traffic assignment: issues and an operational method for Qatar
Chiara Colombaroni, Gaetano Fusco, Natalia Isaenko

Vehicular traffic detection by drone-video for traffic monitoring and management
Domenico Gattuso, Gian Carla Cassone, Margherita Malara

Coherence analysis of road safe speed and driving behaviour from floating car data
Chiara Colombaroni, Gaetano Fusco, Natalia Isaenko

Algorithms for traffic signal settings based on floating car data in a real-time on-field experimental scenario
Vittorio Astarita, Demetrio Carmine Festa, Vincenzo Pasquale Giofré, Giuseppe Guido, Alessandro Vitale

\textbf{13.15 - 15.15}

Light Lunch
VENUE

Ordine degli ingegneri di Salerno
Via Salvatore Marano, 15,
84123 Salerno SA

ACCOMODATION

Grand Hotel
Lungomare Clemente Tafuri, 1,
84127 Salerno SA
Tel. 089 704 1111

Plaza
Piazza Vittorio Veneto, 42,
84123 Salerno SA
Tel. 089 224477

Hotel Montestella
Corso Vittorio Emanuele, 156,
84122 Salerno SA
Tel. 089 225122

Ave Gratia Plena
Via dei Canali, 84121
Salerno SA
Tel. 089 234776