

SOCIETÀ ITALIANA INFRASTRUTTURE VIARIE

16th International SIIV Summer School

IV SIIV Arena



September 10-14, 2018

Villa Amalia – University of Messina



ROAD ASSET MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

FINAL PROGRAM



September 10-14, 2018
Villa Amalia – Via Consolare Pompea, Messina (Italy)

AIM

Società Italiana Infrastrutture Viarie and the University of Messina are proud to announce they are jointly organizing the 16th International SIIV Summer School, to be held in September 10-14, 2018 in Villa Amalia, Messina.

SIIV is a scientific association including most of Italian academics, researchers and scholars involved in the area of Roads, Railways and Airports Engineering.

SIIV Summer School is organized every year in September (first edition in 2003) and gathers PhD students, Postdoc fellows and young researchers (from Italy and abroad), providing them a platform for discussion, interactions and exchange of information.

This Summer School will be also the occasion to provide an official greeting to Prof. Antonino D'Andrea, Head of the Engineering Department of University of Messina, who will conclude his academic role on October 1st 2018. The 2018 Summer School topic is Road Asset Management for Sustainable Development.

Roads are strategical assets for the economy of a country. However, in order to assure the highest levels of comfort and safety for users and preserve their values, it is essential to properly plan and organize the required maintenance activities. Moreover, in order to minimize treatment costs, vehicle operating costs and negative consequences on environment, the maintenance operations must be appropriately scheduled in the view of a reliable sustainable development. Then, numerous researchers focused on improving Pavement Management Systems and defining novel innovative protocols that may simplify surveying, monitoring, and decisional phases in maintenance planning. This school will present the main advances in the field and represent a useful occasion for discussing possible and innovative solutions for assuring sustainable development.

The session of Road Safety Management will be hosted by the Department of Civil Engineering and Architecture of the University of Catania, where Prof. D'Andrea spent the first years of his academic role.

One of the Summer School sessions will host a special workshop with interesting contributions by institutional speakers and operators of the infrastructure field, for an operative analysis of the School topics.

Graduate students, scholars and faculty from Italian and foreign universities involved in the field of Transportation Infrastructure Engineering are welcome to attend. A certificate of attendance will be issued at the end of the course.

I hope you will attend this event and enjoy the 16th International SIIV Summer School!

Gaetano Bosurgi
Summer School Chairman



September 10-14, 2018
Villa Amalia – Via Consolare Pompea, Messina (Italy)



IV SIIV ARENA 2018

Società Italiana Infrastrutture Viarie and the Department of Engineering of University of Messina organize the 4th edition of the SIIV ARENA.

The SIIV ARENA is an occasion for idea sharing and comparison, in which PhD candidates and young researchers present specific and interesting topics in the fields “Roads, Railways and Airports” (SSD ICAR/04).

Since the proposed presentations is not limited to the topics discussed in this Summer School, the Scientific Committee will divide the participants' presentations into three homogeneous area: road maintenance - geometry and safety - controls and monitoring.

The Scientific Committee will then award three prizes taking into account the quality of the presentation, the impact of the research and the innovation of the proposed idea.

The deadline for SIIV ARENA participation (1 or 2 speakers for each University) is June 30th 2018. The research must be presented in English and its duration will be determined according to the number of speakers.



ORGANIZING COMMITTEE

Prof. Gaetano Bosurgi – University of Messina
 Prof. Orazio Pellegrino – University of Messina
 Eng. Nicola Bongiorno - University of Messina
 Eng. Federico Carbone - University of Messina
 Dr. Giuseppina Pappalardo - University of Catania
 Dr. Giuseppe Sollazzo - University of Messina

INTERNATIONAL SCIENTIFIC COMMITTEE

Committee Chairs

Prof. Gaetano Bosurgi - University of Messina
 Prof. Salvatore Cafiso – University of Catania

Members

Prof. Orazio Pellegrino – University of Messina
 Prof. Orazio Baglieri – Politecnico of Torino
 Prof. Andrea Benedetto – University of “Roma Tre”
 Prof. Francesco Canestrari – University Politecnica delle Marche
 Prof. Clara Celauro – University of Palermo
 Prof. Antonio D’Andrea – University of Roma “La Sapienza”
 Prof. Gianluca Dell’Acqua – University of Napoli Federico II
 Prof. Adelino Ferreira – University of Coimbra
 Prof. Tien F. Fwa – National University of Singapore
 Prof. Orazio Giuffrè – University of Palermo
 Dr. Aliaksei Lareshyn –Lund University
 Prof. Giuseppe Loprencipe - University of Roma “La Sapienza”
 Prof. Raffaele Mauro – University of Trento
 Prof. Antonio Montepara – University of Parma
 Prof. Marco Pasetto – University of Padova
 Prof. Filippo G. Praticò – Mediterranea University of Reggio Calabria
 Prof. Xiaoduan Sun - University of Louisiana at Lafayette
 Prof. Andrew Tarko - Purdue University
 Prof. Kelvin CP Wang - Oklahoma State University
 Prof. Xuesong Wang - Tongji University



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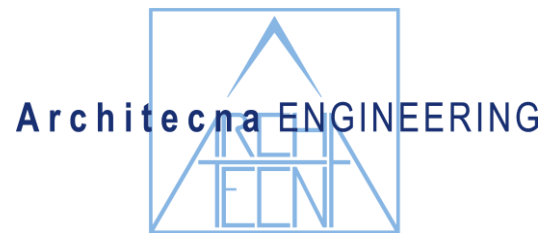
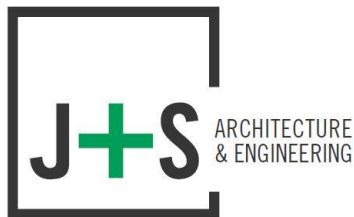
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PROGRAM



Session 1 - September 10th, 2018 (Monday) Villa Amalia

Registration & Welcome

15.00- 16.00 *Registration*

16.00 – 16.30 Welcome to 2018 SIIV Summer School

Prof. Salvatore Cuzzocrea, Rector of University of Messina.

Prof. Antonino D’Andrea, Head of Department of Engineering.

Ing. Rosario De Domenico, President of “Comitato Paritetico Territoriale – Ente Sicurezza Edile”.

Ing. Francesco Triolo, President of “Ordine Ingegneri Messina”.

Prof. Raffaele Mauro, SIIV President.

16.30 – 16:45 *Coffee break*



September 10th, 2018 (Monday) Villa Amalia

SIIV Arena Presentations - IV Edition

Chair: Prof. Raffaele Mauro, University of Trento

16.45 – 17.00 Introduction **Prof. Raffaele Mauro**, SIIV President.

17.00 – 20.00 SIIV Arena Presentations.

20.30 *Dinner*



Session 2 - September 11th, 2018 (Tuesday) Villa Amalia

Pavement Management System (monitoring)

Chair: Prof. Clara Celauro, University of Palermo

9.00 – 9.20 Introduction **Prof. Clara Celauro**, University of Palermo.

9.20 – 10.10 Lecture #2.1 **Prof. Andrea Benedetto**, University of Roma Tre: *Data fusion for infrastructure monitoring: sky, aerial, ground and underground sensors.*

10.10 – 11.00 Lecture #2.2 **Prof. Kelvin C.P. Wang**, Oklahoma State University: *Automated distress survey through Artificial Intelligence and their potential impact on pavement data systems.*

11.00 – 11.20 *Coffee break*

11.20 – 12.10 Lecture #2.3 **Prof. Filippo G. Praticò**, Mediterranea University of Reggio Calabria: *A survey on PMSs: recent advances and new frontiers.*

12.10 am – 13.00 Lecture #2.4 **Prof. Giuseppe Loprencipe**, University of Rome “La Sapienza”: *Pavement data analysis: a case study of a National road network for defining treatments and the budget assignment.*

13.00 – 14.30 *Lunch*



September 11th, 2018 (Tuesday) Department of Engineering

Laboratories of the Department of Engineering

14.45 *Transfer to University of Messina, Department of Engineering*

15.00 – 17.00 Technical tour in the Infrastructure Lab and CERISI Lab– University of Messina.

17.00 *Transfer to Villa Amalia*

20.30 *Dinner*



Session 3 - September 12th, 2018 (Wednesday) Villa Amalia

Pavement Management System (sustainability)

Chair: Prof. Marco Pasetto, University of Padova

9.00 – 9.20 Introduction **Prof. Marco Pasetto**, University of Padova.

9.20 – 10.10 Lecture #3.1 **Prof. Orazio Baglieri**, Politecnico of Torino: *Rubberized bituminous mixtures for sustainable road pavements.*

10.10 – 11.00 Lecture #3.2 **Prof. Tien F. Fwa**, National University of Singapore: *Challenges in developing sustainable Pavement Management Systems.*

11.00 – 11.20 *Coffee break*

11.20 – 12.10 Lecture #3.3 **Prof. Francesco Canestrari**, University Politecnica delle Marche: *Warm Recycling of modified asphalt mixtures for motorway pavements: performance and environmental outcomes.*

12.10 – 13.00 Lecture #3.4 **Prof. Adelino Ferreira**, University of Coimbra: *Road network maintenance optimization for sustainability.*

13.30 – 14.30 *Lunch*



Session 4 - September 12th, 2018 (Wednesday) Villa Amalia

SIIV meeting and Ceremonies

16.00 – 18.00 SIIV general meeting.

18.00 – 18.30 *Coffee break*

18.30 – 19.00 SIIV Arena Awards ceremony.

19.00 – 20.00 Greeting ceremony in honour of **Prof. Antonino D'Andrea**, University of Messina

20.30 *Gala Dinner in honour of Prof. Antonino D'Andrea (reserved only for invited people).*

20.30 *Dinner*



Session 5 - September 13th, 2018 (Thursday) University of Catania

Safety Management

Chair: Prof. Salvatore Cafiso, University of Catania

8.30 - 9.30 *Transfer to University of Catania*

10.00 – 10.20 Introduction **Prof. Salvatore Cafiso**, University of Catania.

10.20 – 11.10 Lecture #5.1 **Prof. Xiaoduan Sun**, University of Louisiana: *Development in Highway Safety Management program introduced by HSM.*

11.10 – 11.30 *Coffee break*

11.30 – 12.20 Lecture #5.2 **Prof. Andrew Tarko**, Purdue University: *Road Safety management in Indiana (USA).*

12.20 – 13.10 Lecture #5.3 **Prof. Xuesong Wang**, Tongji University: *Road safety assessment and modeling in China.*



September 13th, 2018 (Thursday) University of Catania

Transport Infrastructure Laboratory at DICAr

13.30 – 14.30 *Lunch*

14.30 – 15.30 Technical tour in the Infrastructure Lab – University of Catania.



Session 6 - September 13th, 2018 (Thursday) University of Catania

Safety Management

Chair: Prof. Orazio Giuffrè, University of Palermo

16.00 – 16.20 Introduction **Prof. Orazio Giuffrè**, University of Palermo.

16.20 – 17.10 Lecture #6.1 **Dr. Aliaksei Laureshyn**, Lund University: *Road safety management for VRUs.*

17.10 – 18.00 Lecture #6.2 **Prof. Andrew Tarko**, Purdue University: *Modeling of traffic conflict measures as surrogate of safety.*

19.00 *Transfer to Villa Amalia*

20.30 *Dinner*



Session 7 - September 14th, 2018 (Friday) Villa Amalia

Tavola Rotonda

“Asset Management in road maintenance activities”

Chair: Prof. Gaetano Bosurgi, University of Messina

- 10.00 – 10.30 Lecture #7.1 **Prof. Ennio Cascetta** – President of ANAS spa: *La nuova Anas e la svolta manutenzione.*
- 10.30 – 11.00 Lecture #7.2 **Prof. Antonio Montepara**, University of Parma: *Incidenza dei cambiamenti climatici nelle costruzioni stradali: catastrofi, strategie di adattamento e resilienza.*
- 11.00 – 11.30 Lecture #7.3 **Prof. Francesca Moraci**, Consigliere di Amministrazione Gruppo Ferrovie Italiane: *Il futuro delle infrastrutture di trasporto: dalla resilienza all'intelligenza di rete.*
- 11.30 – 11.45 *Coffee break*
- 11.45 – 12.15 Lecture #7.3 **Ing. Ilaria Coppa**, ANAS spa: *Definizione del modello di esercizio e manutenzione della rete stradale di competenza Anas attraverso l'utilizzo di strumenti GIS.*
- 12.15 – 12.45 Lecture #7.4 **Prof. Gianluca Dell'Acqua**, University of Napoli Federico II: *La manutenzione stradale in ambiente BIM e le norme UNI 11337.*
- 12.45 – 13.00 Closing ceremony **Prof. Raffaele Mauro**, Università of Trento –SIIV President.
- 13.00 – 14.30 *Lunch*

SPEAKERS



Prof. Orazio Baglieri

Orazio Baglieri is associate professor at the Politecnico di Torino, where he teaches Road Design and Construction in the Master's degree program in Civil Engineering.

He graduated at the Politecnico di Torino in 2001 and in 2005 he obtained his PhD degree cum laude at the University of Marche, Ancona.

From 2005 to 2011 he served as assistant professor at the University of Genoa. He was visiting scholar at the University of Wisconsin-Madison (WI) in 2007 and University of Waterloo, Canada in 2018. He is currently visiting research scholar at the Lyles School of Civil Engineering at Purdue University-West Lafayette (IN). He has been senior lecturer at the TTPU University of Tashkent (Uzbekistan) since 2013.

The area of expertise covers the design and construction of road pavements with particular emphasis placed on the characterization and modeling of paving materials. The main research topics include i) fatigue and healing characterization of bituminous binders, ii) creep-recovery testing of polymer modified binders, iii) reinforcement of bituminous binders with nano-sized materials, iv) re-use of waste materials and by-products in bituminous binders and mixtures

He is the author of more than 50 papers, most of which published in international journals and conference proceedings.

He has been the supervisor of 4 PhD students and the thesis supervisor of more than 50 Master's students in the area of pavement engineering.

He currently serves as secretary of the RILEM Technical Committee TC 278-CHA (Crack-Healing of Asphalt pavement materials) and is the team co-leader of Task Group TG2 (Laboratory experimentation). He has collaborated with several universities including the University of Wisconsin-Madison (WI), the Arizona State University-Tempe (AZ), the North Carolina State University-Raleigh (NC) and the University of Waterloo, Canada. He has been the Principal Investigator of a number of research projects financed through European, national and structural funds. He has taken on several academic roles including: member of the College of Doctoral School in Civil and Environmental Engineering at Politecnico di Torino, member of the PhD School Advisory Committee, Vice-coordinator of the College of Civil Engineering, Member of Research Committee of DIATI. It has been member of the steering committee and executive board of SIIV (Italian Society of Transportation Infrastructures).



Prof. Andrea Benedetto

Andrea Benedetto is currently Director of the Department of Engineering at Roma Tre University and Full Professor of Roads, Railways and Airports at the Department of Engineering of Roma Tre University. He played the role of Coordinator of the Department Educational Committee for Civil Engineering from 2013 to 2016 and has been nominated Coordinator of Civil Engineering Division in 2016.

He has served as Editor in Chief of *Advances in Transportation Studies* (2008-2016), Associate Editor of *Geoscientific Instrumentation, Methods and Data Systems (GI – EGU)* and in addition as Guest Editor for the *Journal of Applied Geophysics* (2013), *Nondestructive Testing and Evaluation* (2012), *Journal of Safety Research* (2014), *Transportation Research Part C* (2014) and *Near Surface Geophysics* (2014).

Moreover he is member of the editorial boards and he is referee for several other prominent international journals. He is General Chairman of the Road Safety and Simulation Permanent Steering Committee and, in the role of General Chairman, he organized the first and fourth international Conferences RSS2007 and RSS2013.

He is convener and co-convener at the EGU General Assembly (Wien) for the Session on Civil Engineering Applications of Ground Penetrating Radar since 2011. From 2013 he is Editorial Coordinator of the TUD COST Action TU1208. Andrea Benedetto is author of more than 180 papers, he played the role of Chairman and member of the Scientific Committee at GPR international conferences and at the International Workshops on Advanced GPR (IWAGPR).



Prof. Gaetano Bosurgi

Gaetano Bosurgi, is full professor of “Construction of Road, Railway and Airport”, at the Faculty of Engineering at the University of Messina. From 2006 through 2012 he was Coordinator of the Master Degree in Civil Engineering. He is a member of the Education and Programming Committee. He set up the Laboratory of Road Infrastructures in the Department of Civil Engineering and since 2004 he is the coordinator. He is a partner and member of the Board of Directors of SIIV (Italian Society of Road Infrastructure). He is also member the CIDIS (Interuniversity Centre for Theoretical and Experimental Structural Dynamics). From 2000 to 2006 he was a member of the C4.2 and C1 PIARC Committees at the Ministry of Transport and Infrastructure. He was coordinator of the research unit of the local PRIN 2001 and has been a member of several research groups. He was also the scientific coordinator of several research agreements. He is a member of the Scientific Committee of the project RESET (Laboratories Network for Safety, Sustainability and Efficiency of Transport in Sicily). He is scientific coordinator of the Academic Board of the PhD program in "Civil and Environmental Engineering". He is a member of the permanent commission of the Sicilian Region's innovation strategy for smart specialization - "Smart cities & communities (PO-FESR 2014-2020). He performs audit for various international journals. He is the author of numerous scientific papers.



Prof. Salvatore Cafiso

Salvatore Damiano Cafiso, is full professor of “Road, Railways and Airport” at the Department of Civil Engineering and Architecture of University of Catania; Teaching “Highway geometric design” and “Pavement engineering”; Past coordinator of the PhD course in “Engineering of transportation infrastructures”; Delegate for International Relations. He is Director of the Infrastructures of Transport laboratory (ITlab) at the University of Catania, one of the most advanced University laboratory in the field of infrastructure asset monitoring and management. Member of scientific International committees: TRB AHB65 "Operational Effects of geometrics", TRB ANB10 "Transportation Safety Management"; TRB steering committee of "International Symposium on Highway Geometric Design", Tongji University “Joint International Research Laboratory”, PIARC National Technical Committee "Design and management of safer roads". Author of more than 200 scientific papers and books published in international and conference proceedings. The research group coordinated by prof. Cafiso has international reputation and expertise in the field of road safety with specific application in Statistical analysis of data, Traffic Conflict studies in real world and microsimulation environment, Design consistency modeling and evaluation, road safety Audit and Inspection, Network Asset Management.



Prof. Francesco Canestrari

Francesco Canestrari is Full Professor of Roads, Railways and Airports at the Università Politecnica delle Marche (Italy) since 2002. Currently he is the Chair of the Bachelor degree in Civil and Environmental engineering and of the Master degrees in Civil Engineering and in Environmental Engineering.

He is author of more than 130 scientific publications (mostly refereed journal papers) in the field of pavement engineering and he has delivered presentations (also as invited speaker for plenary sessions) at international conferences and meetings.

He won Awards for the best papers presented at international conferences.

His research has resulted in new developments, including new tests, testing specifications, rheological and performance based characterization of sustainable and innovative materials.

Prof. Canestrari has served as the principal investigator of several projects funded by public and private agencies as well as international companies.

Associate Editor of the Journal of Traffic and Transportation Engineering (English Edition)” and member of the Editorial Board of the International Journal of Pavement Research and Technology, International Journal of Road Materials and Pavement Design and Advances in Civil Engineering.

Guest Editor for a Special Issue of the journal Mechanics of Time-Dependent Material and of the International Journal of Pavement Research and Technology.

Convenor of the RILEM TC 206-ATB/TG4 “Pavement Performance Prediction & Evaluation” (2009-2010), RILEM TC 237-SIB/TG4 - Pavement Multilayer System Testing” and RILEM TC PIM/TG3 “Pavement multilayer system”.

Member of international societies such as ASTM, ISAP, RILEM and SIIV. Moreover, he is expert reviewer of many scientific journals in the field of testing materials and pavement engineering.

Member of the scientific committee and session-chairman of many international conferences and, in 2015, he organized the “8th International RILEM Symposium on Testing and Characterization of Sustainable & Innovative Bituminous Materials”. In 2017, he organized the 1st International SIIV Winter School “Advances in Sustainable Asphalt Pavements”.



Prof. Ennio Cascetta

Ennio Cascetta was born in Naples in 1953. He is a professor at the University of Naples Federico II where he teaches “Transportation Systems Planning”.

Since 1995 he has been teaching at the annual course of Advanced Modeling and Simulation of Transportation Networks at the Massachusetts Institute of Technology, Cambridge, USA.

He is the author of several books including “Transportation system analysis: theory and applications” (Springer, 2009). He also wrote more than 150 papers that have been published in International journals and conferences proceedings.

He was the Scientific Coordinator of the Italian General Transportation and Logistic Plan in 2000.

From 2000 to 2010, he was the Regional Councilor of Transport for the Italian Region of Campania. In this role he promoted and supervised 8 billion Euros investments including 50 kms of new regional and urban metro lines, integrated fare systems for all regional public transportation services, and innovative coastal sea-metro services.

From 2005 to 2010 he was the Coordinator of the Commission of Infrastructures, Mobility and Territorial Administration at the Italian Conference of Regions and Provinces.

Since October 2011 he is President of the Scientific Committee of the Italian Motorist Association (ACI).

From October 2013 to September 2015 he was President of the Italian Society of Transport Policies (Si.Po.Tra).

From March 2014 to September 2015 he was a member of the Advisory Board at ART - the Italian Authority for transport regulation.

From October 2015 to June 2017 he was Head Coordinator of the Technical Division for the strategic planning, infrastructures development, transport and high supervision at the Italian Ministry of Infrastructures

Since July 2017 he is the Sole Administrator of Rete Autostrade Mediterranee (RAM) SpA.

Also since July 2017 he is President of Metropolitana di Napoli SpA.

Since January 2018 he is President of Anas Spa, the Italian National Autonomous Roads Corporation, whose sole shareholder is the Ferrovie dello Stato Italiane Group.



Prof. Clara Celauro

EDUCATION

Ph.D. (January 2006) – “Conjunctural, territorial and total quality analysis – XVII Ciclo” with a Thesis “The quality of the highway network as perceived by the users: technical aspects”- University of Palermo, Italy

Sett. 2003 - Mar. 2004 – “Research Student” - Nottingham University, UK

MSc in Civil Engineering (November 2001) - Civil Engineering (Transportation) First Class Honor

PROFESSIONAL EXPERIENCE

present– Associate Professor, Department of Civil, Environmental, Aerospace, Materials Engineering, University of Palermo

Since April 2017 – Deputy Rector with responsibility for construction and planning of the buildings of the School of Medicine

Since November 2015 – Deputy Rector for the Cooperation with the Public Institutions funding the University buildings

Since November 2010 – Assistant Dean for Students with disability, Faculty of Engineering, University of Palermo

Nov 2006 - Sept 2015 – Assistant Professor, University of Palermo, Palermo, Italy.

Sept. 2005 - Aug. 2006 – Post-doc Researcher Department of Transportation Infrastructures, University of Palermo

Nov. 2004 - Feb. 2005 – Graduate Research Assistant, University of Minnesota, MN.

TEACHING ACTIVITIES

Since 2014 to present: “Techniques for road, railways and airport construction”, University of Palermo

2006 – 2014: "Experimental Laboratory Testing for Road Materials course", University of Palermo

Member of the Professors’ Board for Ph. D in Civil Engineering at the University of Palermo since 2006 and Supervisor of Ph.D Students and Post-Graduate Students

Internal and external member of Commissions for final exams of Ph. D. Courses

Supervisor of over 30 final year students for their Final Thesis (both Bachelor and MSc degree)

RESEARCH EXPERTISE/INTEREST

- Constitutive modelling for asphalt mixtures and Analytical design of asphalt pavement
- Use of virgin and waste polymers for improving mechanical properties of asphalt mixtures
- Highway and railway embankment construction techniques
- Lime stabilization of fine soils for road constructions
- Life cycle analysis (LCA) of road and railway constructions

RESEARCH OUTPUT

Prof. Celauro published over 50 papers, mostly peer reviewed papers in refereed Journals and conference books. She has been serving as reviewer for refereed Journals since 2006.

AFFILIATIONS

2003 – present: SIIV – Società Italiana Infrastrutture Viarie (Member of the Directive Board)

2003 to 2014, RILEM – Réunion Internationale des Laboratoires d'Essais et de recherche sur les Matériaux et les Constructions

2004 to 2010, ISAP - International Society for Asphalt Pavements.



Ing. Ilaria Maria Coppa

Ilaria Coppa, engineer, has gained her professional experience mainly in Anas S.p.A., where she began her career as head of the East Maintenance Centre in the Liguria Region. Afterwards she was involved in design, environmental impact assessment, transport analysis and cost-benefit analysis. She is currently responsible, within the Operations and Territorial Coordination Department, for the Transport Planning, Updating and Network Classification Unit.

The actual main activities are:

Road Network Classification

Technical and administrative classification, updating and reorganisation of the motorway and national road network.

Traffic Analysis and Cost Benefit Analysis

Evaluation of the profitability indexes of ANAS investments programme and identification of priorities;

Transport analyses to support programming and designing.

Road Traffic Measurements and Safety

Traffic and speed detection at specific points on the relevant network by means of fixed and mobile detection systems;

Study and classification of the safety of the ANAS network, through the acquisition and processing of accident data.

Roads' Inventory

Coordination, updating and monitoring of the Road Inventory System.

Territorial Analysis

Spatial elaborations and analysis through GIS tools related to the characteristics of the managed network, functional to the drafting of the investments programme and to the definition of the operating model.



Prof. Gianluca Dell'Acqua

Gianluca Dell'Acqua (PhD, PEng) is Associate Professor at the Federico II University of Naples and he qualified as a Full Professor in 2015.

Chairman of the International SIIV Summer School Infrastructure-Building Information Modeling (I-BIM Naples, September 2017).

Chairman of the International Congress on Transport Infrastructure and Systems (TIS Rome, April 2017).

Chairman of the International Conference on Traffic and Transport Engineering (ICTTE Belgrade, 2016).

Chairman of the International Conference on Traffic and Transport Engineering Chair (ICTTE Belgrade, 2014).

Chairman of the Educational Programs with the University of Washington Seattle, Decree MIUR n. 346/2013.

Research Director of the Italian Association of the Traffic and Transport Engineering (2014-17).

Member of the Low-Volume Roads Standing Committee (AFB30) Transportation Research Board of the USA National Academies of Sciences (2010-17).

Panel Member in the NCHRP17-62 Improved Prediction Models for Crash Types and Crash Severity, Transportation Research Board of the USA National Academies of Sciences (FY 2013).

Gianluca Dell'Acqua is author and coauthor of more than 130 scientific research papers regarding Transport Infrastructure Engineering. He was awarded for the best paper ex aequo of the TRB International Conference on Low-Volume Roads Pittsburgh USA, 2011. Since 2017 he is editorial board member of The Baltic Journal for Traffic and Transport Engineering BJRBE - Publisher Technika, Vilnius Gediminas Technical University.



Prof. Adelino Ferreira

Professor Adelino Ferreira, BSc Degree in Civil Engineering (1992), MSc in Civil Engineering (1997), PhD in Civil Engineering (2002) and Habilitation in Transportation Engineering (2018) from the University of Coimbra (UC), is the Head of the Transport Infrastructures Engineering Research Group of CITTA (Research Centre for Territory, Transports and Environment). In 2005, he awarded the Parkman Medal by the Institution of Civil Engineers (ICE) from United Kingdom. He has worked in several research projects financed by the FCT (Portuguese Foundation for Science and Technology). Recently he coordinated a research project entitled: MODAT - Multi-objective Decision-Aid Tool for Highway Asset Management. At present, he coordinates a new research project entitled: PAVENERGY – Pavement Energy Harvest Solutions. He has made numerous presentations at international and national meetings, worked and lectured on transportation engineering and management. He has published about two hundred papers in international and national Journals and in international and national Conferences. He has also tutored and co-tutored more than thirty MSc and PhD theses. He is an Expert in Transportation and Highways by the Portuguese Institution of Engineers since 2007. He is member of the AIPCR – World Road Association/Association Mondiale de la Route and Regular Member of the iSMARTi – International Society for Maintenance and Rehabilitation of Transport Infrastructures. As a Pavement Expert, in the scope of technology transfer, he has been collaborating with the Portuguese Roads and Railways Administration, highway concessionaires and Portuguese Municipalities.



Prof. Tien F. Fwa

Dr. T. F. Fwa is a Professor in the Department of Civil & Environmental Engineering, National University of Singapore (NUS), and Visiting Distinguished Professor at Chang'an University, China. He received his BEng from the then University of Singapore, MEng from the University of Waterloo, Canada, and PhD from Purdue University, USA.

Dr. Fwa's research covers various aspects of pavement engineering, with emphasis on evaluation, maintenance and management of road and airfield pavement systems. He has published more than 200 technical papers in leading international journals. He has received a number of awards for his academic and research contributions, including the 1992 Arthur M. Wellington Prize by the ASCE, USA; the 2000 Engineering Achievement Award by the Institution of Engineers, Singapore; the 2005 Frank M. Masters Transportation Engineering Award by ASCE, USA; the 2009 MAIREPAV-6 Best Paper Award by the Sixth International Conference on Maintenance and Rehabilitation of Pavements, Torino, Italy; the 2009 Alfred Noble Prize by ASCE, USA; the 2009 and 2015 Best Paper Awards of the ASCE Journal of Transportation Engineering, 2013 Best Paper Award by the 8th International Conference on Road and Airfield Paper Technology, Taipei; and the 2014 Minister's Innovation Distinguished Award by Ministry of Transport, Singapore.

Dr. Fwa has been actively promoting transportation research and development in East Asia since 1990s through organizing international/regional conferences and symposia. He has been invited to lecture and give keynote presentations in more than 20 countries. He is the Asia Region Editor for the ASCE Journal of Transportation Engineering since 1989. He also serves on the editorial boards of the International Journal of Pavements (since 2006), International Journal of Pavement Engineering (since 1998), International Journal of Road Design & Pavement Materials (since 1998), and International Journal of Roads and Airports (since 2009).



Prof. Orazio Giuffrè

Orazio Giuffrè has got master degree in transport civil engineering and has started his university career in 1973 as regular assistant, then as Traffic Engineering professor.

From 1986 up to now he is full professor in "Road, Railway and Airport Construction" at the University of Palermo, Faculty of Engineering (nowadays Polytechnic School).

He has led quite a lot of researches concerning different aspect of road construction, particularly pavement building materials, road safety and traffic engineering.

He has been present at a lot of international and national congress, offering his notes on and he has published several scientific works up to now.

He has coordinated and coordinates many scientific local and national research team.

He took part in "Research Committee on standards relative to road materials and project, construction and maintenance", established at CNR (National Research Council), which is interested in fixing rules predicted by "Nuovo Codice della Strada"; within the Committee he coordinates "Road and Territory" team.

In July 2000, on behalf of the Ministry of Public Works (Circulation and Traffic Inspectorate) he carried out a specialist consultancy for the preparation of guidelines for the implementation of a system of prior control of road safety; these guidelines were incorporated into the Circular of the Ministry of Public Works No. 36/99 of 08/06/2001 "Circular on the guidelines for the analysis of road safety."

In the years 2003/2004 he planned and later coordinated the Master course in " Engineering Road Safety (MISS) , financed with funds PON 2000/2006 for a total of € 710,991.10.

In the academic years 2010/2011 and 2011/2012 he has been the coordinator of the Master course in "Environmental Sustainability Transport Infrastructure (SAIT).

From the academic year 2002/2003 until 2016/2017 he has been the coordinator or the substitute coordinator of different PhD courses based at the University of Palermo.

Prof. Giuffrè is a founding member of the Italian Society of Road Infrastructure, of wich, from 2007 to 2011, he was a member of the Executive Council and national vice-president in the years 2010/2011.



Dr. Aliaksei Lareshyn

Aliaksei Lareshyn has a PhD in Transportation and currently works as a senior researcher at Lund University (Sweden) and Institute of Transport Economics (Norway). His main expertise lies in the subject of surrogate measures of safety (SMoS) and application of modern technical tools for more efficient and accurate collection of SMoS data. Other research interests includes promotion of the “green” transportation modes (walking, cycling) and how it can be done without compromising safety. Currently, Aliaksei Lareshyn co-ordinates a Horizon 2020 project InDeV (www.indev-project.eu) which develops and validate road safety analysis methods that do not rely on accident history as the primary data source.



Prof. Giuseppe Loprencipe

Giuseppe Loprencipe is Associate Professor at the Department of Civil Constructional and Environmental Engineering of “Sapienza - University of Rome”. He works in this University since 1995.

He graduated in Civil Engineering of Transports in 1994 and obtained his Ph.D. degree in Roadway and Transportation Infrastructures in 1999.

From 2001, he teaches Road, Railway and Airport design at the “Civil and Industrial Engineering Faculty” of the “Sapienza - University of Rome” and from 2003 he is a member of the Teaching Board of “Infrastructures and Transportations” Ph.D. Course. He is an author of more than 100 technical and scientific papers. He is a national member of the working group for the preparation of general guidelines for the correct installation of the road restraint systems at the Italian ministry of infrastructure since 2009.

From 2014, he has been consulting services for road data collection surveys and analysis for maintenance planning over 1,400 km of republican road network in Kostanay Oblast (Kazakhstan).

From 2014, he is collaborating in the development of a custom Road Asset Management System that will take care of the 24,500 km of roads that make the Kazakhstan main network of roads (Republican roads).

In 2015, he taught an intensive course on Pavement condition Index and Pavement Management for Roads, Parking lots and Airports in Almaty (Kazakhstan).

He was awarded for the successful completion of the course Pavement Management Training Using Paver™ Level I and II in the Colorado State University.

From 2016, he is serving as Guest Editor for the Special Issue Sustainable Transportation Infrastructures of Journal "Infrastructure" edited by MDPI.

He has performed peer-review for many scientific international journals and Congress in the period 1998–2018



Prof. Raffaele Mauro

Professor Raffaele Mauro is Full Professor of “Road, Railway and Airport Construction” at University of Trento, Italy. Since 2016, he is the President of the SIIV - Italian Society of Road Infrastructure. Prof. Mauro is a founding member of the AISI - Italian Association of History of Engineering.

He was member of the teaching body of PhD course “Road Railway and Airport Engineering” at DICAM, University of Palermo.

Prof. Mauro is author of 6 books and more than 120 papers, published in national and international scientific journals or presented in conference proceedings.

He is reviewer for several international scientific journals and member of the Editorial Board of “Archives of Transport” (ISSN: 0866-9546) and “International Journal of Transportation” (ISSN: 2287-7940).

He was member of the Board of Directors of the University of Trento (years 2001÷ 2004) and of the “Autostrada del Brennero SpA” (years 2010-2013). Since 2016, Prof. Mauro is members of the Supervisory Board of the “Brenner Basistunnel BBT SE”.



Prof. Antonio Montepara

Antonio Montepara is Full Professor, Chairman of the Academic Council and Head of the Centre for Infrastructure Studies at the Department Engineering and Architecture of the University of Parma (since 2000).

Head of the Material Laboratory (since 1994).

Dean of Engineering Faculty of Parma since 2007 to 2012. Chairman of the Unified Studies Committee (CSU). Overseer with prof. Reynaldo Roque of the Bilateral Agreement draft with the Department of Civil and Coastal Engineering, University of Florida (since 2005).

Chairman of the SIIV (Italian Infrastructure Society) International Reports Committee since 1998, as well as Charter Member of the “University Centre of Road Research”.

Member of Permanent Monitoring Panel “Mitigation of Catastrophic Risk” - Ettore Majorana Foundation and Centre for Scientific Culture.

Head of WG3 Italian AIPCR Committee C.T. E1 “Adaptation strategies and resilience”

Current research interests concern to: Climate changes and resilience of infrastructures, Reinforcement in Flexible Pavements Maintenance; Hot Asphalt Mixtures Fracture Mechanics; Asphalt Mixtures Performance Characterization; Constitutive Modeling of Microstructural Materials; Recycled Materials and resilience of transportation infrastructures.



Prof. Francesca Moraci

Architect, Phd in Spatial Planning and MS in Economic Policy & Planning (NU Boston), is Professor of Urban Planning at the Mediterranean University of Reggio Calabria, where she has held various elective and institutional roles. Graduated in 1980 at the University of Reggio Calabria, she was Fulbright Fellow and she has been researcher at Northeastern University of Boston, College of Arts and Sciences, Department of Economics and the Center for European Economic Studies, C.E.E.S. (1984-87). Scientific Director of the Urban and Territorial Strategies Laboratory for Planning at DARTE Department. Since 2018 she is member of the board of Gruppo Ferrovie dello Stato Italiane. Since 2015 to 2017, she was one of three members of Anas Spa Board of Directors. She was ANAS member of the Scandinavian-Mediterranean Core networking Corridor Ideas Laboratory on roads and ITS. She is vice president of QVQC - What speed Which City Protocol between MIT, FSS Sistemi Urbani, Anas and various Universities and Institutions. She is Vice-President of Accademia Urbana and an effective member of the INU. Among others technical-scientific contributions, she was among the 15 experts of the Government for the National Strategic Plan for Portuality and Logistics and the reform of the port authorities. Author of numerous national and international monographs and scientific publications, she coordinates several national and international research groups. She worked as consultant for Ministries, Authorities and international engineering firms.

In addition to research and teaching in the USA, she has been Visiting Professor at Chongqin University (RPC) and Barcelona ETSAV-UPC. She is the designer of numerous urban planning, sector planning, environmental and landscape studies and has won numerous international competitions and design competitions. She received prizes and awards for applied research and institutional and managerial activities.



Prof. Marco Pasetto

Marco PASETTO is Professor of "Roads, Railways and Airports" (ICAR/04 – S.C. 08/A3) at the University of Padova (UNIPD). The present teaching activity concerns the following courses (Civil Engineering Master's Degree): "Roads, Railways and Airports" (9 ECTS), "Railway and Airport infrastructures" (9 ECTS), "Design of road infrastructure" (6 ECTS).

Since 2017, he is Director of the 2nd Level Master course on "Planning, design, construction and management of airport infrastructures" at UNIPD.

Coordinator of the participation of the "Roads, Railways and Airports" Group to the teaching activity of UNIPD at the ENSPT (Ecole Nationale Supérieure des Travaux Publics) in Cameroun.

Member of PhD School of Science of Civil, Environmental and Architectural Engineering in UNIPD since 2017 (past member in Udine and Trieste).

Coordinator of the Road Laboratory at UNIPD.

Member of ASN Commissions (MIUR) for the evaluation of eligibility to professor title in 2016 and 2018.

Member of: SIIV-Italian Society for Road Infrastructures, President 2013-2014; AIIT-Italian Society of Traffic and Transport Engineering, Triveneto President 2011-ongoing; ISAP-International Society for Asphalt Pavements, chairman TC APE WG6 "By-products & Secondary Materials Recycling in Asphalt Pavements" 2013-ongoing; AAPT; PIARC; RILEM. UNI (Italian Standard Body) Convenor of SC2-WG 3+4 (concrete pavements+unbound and hydraulically bound mixtures and marginal materials); C.I.R.S.-Interuniversity Center of Road and Airport Research.

Organizer of the International ISAP Symposium (APE) in 2019 (Padova); 2008, 2009, 2010, 2013 and 2017 Workshops on "Reuse of marginal materials in Road Construction" (2010, 2013, 2017 International); 2003 SIIV Italian Road Congress (Padova); Verona 2001 SIIV Italian Road Congress; SIIV Summer School on Innovative materials for road construction (2013, Montegrotto Terme).

Referee on behalf of more than 30 international journals. Chairman in Italian and International Conferences. Author of more than 260 scientific works about different research topics.

M. Pasetto is/has been the Principal investigator in many research contracts between University and Public Administrations or Private Companies (about 30).



Prof. Filippo G. Praticò

Laurea Degree in Civil Engineering (Bachelor and Master)-Pisa University (110/110, equivalent first class degree) and Ph.D. in Transportation Infrastructures -Palermo University.

After industrial occupation, Filippo joined the Mediterranea University and became Associate Professor in 2002, habilitated full in 2012 call, serving as Deputy of the Master School, Deputy of the DIMET Department, Director of the Road Laboratory. Member of the TRB of U.S. National Academies, he has served as Chair of several international committees.

Involved in national and international research and industrial projects.



Prof. Xiaoduan Sun

Dr. Sun is a professor of Civil Engineering department at University of Louisiana at Lafayette. She received Ph.D., from the Ohio State University; B.S. and M.S. degrees from Xian Highway Institute (Chang'an university now), China. Dr. Sun has published over 100 journal and major conference papers and currently serves as a member for two TRB committees: Safety Performance and Transportation in Developing Countries, and one ASCE committee on highway safety. Dr. Sun has been selected as panel member for more than 10 NCHRP highway safety projects in the last ten years. One of her roadway safety projects was awarded by AASHTO as High Value Research project in 2013. Dr. Sun is awarded as the 2018 UL Lafayette Distinguished Professor and has been an endowed professor for the past 10 years. She also received Excellent in Teaching Award twice from Deep South ITS chapter and Engineering Faculty Professionalism Award twice from Louisiana Engineering Foundation twice in the last 15 years. She was the expert consultant for the World Bank on roadway safety in China.



Prof. Andrew Tarko

Dr. Tarko is a Professor of Civil Engineering, Lyles School of Civil Engineering, Purdue University; Director of Center for Road Safety, Purdue University; International Director of Joint International Research Laboratory of Transportation Safety, Tongji University. His research expertise includes modeling and evaluation of transportation systems and their components, traffic operations and safety, development and implementation of safety management methods and tools. Dr. Tarko served as an Associate Editor of Transportation Science, Journal of the Institute for Management and Operational Research Sciences and a Guest Editor for ASCE Journal of Transportation Engineering and the Accident Analysis and Prevention. Dr. Tarko chairs the TRB Subcommittee on Surrogate Measures of Safety ANB20 and he is a current member of the TRB Committee on Safety Data, Evaluation, and Analysis ANB20. Dr. Tarko was a Principal Investigator or Co-Principal Investigator in research grants and awards obtained from government agencies and research-funding organizations for the total amount of over seven million dollars. He is an author or co-author of numerous journal publications, chapters in reference books, conference papers and research reports.



Prof. Kelvin CP Wang

Dr. Wang has degrees from China's Jiaotong Universities and PhD from Arizona State University in 1992. After a four-year residency at Arizona DOT, he became a faculty member in 1993 at the University of Arkansas. Currently he holds the Dawson Chair at the School of Civil and Environmental Engineering at Oklahoma State University (OSU).

Dr. Wang has been tackling the problem of automating survey of pavement distresses for more than 20 years with multi-million-dollar funding from various federal and state agencies. Technologies developed by Dr. Wang on automated pavement distress surveys are being used by users in several countries, including the US, China, South Africa, and Brazil. Dr. Wang received the 2011 ASCE Frank M. Masters Transportation Engineering Award and the 2018 ASCE Francis C. Turner Award.

Since the mid-1990's he led or helped lead over 10 international conferences both in the US and abroad. He is the co-editor-in-chief of the International Journal of Rail Transportation by Taylor and Francis. Dr. Wang was ASCE T&DI president in FY 2017. He is the lead faculty in transportation at OSU and an associate director for a regional University Transportation Center.



Prof. Xuesong Wang

Dr. Xuesong Wang is a professor of Transportation Engineering at Tongji University, Executive Director of the Joint International Research Laboratory of Transportation Safety, Associate Director of Key Laboratory of Road and Traffic Engineering-China Ministry of Education, and Associate Director of the Engineering Research Center of Road Traffic Safety and Environment Engineering-China Ministry of Education. Dr. Wang's main expertise is in the areas of traffic safety planning, safety evaluation of roadway design, traffic safety management, driving behavior analysis, vehicle active safety. He is the Associate Editors of China Journal of Highway and Transport, China Safety Science Journal. He is a member of the TRB Standing Committees on Transportation Research Board: Safety Data, Analysis and Evaluation (ANB20), Simulation and Measurement of Vehicle and Operator Performance (AND30), Transportation in the Developing Countries (ABE90). Dr. Wang serves as the Chair of Shanghai Institute of Traffic Engineer Traffic Safety Sub-Committee. He is a member of editorial board of Accident Analysis & Prevention, Journal of Transportation Safety and Security. Dr. Wang has published more than 250 papers on academic journals and conferences. He has managed more than 70 scientific research projects. Earlier in his career, Dr. Wang has his Ph.D. in Transportation Engineering from the University of Central Florida. In 2015, he was awarded as the outstanding young researcher by the Chinese National Science Foundation.