

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

PROGRAM

1st version



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 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 strategic 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



16th International SIIV SUMMER SCHOOL
ROAD ASSET MANAGEMENT FOR SUSTAINABLE DEVELOPMENT



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

Summer School Chairman



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 - Università di Messina
Prof. Orazio Pellegrino – Università di Messina
Ing. Nicola Bongiorno - Università di Messina
Ing. Federico Carbone - Università di Messina
Ing. Giuseppina Pappalardo - Università di Catania
Ing. Giuseppe Sollazzo - Università di Messina

INTERNATIONAL SCIENTIFIC COMMITTEE

Committee Chairs

Prof. Gaetano Bosurgi - Università di Messina
Prof. Salvatore Cafiso – Università di Catania

Members

Prof. Orazio Pellegrino – Università di Messina
Prof. Orazio Baglieri – Politecnico di Torino
Prof. Andrea Benedetto – Università “Roma Tre”
Prof. Francesco Canestrari – Università Politecnica delle Marche
Prof. Clara Celauro – Università di Palermo
Prof. Antonio D’Andrea – Università di Roma “La Sapienza”
Prof. Gianluca Dell’Acqua – Università di Napoli Federico II
Prof. Adelino Ferreira – University of Coimbra
Prof. Tien F. Fwa – National University of Singapore
Prof. Orazio Giuffrè – Università di Palermo
Dr. Aliaksei Lareshyn – Lund University
Prof. Giuseppe Loprencipe - Università di Roma “La Sapienza”
Prof. Raffaele Mauro – Università di Trento
Prof. Antonio Montepara – Università di Parma
Prof. Marco Pasetto – Università di Padova
Prof. Filippo M. Praticò – Università Mediterranea di 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

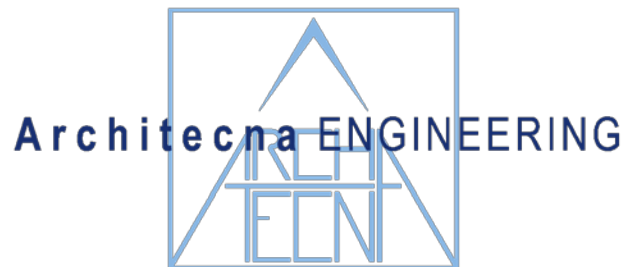
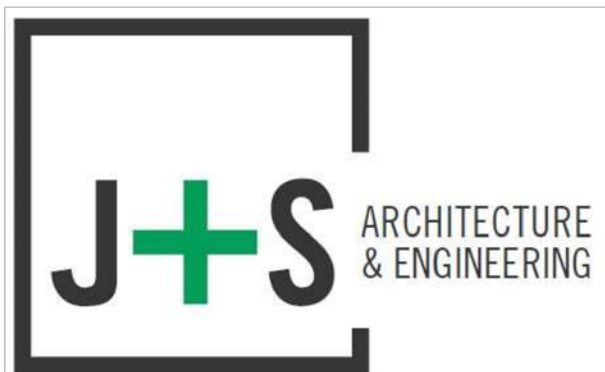


16th International SIIV SUMMER SCHOOL
ROAD ASSET MANAGEMENT FOR SUSTAINABLE DEVELOPMENT



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

PATRONAGES AND SPONSORS



PROGRAM



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

2.30- 3.00 pm Reception

3.30- 4.00 pm Registration

4.00 – 4.30 pm Welcome to 2018 SIIV Summer School

Prof. Salvatore Cuzzocrea, Rector University of Messina

Prof. Antonino D'Andrea Department of Engineering Director Geom.

Giuseppe Ricciardello, ANCE Sicilia President

Ing. Triolo Francesco, Ordine Ingegneri Messina President Prof.

Raffaele Mauro, SIIV President

4.30 – 4:45 pm Coffee break



September 10th, 2018 (Monday) Villa Amalia

SIIV Arena Presentations - IV Edition

Chair: Prof. Raffaele Mauro

4.45 – 5.00 pm Introduction Prof. Raffaele Mauro

5.00 pm – 8.00 pm SIIV Arena Presentations

8.30 pm Dinner (for the attendees housed in Villa Amalia)

n°	Name	University/Administration	Presentation title
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Session 2 - September 11th, 2018 (Tuesday) Villa Amalia
Pavement Management System (monitoring)
Chair: Prof. Clara Celauro, University of Palermo

9.00 – 9.20 am Introduction **Prof. Clara Celauro**, University of Palermo
9.20 – 10.10 am 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 am Lecture #2.2 **Prof. Kelvin CP Wang**, Oklahoma State University: Automated distress survey through Artificial Intelligence and their potential impact on pavement data systems.
11.00 – 11.20 am Coffee break
11.20 – 12.10 am Lecture #2.3 **Prof. Filippo G. Praticò**, Mediterranea University of Reggio Calabria: A survey on PMSs: recent advances and new frontiers.
12.10 am – 1.00 pm 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.
1.00 pm – 2.30 pm Lunch



Session 2 - September 11th, 2018 (Tuesday) Department of Engineering
Laboratories of the Department of Engineering

2.45 pm Transfer to University of Messina, Department of Engineering (for the attendees housed in Villa Amalia)
3.00 – 5.00 pm Technical tour in the Infrastructure Lab and CERISI Lab– University of Messina
5.00 pm Transfer to Villa Amalia (for the attendees housed in Villa Amalia)
8.30 pm Dinner (for the attendees housed in Villa Amalia)



Session 3 - September 12th, 2018 (Wednesday) Villa Amalia
Pavement Management System (sustainability)
Chair: Prof. Marco Pasetto, University of Padova

9.00 – 9.20 am Introduction **Prof. Marco Pasetto**, University of Padova
9.20 – 10.10 am Lecture #3.1 **Prof. Orazio Baglieri**, Politecnico of Torino: Rubberized bituminous mixtures for sustainable road pavements.
10.10 – 11.00 am Lecture #3.2 **Prof. Tien F. Fwa**, National University of Singapore: Challenges in developing sustainable Pavement Management Systems.
11.00 – 11.20 am Coffee break
11.20 – 12.10 am 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 am – 1.00 pm Lecture #3.4 **Prof. Adelino Ferreira**, University of Coimbra: Road network maintenance optimization for sustainability.
1.30 – 2.30 pm Lunch



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

- 4.00 – 6.00 pm SIIV general meeting
- 6.00 – 6.30 pm SIIV Arena Awards ceremony
- 6.30 – 7.30 pm Greeting ceremony in honour of **Prof. Antonino D'Andrea**, University of Messina
- 8:30 pm Gala Dinner in honour of Prof. Antonino D'Andrea (reserved only for invited people)
- 8.30 pm Dinner (for the attendees housed in Villa Amalia)



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

Safety Management

Chair: Prof. Salvatore Cafiso, University of Catania

- 8.30 - 9.30 am Transfer to University of Catania (for the attendees housed in Villa Amalia)
- 10.00 – 10.20 am Introduction **Prof. Salvatore Cafiso**, University of Catania
- 10.20 – 11.10 am Lecture #5.1 **Prof. Xiaoduan Sun**, University of Louisiana: Development in Highway Safety Management program introduced by HSM.
- 11.10 – 11.30 am Coffee break
- 11.30 – 12.20 am Lecture #5.2 **Prof. Andrew Tarko**, Purdue University: Road Safety management in Indiana (USA).
- 12.20 am – 1.10 pm Lecture #5.3 **Prof. Xuesong Wang**, Tongji University: Road safety assessment and modeling in China.



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

Transport Infrastructure Laboratory at DIACr

- 1.30 – 2.30 pm Lunch
- 2.30 – 3.30 pm 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

- 3.00 – 3.20 pm Introduction **Prof. Orazio Giuffrè**, University of Palermo
- 3.20 – 4.10 pm Lecture #6.1 **Dr. Alieskey Laureshyn**, Lund University: Road safety management for VRUs.
- 4.10 – 5.00 pm Lecture #6.2 **Prof. Andrew Tarko**, Purdue University: Modeling of traffic conflict measures as surrogate of safety.
- 7.00 pm Transfer to Villa Amalia (for the attendees housed in Villa Amalia)
- 8.30 pm Dinner (for the attendees housed in Villa Amalia)



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

Tavola Rotonda “Asset Management in road maintenance activities”

Chair: Prof. Gaetano Bosurgi

10.30 – 11.00 am Lecture #7.1 **prof. Ennio Cascetta** – Presidente ANAS spa

11.00 – 11.30 am Lecture #7.2 **Prof. Antonio Montepara**, Università di Parma

11.30 – 11.45 am Coffee break

11.45 – 12.15 am Lecture #7.3 **ing. Ugo Di Bennardo**, Direttore Operation e Coordinamento Territoriale ANAS spa.

12.15 – 12.45 am Lecture #7.4 **prof. Gianluca Dell’Acqua**, Università di Napoli: La manutenzione stradale in ambiente BIM e le norme UNI 11337.

12.45 – 1.00 pm Closing ceremony **Prof. Raffaele Mauro**, University of Trento – Presidente SIIV.

1.00 – 3.00 pm Lunch