



Università
degli Studi
di Palermo

International Symposium

Sustainable Road Pavements Worldwide: *from Research to Implementation*

Palermo, 21 September 2022

Under the patronage of:

ASSOCIAZIONE ITALIANA
per l'INGEGNERIA
del TRAFFICO
e dei TRASPORTI

SEZIONE SICILIA



Introduction

In the last few years, policymakers have been addressing the pressing environmental concerns by setting more and more ambitious targets in terms of sustainability. For example, the EU set several policy initiatives and requirements to reach climate neutrality by 2050 through the transition to an energy-efficient society, clean transport and a circular economy. Such actions must also involve **implementing a greener transport sector**, both in terms of mobility solutions and infrastructures. As a consequence, the road pavement sector is facing new challenges and academia, industry, national road authorities, and contractors are cooperating to meet the goal. Researchers and industry have developed **new sustainable materials, technologies and techniques**, and their implementation in the road infrastructures worldwide is already started.

In view of this, the International Symposium is a unique opportunity to share knowledge “from research to implementation” on sustainable road pavements worldwide. Eminent speakers from Netherlands, Italy, Spain, France, Belgium, Brazil and US will be providing the audience with their experience in going from research on sustainable road pavement to their experience in implementing them.

Other sponsors



Local organizing committee

Event chair

Dr. Davide Lo Presti

Logistic support - SMARTilab UNIPA

Dr. Gaspare Giancontieri

Dr. Chiara Mignini

Dr. Patricia Hennig Osmari

Gabriella Buttitta

Silvia Milazzo

Usman Ghani

Contacts (organizing secretary)

Davide Lo Presti: davide.lopresti@unipa.it

Chiara Mignini: chiara.mignini@unipa.it

Registration and Websites:

<http://rilem2022.unipa.it>

<https://www.aiit.it/news/>

Final program

CHAIRS:

Dr. **Davide Lo Presti**
University of Palermo

Dr. **Clara Celauro**
University of Palermo

08:30	<i>Welcome & Registration</i>
9:00	Welcome from Local Authorities & Stefano Zampino , <i>AIIT president</i> Prof. Hervé Di Benedetto , <i>RILEM fellow and honorary member</i>
9:30	Putting research into practice and how research should be inspired by practice Prof. Andre A. A. Molenaar
10:00	Research and implementation of sustainable pavements in Italy Prof. Ezio Santagata ,
10:30	Research and implementation of sustainable pavements in Spain Prof. Mayca Rubio Gámez
11:00	<i>Coffe Break</i>
11:20	From research towards the application of innovative technologies in Flanders Dr. Wim Van den bergh
11:50	The Brazilian efforts towards sustainable road pavements Dr. Kamilla Vasconcelos
12:20	Could bio-based binders be an alternative to bitumen for pavement construction sector? Dr. Emmanuel Chailleux & Dr. Flavien Geisler
12:50	Self-Powered Sensing and Edge Computing in SHM and Mobility Applications Dr. Nizar Lajnef
13:20	<i>Closing notes</i>

Location

The International Symposium will be held in the beautiful location of **Palazzo Chiaramonte-Steri** owned by University of Palermo, at Complesso Monumentale dello Steri, Piazza Marina n. 61



Confirmed speakers



Dr. Emmanuel Chailleux,
Université Gustave Eiffel, France

Emmanuel Chailleux is a Researcher at Université Gustave Eiffel (formerly IFSTTAR) in the Materials and Structures Department. His research focuses on organic binders for granular road structures. In this context, he conducts studies aimed at identifying links between the chemical structures of binders and their physical and mechanical properties: viscoelasticity, crack resistance, ageing. For some years now, he has devoted his research to the development of alternative binders from biomass.



Dr. Flavien Geisler,
Eiffage, France

Flavien Geisler is project manager in road and pavement engineering at Eiffage within the Research & Innovation Department. From 2015 to 2020 he has worked as the manager of the Fifth Generation Road projects. As he has a background of a chemical engineer he has been now working as project manager in the field of chemistry of bituminous binders and bio-binder or bio-based emulsions.



Dr. Nizar Lajnef,
Michigan State University, US

Nizar Lajnef is an associate professor of civil engineering at Michigan State University. His current research activities include smart mobility solutions, sensing systems for the monitoring of civil and mechanical structures, multifunctional and connected infrastructure, and sensors design and implementation.



Prof. Andre A. A. Molenaar,
Delft University of Technology, Netherlands

Andre A. A. Molenaar is emeritus professor at Delft University of Technology. He was involved in a large number of research projects and consultancy work all over the world. His research mainly focused on accelerated testing of asphalt pavements, pavement evaluation, recycling of construction demolition waste, and the characterization of the stiffness, fatigue, crack growth, and permanent deformation behavior of asphalt mixtures made of virgin and recycled materials.



Prof. Mayca Rubio Gámez,
University of Granada, Spain

Mayca Rubio Gámez is a full Professor and the Head of the Research Group "Laboratory of Construction Engineering" (LabIC) at University of Granada. Her research mainly focuses on the development of innovative materials for road pavements.



Prof. Ezio Santagata,
Politecnico di Torino, Italy

Ezio Santagata is full professor the Politecnico di Torino, Director of the "Road Materials Laboratory" and Scientific Responsible of the "Experimental Laboratory of Innovative and Recycled Materials for Civil Engineering Infrastructures". His research is focused on pavement materials and structures, with an emphasis on laboratory testing of bituminous binders and mixtures.



Dr. Wim Van den bergh,
Universiteit Antwerpen, Belgium

Wim Van den bergh is associate professor and research coordinator for Road Engineering Research Section of EMIB at University of Antwerp. His research focuses on healing of bituminous materials, impact of recycling on durability, use of IT in road engineering for enhancing quality and durability, improved mixtures for special pavements such as airport and harbour environment.



Dr. Kamilla Vasconcelos,
University of São Paulo, Brazil

Kamilla Vasconcelos is an associate professor in the Transportation Engineering program at the University of São Paulo. She is involved in different research projects related to Transportation Infrastructure with focus on sustainability and biomaterials.

