



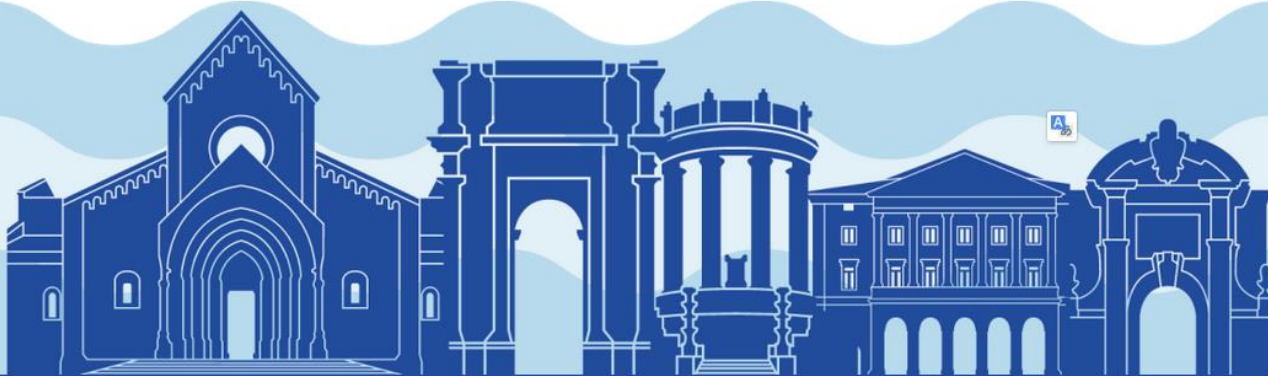
UNIVERSITÀ  
POLITECNICA  
DELLE MARCHE

# 11<sup>TH</sup> EATA CONFERENCE

EUROPEAN ASPHALT  
TECHNOLOGY ASSOCIATION

DICEA

DIPARTIMENTO INGEGNERIA  
CIVILE EDILE ARCHITETTURA  
18 | 22 23 | 27 ECCELLENZA



**MOLE VANVITELLIANA ANCONA, ITALY 10/12 JUNE**

# 2025



# Final Programme

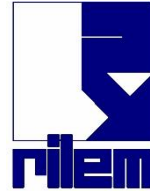


Hosted by Università Politecnica delle Marche under the auspices of  
the Italian Society of Transportation Infrastructures (SIIV) and the International  
Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM)



## Supporting Institutions

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## Gold Sponsors

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## Exhibitors

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Dear Colleagues,

On behalf of the Organizing Committee, we are pleased to welcome you to Ancona, Italy, for the 11<sup>th</sup> Conference of the European Asphalt Technology Association (EATA 2025).

Since its first edition in 2004, EATA conferences have grown into a leading international forum for researchers and professionals in asphalt technology. In 2025, the conference is held in Italy for the second time, hosted by the Transportation Infrastructure Research Group at Università Politecnica delle Marche, under the auspices of the Italian Society of Transportation Infrastructures (SIIV).

The EATA2025 conference offers a unique opportunity to share scientific advancements, technical expertise, and emerging perspectives on materials, modeling, design, performance, and sustainability. We have received an outstanding response to the call for papers, with 162 full submissions from 31 countries, evaluated through a rigorous peer-review process involving over 150 experts. Forty-two papers were selected for oral presentation and are published in a Special Issue of Road Materials and Pavement Design, while forty-three posters will be presented during dedicated sessions. These contributions reflect the richness and diversity of our scientific community, covering a broad spectrum of topics ranging from thermo-mechanical characterisation, biobinders, low-carbon technologies, and recycling, to smart pavements, surface properties, and advanced modeling techniques. The conference programme features nine technical sessions and two poster sessions, complemented by keynote lectures delivered by internationally recognized scholars. Dr. Mihai O. Marasteanu from the University of Minnesota, Dr. M<sup>a</sup> Carmen Rubio-Gómez from the University of Granada, and Dr. Michael Kaliske from Technische Universität Dresden will share their insights on emerging challenges and innovative approaches in asphalt materials and pavements research.

In addition, a post-conference workshop will focus on recent developments in Traffic Speed Deflectometer monitoring of road pavement networks, offering insights from various national experiences and exploring the potential of smart pavement data integration.

Pre- and post-conference events, organized in collaboration with RILEM, will involve four Technical Committees: TC 308-PAR on performance-based asphalt recycling, TC 316-FEE on fume emissions evaluation for asphalt materials, TC 307-PP on the physicochemical effects of polymers in bitumen, and TC 323-APD on alternative paving materials in terms of design and performance.

With more than 200 researchers and practitioners attending from 28 countries, EATA 2025 promises to offer a stimulating environment for scientific exchange, collaboration, and innovation. We are confident that the combination of high-level technical sessions, engaging discussions, and the welcoming atmosphere of the Marche Region will make your participation both rewarding and enjoyable.

We look forward to an inspiring EATA 2025 Conference—and to welcoming you all in Ancona!

**Francesco Canestrari & Andrea Graziani**  
*Conference Chairmen*





# About EATA

EATA, the European Asphalt Technology Association, is an informal organisation of European engineers and scientists involved in Asphalt Technology Research..

The Association was founded at the University of Nottingham in 2004, can trace its origins there back to 1973 and was inspired by the activities of the Association of Asphalt Paving Technologists in the USA that was formed in 1924.

Its main mission is to create regular opportunities in Europe for asphalt technologists involved in research and development to meet and exchange ideas in their field with a view to advancing and improving the application of asphalt technology in engineering practice and to publish a volume of peer reviewed papers in asphalt technology at regular intervals.

Since 2004 EATA hold a technical meeting every two or three years and publish a volume of the papers which are presented and discussed.

EATA does not have a formal membership. Its activities are overseen by a Steering Group and the technical meetings are organised by a group in the host city. This group also takes responsibility for the volume of published papers.

Further information about the activities of EATA can be found at the following website:  
<https://www.eata-group.eu/>







# Organisation

## **Conference Chairmen:**

**Francesco Canestrari**, Polytechnic University of Marche, Italy  
**Andrea Graziani**, Polytechnic University of Marche, Italy  
**Hervé di Benedetto**, University of Lyon/ENTPE, France  
**Gabriele Tebaldi**, University of Parma, Italy

## **Steering Committee:**

**Francesco Canestrari**, Polytechnic University of Marche, Italy  
**Andrea Graziani**, Polytechnic University of Marche, Italy  
**Hervé di Benedetto**, University of Lyon/ENTPE, France  
**Gabriele Tebaldi**, University of Parma, Italy  
**Michael P. Wistuba**, Technische Universität Braunschweig, Germany

## **Local Organizing Committee:**

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**Fabrizio Cardone**, Polytechnic University of Marche, Italy  
**Gilda Ferrotti**, Polytechnic University of Marche, Italy  
**Andrea Graziani**, Polytechnic University of Marche, Italy  
**Andrea Grilli**, Polytechnic University of Marche, Italy  
**Lorenzo Paolo Ingrassia**, Polytechnic University of Marche, Italy  
**Pierluigi Priori**, Polytechnic University of Marche, Italy  
**Arianna Stimilli**, Polytechnic University of Marche, Italy  
**Amedeo Virgili**, Polytechnic University of Marche, Italy  
supported by Polytechnic University of Marche team:

**Sara Carlucci, Omar Guazzaroni, Eugenio Mariani, Valentina Scaramucci, Andrea Scarponi**

## **Scientific Secretariat:**

Department of Construction, Civil Engineering and Architecture – Road and Transport Section  
via Breccie Bianche 12, 60131 Ancona, ITALY

General information: [contact@eata2025.com](mailto:contact@eata2025.com)

## **Organising Secretariat:**

Adria Congrex srl  
via Sassonia 30, 47922 Rimini, ITALY

General information: Cristina Cherubini ([c.cherubini@adriacongrex.it](mailto:c.cherubini@adriacongrex.it))



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<b>S.M. Angelone</b>	Argentina	<b>A. Garcia</b>	Germany	<b>Q.T. Nguyen</b>	Vietnam
<b>P. Apostolidis</b>	USA	<b>N. Garg</b>	USA	<b>F. Olard</b>	France
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<b>O. Baglieri</b>	Italy	<b>A. Graziani</b>	Italy	<b>E. Pasquini</b>	Italy
<b>H. Bahia</b>	USA	<b>J. Grenfell</b>	UK	<b>C. Petit</b>	France
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<b>A. Baliello</b>	Italy	<b>M. Guo</b>	China	<b>G. Pipintakos</b>	Germany
<b>J. Barreira de Sousa</b>	Portugal	<b>A. Gupta</b>	India	<b>P. Polaczyk</b>	USA
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<b>J. Blom</b>	Belgium	<b>P. Hornych</b>	France	<b>D. Ramirez Cardona</b>	Canada
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<b>A. Cannone Falchetto</b>	Italy	<b>K. Jenkins</b>	South Africa	<b>F. Russo</b>	Italy
<b>G. Cantisani</b>	Italy	<b>A. Jimenez del Barco Carrion</b>	Spain	<b>D. Rys</b>	Poland
<b>X. Carbonneau</b>	France	<b>M. Kalantari</b>	Germany	<b>C. Sangiorgi</b>	Italy
<b>F. Cardone</b>	Italy	<b>M. Kaliske</b>	Germany	<b>E. Santagata</b>	Italy
<b>S. Caro Spinel</b>	Colombia	<b>M. Kane</b>	France	<b>C. Sauzeat</b>	France
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<b>C. Castorena Hintz</b>	USA	<b>E. Lachance-Tremblay</b>	Canada	<b>J. Škultecké</b>	Lithuania
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<b>M.C. Cavalli</b>	Sweden	<b>G. Leegwater</b>	Netherlands	<b>S. Spadoni</b>	Italy
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<b>E. Dave</b>	USA	<b>S. Mangiafico</b>	France	<b>J. Valentin</b>	Czechia
<b>L.G. De Picado Santos</b>	Portugal	<b>E. Manthos</b>	Greece	<b>W. Van den bergh</b>	Belgium
<b>G. Dell'Acqua</b>	Italy	<b>M. Marasteanu</b>	USA	<b>A. Vanelstraete</b>	Belgium
<b>H. Di Benedetto</b>	France	<b>A. Margaritis</b>	Belgium	<b>K. Varveri</b>	Netherlands
<b>B. Dołżycki</b>	Poland	<b>A. Marradi</b>	Italy	<b>K. Vasconcelos</b>	Brazil
<b>L. Eberhardsteiner</b>	Austria	<b>E. Masad</b>	Qatar	<b>R. Veropalumbo</b>	Italy
<b>M. Elwardany</b>	USA	<b>D. Mensching</b>	USA	<b>V. Vignali</b>	Italy
<b>S. Erlingsson</b>	Sweden	<b>M. Miljković</b>	Serbia	<b>A. Virgili</b>	Italy
<b>F. Fakhari Tehrani</b>	France	<b>J. Mirwald</b>	Austria	<b>D. Wang</b>	Canada
<b>G. Ferrotti</b>	Italy	<b>K. Mollenhauer</b>	Germany	<b>H. Wang</b>	USA
<b>E. Freitas</b>	Greece	<b>A. Montepara</b>	Italy	<b>M. Wistuba</b>	Germany
<b>T. Gabet</b>	France	<b>F. Moreno-Navarro</b>	Spain	<b>A. Zeissler</b>	Germany
<b>M. Gajewski</b>	Poland	<b>J. Norambuena-Contreras</b>	UK	<b>A. Zofka</b>	Poland

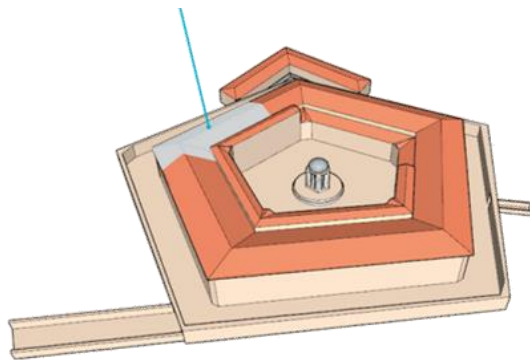
The Mole Vanvitelliana, an iconic 18th-century fortress located on an artificial island in Ancona's port, will host the Conference. Designed by renowned architect Luigi Vanvitelli, this unique pentagonal structure has a rich history and now serves as a cultural hub for exhibitions and events. Its striking architecture and waterfront location make it an inspiring and memorable venue, blending history, culture, and modernity in a truly remarkable setting.

The Conference as well as the Post-conference Workshop on June 12<sup>th</sup> will take place in the *Auditorium Orfeo Tamburi*, a large and comfortable conference room which hosts most of the city's cultural events. The Auditorium celebrates in its name the art and talent of the great Orfeo Tamburi (Jesi 1910 – Paris 1994): the hall hosts scenographic panels of the artist and is a cultural centre, a venue for activities, exhibitions and events for a citizen and non-citizen audience. The poster sessions and lunches will be hosted in the *Boxe Hall*, one of the brightest and most spacious rooms of the Mole Vanvitelliana. Its arches, its structure and the impeccable use its space dialogue with the contemporaneity. The large windows combine with the stone and the history of a unique place.

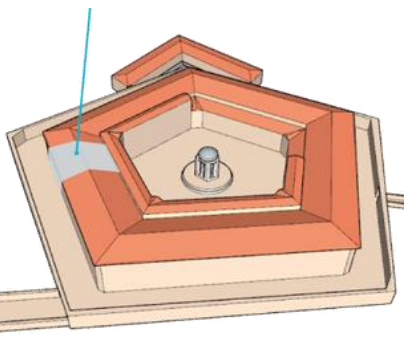
## Conference Hall

## Mole Vanvitelliana

Auditorium Orfeo Tamburi

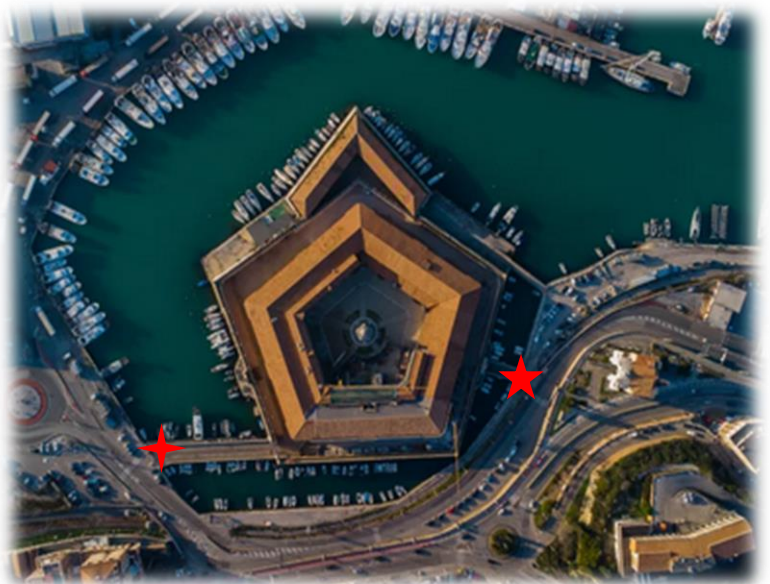


Boxe Hall



★ Main entrance

★ Secondary entrance



MAIN ENTRANCE

SECONDARY ENTRANCE



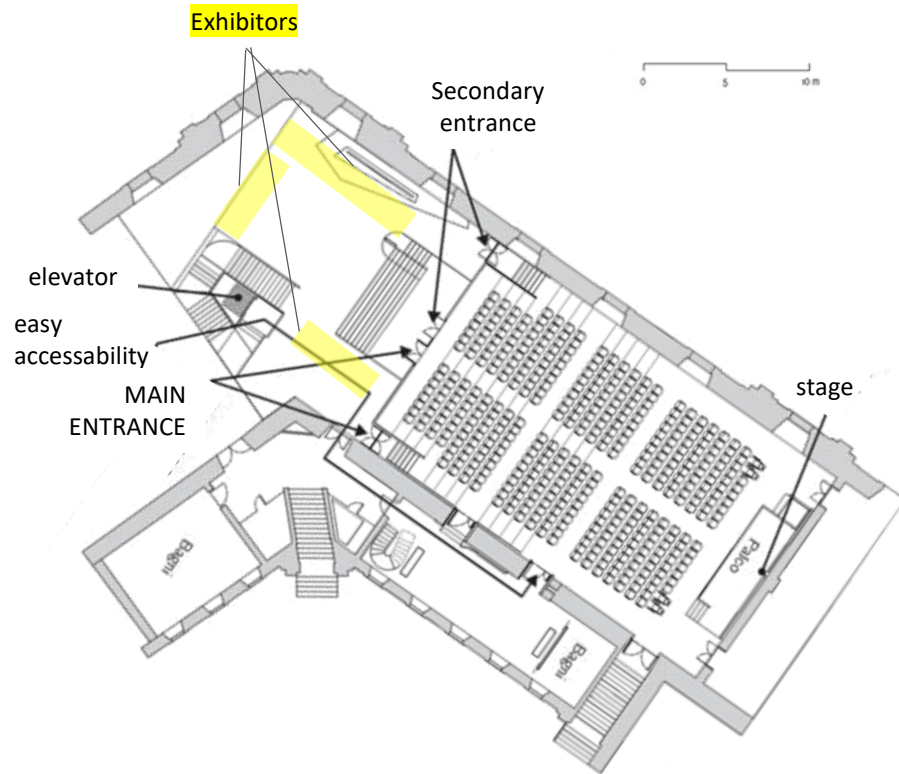
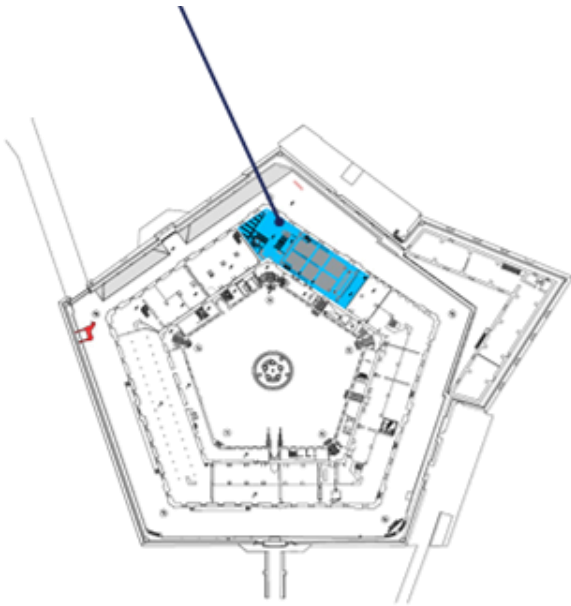
The full address of the Venue is:  
**Banchina Giovanni da Chio, 28**  
**60121 Ancona AN - ITALY**

The venue, located around 20 minutes walk from the town centre, can be reached by:

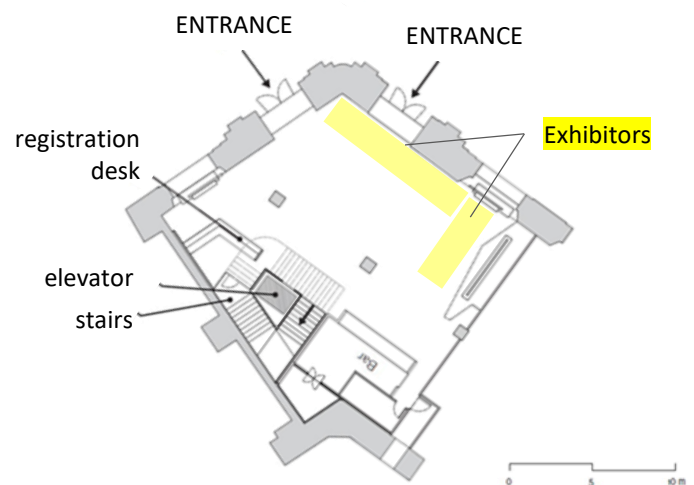
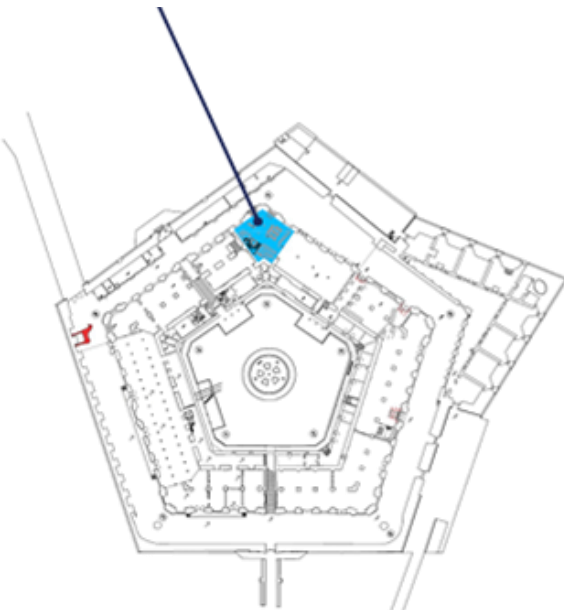
- # 1/4 bus from Piazza Cavour - in the town centre (5 stops), or from Piazza Kennedy - near the Muse theatre. Bus # 1/4 runs every 9 mins, the journey takes around 5 and 2 mins, respectively.

## Auditorium Orfeo Tamburi

Auditorium and first floor Foyer



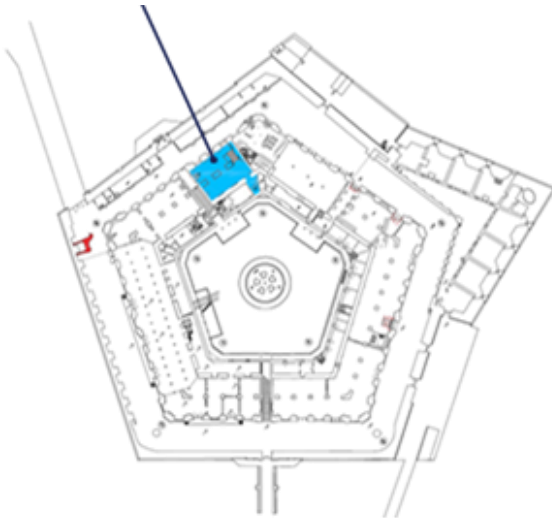
ground floor Foyer





## Boxe Hall

Boxe Hall



## Official language

Official language of the Conference is English

## Registration and information desk

The Conference registration desk is located in the Foyer of the *Auditorium Tamburi*, ground floor. Registrations will be possible starting from Monday 9<sup>th</sup> according to the following operating hours:

Monday 9 <sup>th</sup> June:	17.00 – 20.00
Tuesday 10 <sup>th</sup> June:	8.30 – 18.30
Wednesday 11 <sup>th</sup> June:	8.30 – 18.30
Thursday 12 <sup>th</sup> October:	8.30 – 13.00

## Name badges

Your name badge is your admission to scientific sessions, coffee breaks and buffet lunches. It should be worn at all times at the Conference venue.

The badge of the organizing committee staff is yellow colored.

The badge of the session chairmen is red marked.

## Internet access

Wireless Internet access is available in the Conference venue. Username and password are provided for at the registration desk/secretariat.

## Certificate of attendance

The certificate of attendance will be e-mailed after the Conference.

## Exhibitors

The Exhibition area is in the two Foyers of the Conference Hall (ground and first floor, respectively). There are seven (7) exhibitors of materials, machinery and laboratory equipment.

Exhibition opening hours:

Monday 9 <sup>th</sup> June:	17.00 – 20.00
Tuesday 10 <sup>th</sup> June:	8.30 – 18.30
Wednesday 11 <sup>th</sup> June:	8.30 – 18.30
Thursday 12 <sup>th</sup> October:	8.30 – 18.00

## Lunch and Coffee Break

Lunch takes place in the Foyer of the *Auditorium Tamburi* (ground floor) and in the *Boxe Hall* whereas Coffee Break takes place in the two Foyers of the *Auditorium Tamburi* (ground and first floor).



# General info

## Public Transport System

A public transport network serves Ancona with buses crossing the city and connecting Ancona to the airport. For detailed information on tickets and routes you can contact:

ATMA (Azienda Trasporti e Mobilità Ancona)  
Via Bocconi, 35 - 60125 Ancona  
Phone +39 071 2802092 Fax +39 071 2837468  
<https://www.atmaancona.it/> email: info@atmaancona.it

Further information on plan routes, ticket types and ticket purchase options can be found through the app MooneyGo (formerly myCicero) or the App ATMAApp by Conerobus.

Ancona is served by two main taxi stations. In order to call or reserve a taxi please refer to the following contacts. The porters at the hotels can help participants to get a taxi.

Railway station  
PIAZZA ROSSELLI  
Time 00.00 – 24.00  
phone: +39 071 43321

Taxi - Ancona downtown  
PIAZZA DELLA REPUBBLICA  
Time 06.30 – 20.00  
Phone +39 071 202895

## Time

Italy time is GMT + 1



# Presentations

## Keynote Lectures

Keynote Lectures are scheduled at the beginning of each Conference day and will be delivered in the *Auditorium Tamburi* (first floor).

## Technical sessions

Technical sessions will be held in the *Auditorium Tamburi* (first floor).

## Post-conference Workshop

The Post-conference Workshop will be held in the *Auditorium Tamburi* (first floor).

## General information for speakers

The speaker is requested to keep the time of his/her presentation to 15 minutes.

The presentation should be prepared in Microsoft PowerPoint saving the file with 2007 or later format to guarantee it will open successfully on an on-site PC. Only fonts that are included in the basic installation of Microsoft Office will be available. Use of other fonts can cause the wrong layout/style of your presentation. PowerPoint file should be prepared in English. No template is available for the presentation layout.

The speaker should bring its presentation file on USB flash memory to the corresponding scheduled presentation room at least 15 MINUTES prior to the start of the session saving all files associated with the presentation (PowerPoint file, movie / video files, etc.) to one folder/location.

The speaker is invited to check the files with anti-virus software before the submission.

The use of own personal PC for the presentation will not be accepted. The speaker is invited control/change slides on your own before the beginning of the session.

Please check the detailed presentation session program on the next pages for last updates.



## Pre-conference workshops

Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
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Time	Boxe Hall (Conference Venue)	Faculty of Engineering	Faculty of Engineering	Time
9.00-16.00		TC annual meeting* RILEM TC 308-PAR Performance-based Asphalt Recycling	TC meeting, RILEM TC 316-FEE* Fume Emissions Evaluation for Asphalt Materials	10.00-12.00
			Workshop, RILEM TC 307-PPB* Physicochemical Effects of Polymers in Bitumen	13.00-16.00
17.00-20.00	Registration & Welcome Cocktail			

\* refer to RILEM TC chairmen for meeting point and further details

## Conference Sessions

Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
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Time	Auditorium Tamburi (Conference Venue)	Boxe Hall (Conference Venue)
8.30-9.00	Registration	
9.00-9.30	Opening Ceremony	
9.30-10.15	Keynote Lecture 1	
10.15-10.45	Coffee Break	
10.45-12.45	Session 1	
12.45-14.30		Lunch/Poster Session
14.30-16.15	Session 2	
16.15-16.45	Coffee Break	
16.45-18.30	Session 3	
19.00-21.00	Sunset Happy Hour	

## Conference Sessions

Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
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Time	Auditorium Tamburi (Conference Venue)	Boxe Hall (Conference Venue)
9.00-9.45	Keynote Lecture 2	
9.45-10:45	Session 4-a	
10.45-11.15	Coffee Break	
11.15-12.30	Session 4-b	
12.30-14.30		Lunch/Poster Session
14.30-16.30	Session 5	
16.30-17.00	Coffee Break	
17.00-18.30	Session 6	
19.45-24.00	Gala Dinner	

## Conference Sessions e Post-conference workshop

Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
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Time	Auditorium Tamburi (Conference Venue)	Boxe Hall (Conference Venue)
9.00-9.45	Keynote Lecture 3	
9.45-10.45	Session 7-a	
10.45-11.15	Coffee Break	
11.15-13.00	Session 7-b	
13.00-13.30	Closing Ceremony	
13.30-14.30		
14.30-18.00	Post-conference workshop Latest Advancements in TSD Monitoring of Road Pavement Networks	Lunch

Post-conference workshop

Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
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Time	Faculty of Engineering
9.00-13.00	RILEM TC 323-APD * Alternative Paving Materials - Design and Performance

\* refer to RILEM TC chairman for meeting point and further details

Tuesday, 10<sup>th</sup> June

Auditorium Tamburi

## Opening Ceremony

*Chairman: Prof. Andrea Graziani (Italy)*

9.00 – 9.30

Welcome

*Prof. E. Quagliarini, Head of the Department of Construction, Civil Engineering and Architecture - Polytechnic University of Marche (Italy)*

*Prof. G. Tebaldi, EATA President (Italy)*

*Dr. S. Saporetti, delegate of the Ministry of the Environment (Italy)*

## Keynote Lecture 1

*Chairman: Prof. Hervé Di Benedetto (France)*

10.00 – 10.30

### **The Golden Age of Asphalt Rheology: The Development of the PG Binder Specification**

*Prof. M. Marasteanu, University of Minnesota (USA)*



Dr. **Mihai O. Marasteanu** is the MSES/Miles Kersten Professor in the Department of Civil Environmental and Geo-Engineering at The University of Minnesota. He received Ph.D. and MS degrees from The Pennsylvania State University, where he was member of the SHRP research team who developed the Performance Grade (PG) specifications for asphalt binders. For the past 25 years, he has led the asphalt pavements research program at The University of Minnesota. He was principal investigator of two major national pooled fund studies on low temperature cracking, that represented a significant step towards using fracture tests and fracture mechanics to select cracking resistant materials and to predict pavement performance. His research group has developed simple experimental methods, that could be easily adopted for routine testing, to obtain relevant creep and strength properties of asphalt binders and mixtures by testing miniature beams.

While continuing to pursue traditional areas of pavement engineering, his recent research has mainly focused on innovation in pavement materials and technologies, nondestructive testing, machine learning, pavement – environment interactions, and new asset management tools for pavements applications. Dr. Marasteanu is co-author of a US patent on asphalt-graphite mixtures. He has published over 150 papers in peer reviewed journals and conference proceedings and over 45 research reports. He is an honorary editor for the Road Materials and Pavement Design journal.



Tuesday, 10<sup>th</sup> June

Auditorium Tamburi

## Session 1      Aging and rheology of binders

*Chairmen:*      *Kamilla Vasconcellos, University of São Paulo (Brazil)*  
*Ezio Santagata, University of Qatar (Qatar)*

- |               |  |
|---------------|--|
| 10.45 – 11.05 | <b>3D Linear Viscoelastic Characterisation and Modelling of Bitumen</b><br><i>Nuh Isa<sup>1</sup>, Salvatore Mangiafico<sup>1</sup>, Cedric Sauzeat<sup>1</sup></i><br><i><sup>1</sup>University of Lyon, ENTPE, France</i>  |
| 11.05 – 11.25 | <b>Optimising Bitumen Modification: How Styrene-Butadiene-Styrene (SBS) Characteristics and Content Affect Bitumen Behaviour</b><br><i>Georgios Pipintakos<sup>1</sup>, Judita Škuldeckė<sup>2</sup>, Audrius Vaitkus<sup>2</sup>, Ovidijus Šernas<sup>2</sup>, Hilde Soenen<sup>3</sup>, Wim Van den bergh<sup>1</sup></i><br><i><sup>1</sup>University of Antwerp, Belgium; <sup>2</sup>Vilnius Gediminas Technical University, Lithuania; <sup>3</sup>Nynas NV, Belgium</i> |
| 11.25 – 11.45 | <b>Characterisation of bitumen grade and modification using a multilevel multivariate discriminant analysis approach and FTIR spectroscopy</b><br><i>Mohsen Motevalizadeh<sup>1</sup>, Konrad Mollenhauer<sup>1</sup>, Jens Wetekam<sup>1</sup></i><br><i><sup>1</sup>University of Kassel, Germany</i>  |
| 11.45 – 12.05 | <b>Analysis of design variables of highly modified asphalt binders for longer-lasting roads</b><br><i>F. Moreno-Navarro<sup>1</sup>, R. Tauste<sup>1</sup>, G. Garcia-Trave<sup>1</sup>, M.C. Rubio-Gamez<sup>1</sup></i><br><i><sup>1</sup>University of Granada (LabIC.UGR), Spain</i>   |
| 12.05 – 12.25 | <b>Requirements for the low-temperature cracking resistance of asphalt binders</b><br><i>Tess Sigwarth<sup>1</sup>, Johannes Büchner<sup>1</sup>, Michael P. Wistuba<sup>1</sup>, Elena Rud<sup>2</sup></i><br><i><sup>1</sup>Technische Universität Braunschweig, Germany; <sup>2</sup>Basalt-Actien-Gesellschaft, Köln, Germany</i>  |
| 12.25 – 12.45 | <b>Decoupling oxidation and hardening in ageing: Evaluation of bitumen-stone adhesion using different experimental methods</b><br><i>Lu Zhou<sup>1</sup>, Gordon Airey<sup>1</sup>, Yuqing Zhang<sup>2</sup>, Chonghui Wang<sup>3</sup></i><br><i><sup>1</sup>University of Nottingham, University Park, UK; <sup>2</sup>Southeast University, Nanjing, People's Republic of China; <sup>3</sup>Aston University, UK</i>   |

Tuesday, 10<sup>th</sup> June

Auditorium Tamburi

## Session 2 Performance and multiscale modelling

**Chairmen:** *Jamilla Teixeira, University of Nebraska (USA)*  
*Cédric Sauzéat, ENTPE – Université de Lyon (France)*

- 14.30 – 14.50** **Multi-scale analysis of ageing behaviour in bituminous materials**  
*Sadaf Khalighi<sup>1</sup>, Lili Ma<sup>1</sup>, Kristina Primerano<sup>2</sup>, Johannes Mirwald<sup>2</sup>, Bernhard Hofko<sup>2</sup>, Diederik van Lent<sup>3</sup>, Aikaterini Varveri<sup>1</sup>*  
*<sup>1</sup>Delft University of Technology, The Netherlands; <sup>2</sup>TU Wien, Austria; <sup>3</sup>Netherlands Organisations for Applied Scientific Research (TNO), The Netherlands*
- 14.50 – 15.10** **Advanced discrete element analysis of tyre – pavement interactions on textured bituminous surfaces based on the French wheel tracking test**  
*Juan Carlos Quezada<sup>1</sup>, Oussama Hammoud<sup>2</sup>, Dexin Liu<sup>1</sup>, Ferhat Hammoum<sup>3</sup>, Cyrille Chazallon<sup>1</sup>, Philippe Klein<sup>3,4</sup>, Julien Cesbron<sup>3</sup>*  
*<sup>1</sup>INSA Strasbourg, France; <sup>2</sup>AMOCER Group, Lyon, France; <sup>3</sup>Université Gustave Eiffel, Campus de Nantes, France; <sup>4</sup>Université de Lyon, Lyon, France*
- 15.10 – 15.30** **Long-term performance of asphalt mixtures containing bio-extended bituminous binders: Laboratory investigation and Accelerated Pavement Testing**  
*Jiqing Zhu<sup>1</sup>, Abubeker Ahmed<sup>1</sup>, Yared Dinegdæ<sup>1</sup>, Andreas Waldemarson<sup>1</sup>, Xiaohu Lu<sup>2</sup>, Patryk Witkiewicz<sup>3</sup>, Kenneth Olsson<sup>4</sup>*  
*<sup>1</sup>Swedish National Road and Transport Research Institute (VTI), Sweden; <sup>2</sup>Nynas AB, Sweden; <sup>3</sup>Skanska Sverige AB, Sweden; <sup>4</sup>Skanska Industrial Solutions AB, Sweden*
- 15.30 – 15.50** **Towards a better understanding of crack propagation in asphalt pavements with reinforcement grids (using laboratory-scaled traffic load and interlayer shear test)**  
*Christiane Raab<sup>1</sup>, Martin Arraigada<sup>1</sup>*  
*<sup>1</sup>Concrete and Asphalt Laboratory, Empa, Switzerland*
- 15.50 – 16.10** **Bitumen Optical Microscopy as A Quality Assurance Tool through Deployment of Trained Siamese Neural Network Model**  
*Nazmus Sakib<sup>1</sup>, Nafis Tahmid<sup>2</sup>, Shattik Islam Rhythm<sup>2</sup>, Md. Shamsuzzoha Bayzid<sup>2</sup>, Amit Bhasin<sup>3</sup>*  
*<sup>1</sup>Islamic University of Technology (IUT), Bangladesh; <sup>2</sup>Bangladesh University of Engineering and Technology, Bangladesh; <sup>3</sup>University of Texas at Austin, TX, USA*

Tuesday, 10<sup>th</sup> June

Auditorium Tamburi

## Session 3      Thermo-mechanical properties of bituminous materials

**Chairmen:**      *Piotr Jaskula, Gdansk University of Technology (Poland)*  
                          *Michael P. Wistuba, Technical University of Braunschweig (GE)*

- 16.45 – 17.05      **Mesostructural Analysis of Damage and Healing of Fine-Aggregate Mixtures Containing Recycled Asphalt**  
*Miomir Miljković<sup>1</sup>, K. Lakshmi Roja<sup>2</sup>, Thomas Seers<sup>2</sup>, Talha Khan<sup>2</sup>, Eyad Masad<sup>3</sup>*  
<sup>1</sup>University of Niš, Serbia; <sup>2</sup>Texas A&M University at Qatar, Qatar; <sup>3</sup>Hamad Bin Khalifa University, Doha, Qatar
- 17.05 – 17.25      **Investigating Linear Viscoelastic Response of Cylindrical and Prismoidal Bituminous Mixtures Subjected to Torsion Using Dynamic Shear Rheometer**  
*I. J. S. Sandeep<sup>1</sup>, Greena Maria Sunny<sup>1</sup>, Atanu Behera<sup>1</sup>, J. Murali Krishnan<sup>1</sup>*  
<sup>1</sup>Indian Institute of Technology Madras, India
- 17.25 – 17.45      **Evaluating Thermal Contraction Behaviour of Basalt Mastic Using Micromechanical Finite Element Modeling**  
*Amir Shabani<sup>1</sup>, Denis Jelagin<sup>1</sup>, Manfred N. Partl<sup>1</sup>*  
<sup>1</sup>KTH Royal Institute of Technology, Sweden
- 17.45 – 18.05      **Assessment of optical-thermal balance and environmental degradation of a thermochromic-coated asphalt mixture for urban heat mitigation**  
*Larissa Virgínia da Silva Ribas<sup>1</sup>, José Roberto Pereira dos Santos<sup>2</sup>, Karina de Lima<sup>2</sup>, Jamilla Emi Sudo Lutf Teixeira<sup>3</sup>, Verônica Teixeira Franco Castelo Branco<sup>2</sup>*  
<sup>1</sup>Federal University of Bahia, Brazil; <sup>2</sup>Federal University of Ceará, Brazil; <sup>3</sup>University of Nebraska-Lincoln, NE, United States
- 18.05 – 18.25      **Temperature correction for traffic speed deflectometer measurements on flexible pavement using ANN models**  
*Kairen Shen<sup>1</sup>, Hao Wang<sup>1</sup>, Francesco Canestrari<sup>2</sup>, Andrea Grazian<sup>2</sup>*  
<sup>1</sup>Rutgers University, NJ, USA; <sup>2</sup>Università Politecnica delle Marche, Italy

Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 1

*Chairmen:*                    *Fabrizio Cardone, Polytechnic University of Marche (Italy)*  
                                      *Lélio Antonio Teixeira Brito, Federal University of Rio Grande do Sul (Brazil)*

- P1    A theoretical framework for three-dimensional unconfined creep-recovery tests of asphalt mixtures in the time domain**  
Ngoc-Hung Nguyen, Tien Tho Do, Thanh-Nhan Phan, H.T. Tai Nguyen, Mai Lan Nguyen
- P2    Testing and evaluation of the new polymer-modified bituminous binder compositions with improved resistance against thermo- and photo-oxidative aging**  
Kamil Niemyjski, Jakub Kamiński, Mateusz Kędzierski
- P3    Decoding the Synergistic Effects of Humidity and Reactive Oxygen Species on Bitumen Aging**  
Sophie Stüwe, Kristina Primerano, Bowen Li, Johannes Mirwald, Bernhard Hofko
- P4    Study on the contribution rates of heat, oxygen and UV factors to the aging of asphalt binders**  
Meng Guo, Xu Yin, Shuaixiang Zhang, Yiqiu Tan, Xiuli Du
- P5    The Role of Promising Antioxidants in the Chemomechanics of Asphalt Binders**  
Georgios Pipintakos, Johannes Mirwald, Anand Sreeram, Antonio Roberto, Yongping Hu, Shi Xu, Dheeraj Adwani, Amit Bhasin
- P6    In-field validation of asphalt mixtures including textile fibers from end-of-life tires**  
Edoardo Bocci, Carlo Carpani, Maurizio Bocci
- P7    Effect of aging kinetics on the fatigue behavior of asphalt mixtures incorporating various RAP contents**  
Mohammed Nouali, Anne Dony, Stéphanie Vignaud, Alan Carter
- P8    Effect of lime type on the viscoelastic behavior and shear strength of asphalt mixtures**  
Washington Peres Núñez, William Fedrigo, Gabriela Viapiana, Daniel Pinheiro Fernandes, Thaís Radünz Kleinert, Igor Sieczkowski Moreira, Natália Guterres Mensch, Lélio Antônio Teixeira Brito



Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 1

**P9 Oxidation of lignin-modified bitumens**

Philip R. Herrington, Abhirup B. Roy-Chowdhury, Matthew D.W. Sharp, Lia C. van den Kerkhof

**P10 Adhesion and Cohesion of Biobased Binders with Aggregates: Insights from Surface Chemistry indicators**

Christina Makoundou, Jan-Willem Benjamins, Viveca Wallqvist

**P11 Computational Analysis of Mechanical Responses in Asphalt Pavements Using Three-Dimensional Multiscale Thermo-Mechanical Modeling**

Pengfei Liu, Chaoliang Fu, Yichong Li, Cong Du, Jiao Jin

**P12 Resistance to permanent deformation of mastic asphalt – Evaluation of an alternative test method**

Annette Gail, Ann Vanelstraete

**P13 Chemical and mechanical characterisation of SBS-modified bitumen**

Erik Kamratowsky, J. Keller, S. Leischner, A. Zeißler

**P14 Analysis of permanent deformation in asphalt-rubber mixtures using the SSR and FN tests**

Natália Guterres Mensch, Bethania Machado Correa, Edinei Cesario Zanoni, Lélío Antônio Teixeira Brito

**P15 Recycling additives effect assessment on aged bitumen using Apparent Molecular Weight Distribution: highlight on asphaltenes deagglomeration**

Justine Cantot, Vincent Gaudefroy, Emmanuel Chailleux

**P16 The Susceptibility of Lignosulfonate-Modified Asphalt to Permanent Deformation**

A. Murphy, Elaine S. Goosen

**P17 Characterization of Polymer Modified Bitumen: Evaluating SBS-Enhanced Binders for High-Performance Pavement Applications**

Philippe Cornu, Manuela Gennesseaux, Malal Kane, Luc Kirchen

Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 1

- P18 Enhancing Asphalt Performance with Modified Plastic and Comparative Evaluation with Fiber Additive**  
*Julissa J. Larios Rodriguez, Peter E. Sebaaly, Elie Y. Hajj, Adam J.T. Hand*
- P19 Influence of incorporating an electric induction charging system on the response of flexible pavements through bending tests**  
*Elliot Tardivat, Sébastien Lamothe, JeanClaude Carret, Diego Ramirez Cardona*
- P20 Assessment of the Characteristic Properties and the Temperature Susceptibility of Olive Waste Biochar-Modified Bitumen**  
*Stavros Kalampokis, Evangelos Manthos*
- P21 An Integrated Packing-Moisture Control Approach in Bitumen-Stabilized Materials (BSM) Design**  
*Sajjad Noura, Andrea Graziani, Alan Carter*

Wednesday, 11<sup>th</sup> June

Auditorium Tamburi

## Keynote Lecture 2

Chairman: *Prof. Hervé Di Benedetto (France)*

09.00 – 09.45

### **Modeling and Simulation of Pavements**

*Prof. M. Kaliske, Technische Universität Dresden  
(Germany)*



Dr. **Michael Kaliske** is Full Professor at Technische Universität Dresden, where he has been Director of the Institute for Structural Analysis since 2006. He got his Diploma in Civil Engineering from the University of Hannover in 1990 and his Ph.D. and Habilitation in Structural Mechanics in 1995 and 1999, respectively, from the same University.

Afterwards, he joined Continental, where he was Head of the Mechanics and Simulation Development Department (2001-2002). After that, he was Director of the Institute of Structural Mechanics at the University of Leipzig from 2002 to 2008. He has been Secretary of the International Association of Applied Mathematics and Mechanics (GAMM) since 2009 and he Vice-President of the International Association for Computational Mechanics (IACM) since 2022. He was Vice-President (2013-2016) and President (2017-2020) of the German Association for Computational Mechanics (GACM).

Currently, he is also a member of the Senate of the German Research Foundation (DFG).

Wednesday, 11<sup>th</sup> June

Auditorium Tamburi

## Session 4-a Smart pavement solutions

*Chairmen: Davide Chiola, Movyon (Italy)*

*Fernando Moreno-Navarro, University of Granada (Spain)*

09.45 – 10.05

### **Responses of a Thin Flexible Pavement Loaded with Tires of Various Dimensions and Configurations**

*Shafiqur Rahman<sup>1</sup>, Abubeker Ahmed<sup>1</sup>, Sigurdur Erlingsson<sup>1,2</sup>*

*<sup>1</sup>Swedish National Road and Transport Research Institute (VTI), Sweden; <sup>2</sup>University of Iceland, Iceland*

10.05 – 10.25

### **Laboratory Testing and Modeling of Axle Load Sensor – Asphalt Mixture System**

*Dawid Ryś<sup>1</sup>, Przemysław Więckowski<sup>1</sup>, Magdalena Złotowska<sup>2</sup>, Paweł Tutka<sup>2</sup>*

*<sup>1</sup>Gdańsk University of Technology, Poland; <sup>2</sup>Warsaw University of Technology, Poland*

10.25 – 10.45

### **Modelling the thermophysical properties of pavement layers using real-time sensor collected data**

*Konstantinos Mantalovas<sup>1</sup>, Alessandro Buscemi<sup>1</sup>, Francesco Graziano<sup>1</sup>, Clara Celauro<sup>1</sup>*

*<sup>1</sup>University of Palermo, Italy*



Wednesday, 11<sup>th</sup> June

Auditorium Tamburi

## Session 4-b Smart pavement solutions

**Chairmen:** *Andrea Grilli, Polytechnic University of Marche (Italy)*  
*Manfred Partl, PRRC (Switzerland)*

- 11.15 – 11.35**      **Evaluation of mechanical responses of full-scale pavement integrating inductive coils for the development of ERS for heavy goods vehicles**  
*Gustavo Garcia Otto<sup>1</sup>, Mai Lan Nguyen<sup>1</sup>, Pierre Horny<sup>1</sup>, Pierre Delaigue<sup>2</sup>, Lionel Grin<sup>3</sup>, Severine Olivier<sup>3</sup>, Bertrand Pouteau<sup>3</sup>, Vincent Labbé<sup>3</sup>, Itai Koren<sup>4</sup>, Phillipe Sonnatag<sup>5</sup>*  
*<sup>1</sup>Université Gustave Eiffel, France; <sup>2</sup>Groupe VINCI, Paris, France; <sup>3</sup>VINCI Construction, Paris, France; <sup>4</sup>Electreon, Beit Yanai, Hadassah Neurim Youth Village, Israel; <sup>5</sup>Hutchinson, Hambourg, Germany*
- 11.35 – 11.55**      **Evaluating the Structural Performance of eRoad Pavements Impact of Inductive Charging Coils on Mechanical Behavior**  
*Danial Arzjani<sup>1</sup>, Jean Claude Carret<sup>1</sup>, Jean-Pascal Bilodeau<sup>2</sup>, Diego Ramirez-Cardona<sup>1</sup>*  
*<sup>1</sup>École de technologie supérieure (ÉTS), Montréal, Canada; <sup>2</sup>Université Laval, Quebec City, Canada*
- 11.55 – 12.15**      **Experimental setup and thermo-viscoelastic FEM analysis of eRoads under diurnal thermal loading cycles in warm conditions**  
*Brahim Mazhoud<sup>1</sup>, Daniel Lira Lopes Targino<sup>1</sup>, Stéphane Bouron<sup>1</sup>, Olivier Chupin<sup>1</sup>, Thomas Gabet<sup>1</sup>*  
*<sup>1</sup>Université Gustave Eiffel, Campus de Nantes, France*
- 12.15 – 12.35**      **Optimisation of a road asphalt solar collector for energy harvesting**  
*Marco Pasetto<sup>1</sup>, Andrea Baliello<sup>1</sup>, Giovanni Giacomello<sup>1</sup>, Emiliano Pasquini<sup>1</sup>*  
*<sup>1</sup>University of Padova, Italy*

Wednesday, 11<sup>th</sup> June

Auditorium Tamburi

## Session 5 Sustainable binders

**Chairmen:** *Aikaterini Varveri, Delft University of Technology (NL)*  
*Salvatore Mangiafico, ENTPE – University of Lyon (France)*

- 14.30 – 14.50** **Investigation of polymer-modified bitumen containing renewable components**  
*Simona Caimmi<sup>1</sup>, Lorenzo Paolo Ingrassia<sup>1</sup>, Elisabetta Canaves<sup>2</sup>, Nicoletta Gasbarro<sup>3</sup>, Simona Sabbatini<sup>1</sup>, Gilda Ferrotti<sup>1</sup>, Francesco Canestrari<sup>1</sup>*  
*<sup>1</sup>Università Politecnica delle Marche, Italy; <sup>2</sup>Eni New Feedstocks and Energy Carriers Research Center, San Donato Milanese, Italy*
- 14.50 – 15.10** **Ageing resistance in model bio-based binders for road materials: A study of rosin esters and vegetable oil combinations**  
*Maria Camila Santos Quiñones<sup>1</sup>, Justine Cantot<sup>1</sup>, Flavien Geisler<sup>2</sup>, Simon Pouget<sup>2</sup>, Clémence Queffélec<sup>3</sup>, Laurent Porot<sup>4</sup>, Davide Lo Presti<sup>5</sup>, Bernhard Hofko<sup>6</sup>, Emmanuel Chailleux<sup>7</sup>*  
*<sup>1</sup>Université G. Eiffel, Campus de Nantes, France; <sup>2</sup>Eiffage Infrastructures SAS, France; <sup>3</sup>University of Nantes, France; <sup>4</sup>Kraton Polymers Research BV, Netherlands; <sup>5</sup>University of Palermo, Italy; <sup>6</sup>TU Wien, Austria; <sup>7</sup>Université G. Eiffel, Champs-sur-Marne, France*
- 15.10 – 15.30** **Evaluation of antioxidants to mitigate aging in wood-based bio-binders**  
*Leidy V. Espinosa<sup>1</sup>, Kamilla Vasconcelos<sup>1</sup>, Amit Bhasin<sup>2</sup>, Liedi Bernucci<sup>1</sup>*  
*<sup>1</sup>University of São Paulo, Brazil; <sup>2</sup>University of Texas at Austin, TX, United States*
- 15.30 – 15.50** **Effect analysis of using tall oil pitch (TOP) to partially extend bitumen in asphalt pavements: comparison of different TOPs**  
*Fan Zhang<sup>1</sup>, Jiqing Zhu<sup>2</sup>, Yuxuan Sun<sup>1</sup>, Christy Mariam Benny<sup>1</sup>, Di Wang<sup>3</sup>, Augusto Cannone Falchetto<sup>4</sup>*  
*<sup>1</sup>Aalto University, Espoo, Finland; <sup>2</sup>Swedish National Road and Transport Research Institute (VTI), Sweden; <sup>3</sup>University of Ottawa, Canada; <sup>4</sup>University of Padova, Italy*
- 15.50 – 16.10** **Rheological Performance of Modified Binders with LDPE from Municipal and Consumer Waste Sources**  
*Aakash Singh<sup>1</sup>, Prakash Soni<sup>1</sup>, Ankit Gupta<sup>1</sup>*  
*<sup>1</sup>Indian Institute of Technology (BHU), India*
- 16.10 – 16.30** **The effect of gamma-irradiated recycled polyolefins as asphalt binder modifiers**  
*Gustavo Pinheiro<sup>1</sup>, Jessica Dipold<sup>1</sup>, Anderson Zanardi Freitas<sup>1</sup>, Kamilla Vasconcelos<sup>1</sup>, Niklaus Wetter<sup>1</sup>*  
*<sup>1</sup>University of São Paulo, Brazil*

Wednesday, 11<sup>th</sup> June

Auditorium Tamburi

## Session 6 Pavement surface properties

**Chairmen:** *Sigurdur Erlingsson, Swedish National Road and Transport Research Institute (Sweden)*

*Wim Van den bergh, University of Antwerp (Belgium)*

- 17.00 – 17.20 **Comparison of open-graded, dense-graded and semi-porous asphalt mixtures for motorway wearing courses based on Wehner-Schulze tests and photogrammetry**  
*Eugenio Mariani<sup>1</sup>, Lorenzo Paolo Ingrassia<sup>1</sup>, Amedeo Virgili<sup>1</sup>, Davide Chiola<sup>2</sup>, Francesco Canestrari<sup>1</sup>*  
*<sup>1</sup>Università Politecnica delle Marche, Italy; <sup>2</sup>Movyon S.p.A., Italy*
- 17.20 – 17.40 **Statistical Modeling of Pavement Friction: Analyzing the Effects of Texture Characteristics and Measurement Resolution**  
*Pawel Gierasimiuk<sup>1</sup>, Malal Kane<sup>2</sup>*  
*<sup>1</sup>Université Gustave Eiffel, Campus de Nantes, France; <sup>2</sup>Eiffage Infrastructures SAS, France; <sup>3</sup>University of Nantes, France; <sup>4</sup>Kraton Polymers Research BV, The Netherlands; <sup>1</sup>Bialystok University of Technology, Poland; <sup>2</sup>Université Gustave Eiffel, Campus de Nantes, France*
- 17.40 – 18.00 **Investigation on the relationship between pavement profiles and empirical indirect surface texture measurement methods through CRP and spectral analysis**  
*Filippo Balzano<sup>1</sup>, Piergiorgio Tataranni<sup>1</sup>, Manuel De Rose<sup>2</sup>, Rosolino Vaiana<sup>2</sup>, Cesare Sangiorgi<sup>1</sup>*  
*<sup>1</sup>University of Bologna, Italy; <sup>2</sup>University of Calabria, Italy*
- 18.00 – 18.20 **Parameter uncertainty and statistical analysis of tyre-pavement interaction under braking**  
*Débora Cardoso da Silva<sup>1</sup>, Ndrianary Rakotovo Ravahatra<sup>1</sup>, Benoit Picoux<sup>1</sup>, Philippe Reynaud<sup>1</sup>, Sylvie Yotte<sup>1</sup>, Christophe Petit<sup>1</sup>*  
*<sup>1</sup>Université de Limoges, France*
- 18.20 – 18.40 **A laboratory and field recovery estimation of cleaned road surfaces after accidents spills contamination and traffic simulation**  
*Marco Bruno<sup>1</sup>, Valeria Vignali<sup>1</sup>, Andrea Simone<sup>1</sup>, Claudio Lantieri<sup>1</sup>*  
*<sup>1</sup>University of Bologna, Italy*

Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 2

**Chairmen:** *Fabrizio Cardone, Polytechnic University of Marche (Italy)*  
*Lélio Antonio Teixeira Brito, Federal University of Rio Grande do Sul (Brazil)*

- P1 Comparison of fatigue behavior of Cold Recycled Material (CRM) Mixture compacted in laboratory and in field conditions**  
*Mariusz Jaczewski*
- P2 Characterizing the interaction effect between asphalt and mineral filler in asphalt mastics of mastic asphalt concrete using rheological and 3D DEM analysis**  
*Ruiming Li, Xiaoxu Zhu, Yuhong Wang*
- P3 Determination of Effective Pavement Temperature for Improved FWD Deflection Analysis in Full-Depth Asphalt Pavements**  
*Pablo Orosa, Jin Li, Oscar A. Moncada, Bongsuk Park, Seonghwan Cho, John E. Haddock*
- P4 Texture-Image coupled fusion analysis for pavement skid resistance evaluation**  
*Jingtao Zhong, Jingyu Zhang, Zhiqiang Cheng, Shengjia Xie, Kai Huang, Ulises Martinez, Baoshan Huang*
- P5 Advanced surface texture analysis for road pavements under simulated polishing: case study on Microsurfacing**  
*Manuel De Rose, Joel R.M. Oliveira, Filippo Balzano, Cesare Sangiorgi, Carlos Palha, Rosolino Vaiana*
- P6 Detection of homogeneity indicators in the blending process of fresh and RAP bitumen by using multivariate analysis of IR mapping data**  
*Lamiae El Moustafi, Elio Ziade, Julie Cornette, Aurélia Nicolaï, Maggy Colas, Joseph Absi*
- P7 Balanced performance validation of the RA cracking-based brittleness index (CBI) for recycled asphalt mixtures**  
*Alexandros Margaritis, João Crucho, Tine Tanghe, Stefan Vansteenkiste, Ann Vanelstraete*
- P8 Can we Neglect the Pavement Damage Contribution from Electric Vehicles?**  
*Konstantinos Gkyrtis, Leonidas Stavroulakis, Christina Plati, Andreas Loizos*

Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 2

- P9 A Comparative Machine Learning Study on Multi-Depth Temperature Variation from Edmonton's Smart Road Project**  
*Malik Noor Ul Amin Awan, Akshay Waim, Leila Hashemian, Mohammad Shafiee, Alireza Bayat*
- P10 Thermomechanical Behavior of Electric Road Systems: A Literature Review, Bibliometric Analysis and Insights from Experimental Implementation Projects**  
*Daniel Lira Lopes Targino, Brahim Mazhoud, Romain Balieu, Lucas Feitosa de Albuquerque Lima Babadopulos, Olivier Chupin, Thomas Gabet*
- P11 Full-Scale Experimental and Numerical Analysis of Pavement Surface Layers Responses to Various Axle Configurations**  
*Marina AlBacha, Mai-Lan Nguyen, Pierre Hornych, Olivier Chupin, Juliette Blanc, Xavier Chapeleau*
- P12 Enhancing the Sustainability of Asphalt Mixtures: A Focus on Operational Factors and Dataset Selection for Reliable EPDs**  
*Rita Kleizienė, Gabriella Buttitta, Nicolás Carreño, Davide Lo Presti*
- P13 Characterization and environmental impact assessment of bitumen volatile organic compounds (VOCs) using SIFT-MS based direct and fume bag sampling**  
*Ali Zain Ul Abadeen, Johan Blom, Seyed Reza Omranian*
- P14 Rolling Resistance evaluation, a complete study from the laboratory to the field**  
*Donatien De Lesquen, Véronique Cerezo, Ahmed Es-Sabar, Christophe Ropert, Samuel Louis, Manuela Genneseaux, Simon Pouget, Julien Van Rompu*
- P15 Evaluating Binder Ageing and Polymer Degradation Levels in Different Reclaimed Asphalt Pavement (RAP) Fractions**  
*Isabeau Kokken, Antonio Roberto, David Hernando, Wim Van den bergh*
- P16 Holistic Assessment of Asphalt Pavement Preventive Maintenance: Determining Environmental, Economic and Performance Benefits of Pavement Preservation Treatments**  
*Anthony Brenes-Calderon, Adriana Vargas-Nordcbeck, Josue Garita-Jimenez, Surendra Chowdari Gatiganti*



Tuesday, 10<sup>th</sup> June

Boxe Hall

## Poster Session 2

- P17** **The Effect of Vehicle Speed on Deflection Data Obtained Using the Falkorr Traffic Speed Deflectometer Device (TSDD) with a Measure Sensor in Asphalt Pavements**  
*Caio M. Raul, Felipe F. Camargo, Cecília F. Merighi, André F. Vale, Kamilla Vasconcelos*
- P18** **Analysis of Mechanistic-Empirical Design of Sustainable Pavements with the use of Steel Slag Aggregate for Asphalt Pavement Structures**  
*Iuri Sidney Bessa, Jardel Andrade de Oliveira, Adriano Jorge Sombra Júnior, Suelly Helena de Araújo Barroso, Jorge Barbosa Soares, Beatriz Chagas Silva Gouveia, Lucas Babadopulos*
- P19** **Performance evaluation of cold in place asphalt mixtures retreaded with bitumen or bio-based emulsion, under controlled environment and field curing**  
*Andressa Chaves, Cedric Sauzeat, Flavien Geisler, Simon Pouget, Salvatore Mangiafico*
- P20** **Evaluating the Influence of Recycled Binder Availability on the Rheological Properties of Extracted Asphalt Binders from RAP Mixtures**  
*Raquel Moraes, Fan Yin, Chen Chen, Nam Tran*
- P21** **Assessing the Current Bitumen-Quality in the Netherlands: Challenges of Geopolitical Influences and Sustainability Trends**  
*Milliyon Woldekidan, Radjan Khedoe, Liz Mensink, René Stegeman, Sayeda Nahar*

Thursday, 12<sup>th</sup> June

Auditorium Tamburi

## Keynote Lecture 3

Chairman: *Prof. Hervé Di Benedetto (France)*

09.00 – 09.45

### **Circular, Resilient and Tech Asphalt Materials. Bridging the gap between Research and Implementation**

*Prof. M. Rubio-Gamez, University of Granada (Spain)*



Dr. M<sup>a</sup> **Carmen Rubio-Gómez** is a professor in the Department of Construction Engineering at the University of Granada (UGR) and the director of the LabIC.UGR research group. Her expertise lies in developing sustainable and smart materials for transport infrastructures, with a focus on enhancing asphalt pavement durability, minimizing carbon footprint, and mitigating climate change impacts through innovative road solutions. Prof. Rubio-Gómez maintains strong collaborative ties with international research institutions, industry partners, and organisations, emphasizing the translation of research into practical applications. She is also an active member of international technical committees in associations such as Rilem, EATA, ISAP. Her work has been recognized, highlighting the “Juan Antonio Fernández del Campo International Road Innovation Award”, the “Medal of Honor awarded by the Spanish Road Association” and the “Science and Innovation Award” granted by the Andalusian government in Spain.

Thursday, 12<sup>th</sup> June

Auditorium Tamburi

## Session 7-a Recycling and LCA

**Chairmen:** *Gilda Ferrotti, Polytechnic University of Marche (Italy)*  
*Christiane Raab, EMPA (Switzerland)*

- 09.45 – 10.05 **Evaluating circularity in pavements using mass and value-based indicators**  
*Siheng Liu<sup>1</sup>, Avishreshth Singh<sup>1</sup>, Aikaterini Varveri<sup>1</sup>, Francesco Di Maio<sup>1</sup>*  
*<sup>1</sup>Delft University of Technology, The Netherlands*
- 10.05 – 10.25 **Mechanical investigation and environmental life cycle assessment of warm mix asphalts**  
*Cristina Oreto<sup>1</sup>, Rosa Veropalumbo<sup>1</sup>, Giuseppe D'Addio<sup>1</sup>, Nunzio Viscione<sup>1</sup>,  
Francesca Russo<sup>1</sup>*  
*<sup>1</sup>Federico II University of Naples, Italy*
- 10.25 – 10.45 **Application of single score methods for environmental impact assessment to compare pavement technologies**  
*Rita Kleizienė<sup>1</sup>, Michiel van de Beek<sup>1</sup>, Adam Zofka<sup>1</sup>, Martynas Karbočius<sup>1</sup>*  
*<sup>1</sup>Vilnius Gediminas Technical University, Lithuania*

Thursday, 12<sup>th</sup> June

Auditorium Tamburi

## Session 7-b Recycling and LCA

**Chairmen:** *Jo Sias, University of New Hampshire (USA)*  
*Gordon Airey, University of Nottingham (United Kingdom)*

- 11.15 – 11.35**      **Investigating the effects of rejuvenating agents by means of Reclaimed Asphalt Model System**  
Ezio Santagata<sup>1</sup>, Pier Paolo Riviera<sup>2</sup>, Davide Dalmazzo<sup>2</sup>, Leonardo Urbano<sup>2</sup>, Orazio Baglieri<sup>2</sup>  
*<sup>1</sup>Qatar University, Qatar; <sup>2</sup>Politecnico di Torino, Italy*
- 11.35 – 11.55**      **Assessing the blending of recycled LDPE flakes with bitumen in mixtures using rheological and thermal properties: a case study**  
Gabriel Orozco<sup>1</sup>, Ali Qabur<sup>2</sup>, Alan Carter<sup>1</sup>  
*<sup>1</sup>École de Technologie Supérieure, Canada; <sup>2</sup>Jazan University, Saudi Arabia*
- 11.55 – 12.15**      **Rheological and performance characterization of cold bituminous mastics made with different bitumen emulsions and mineral fillers**  
Carlo Carpani<sup>1</sup>, E. Bocci<sup>2</sup>, M. Bocci<sup>1</sup>  
*<sup>1</sup>Università Politecnica delle Marche, Italy; <sup>2</sup>eCampus University, Novedrate, Italy*
- 12.15 – 12.35**      **Influence of compaction method on physical-mechanical properties of cold-recycled asphalt mixtures and pavement life**  
Fausto Bisanti<sup>1</sup>, Nicola Carbutti<sup>1</sup>, Eshan V. Dave<sup>2</sup>, Jo E. Sias<sup>2</sup>, Elena Romeo<sup>1</sup>, Gabriele Tebaldi<sup>1</sup>  
*<sup>1</sup>University of Parma, Italy; <sup>2</sup>University of New Hampshire, USA*
- 12.35 – 12.55**      **An application of the S-VECD approach to analyse the performance of asphalt pavements with cold recycled materials**  
Sara Spadoni<sup>1</sup>, Andrea Graziani<sup>1</sup>, Youngsoo Richard Kim<sup>2</sup>, Francesco Canestrari<sup>1</sup>  
*<sup>1</sup>Università Politecnica delle Marche, Italy; <sup>2</sup>North Carolina State University, USA*

Thursday, 12<sup>th</sup> June

Auditorium Tamburi

## Closing Ceremony

*Chairmen: Prof. Francesco Canestrari (Italy)*

13.00 – 13.15      Award ceremony  
*Podium Papers*  
*Best paper award*  
*Best PhD presentation award*  
  
*Posters*  
*Best poster presentation award*  
*Best poster content award*

13.15 – 13.30      EATA2025 in Numbers & Figures  
*Prof. Francesco Canestrari (Italy)*



Thursday, 12<sup>th</sup> June

Auditorium Tamburi

## Post-Conference Workshop

### Latest Advancements in TSD monitoring of Road Pavement Networks

Road agencies are looking for efficient pavement management tools to maintain adequate structural conditions and preserve the asset value. Since the late 1990s the Traffic Speed Deflectometer (TSD) has been developed to continuously assess the structural capacity of the pavement through non-destructive testing while moving at traffic speeds, thus overcoming the typical drawbacks of traditional testing equipment such as Falling Weight Deflectometer (FWD). Nowadays, the TSD has reached wide diffusion and is adopted for pavement monitoring in several countries all around the world. However, to date, road agencies still face challenges in managing and interpreting the huge amount of data deriving from TSD surveys and there is no consensus on a well-established method to use TSD measurements for estimating the remaining structural life of the pavement at the network level. By implementing such an approach in a pavement management system, this methodology can enable better budget allocation through a reliable identification of the maintenance and rehabilitation priorities of the network. In this context, the aim of the workshop is to share experiences gained in different countries and promote a step forward in TSD data analysis for a more reliable pavement structural assessment taking also the opportunities deriving from the advent of smart pavements.

14.30 – 15.00      Welcome and Opening  
*Pavement Management Needs and Future Challenges*

#### Session 1: Italian perspective for TSD structural monitoring

15:00-15:20      *An early heuristic approach to assess pavement residual life at the network level using the TSD*  
 Lorenzo Paolo Ingrassia – Università Politecnica delle Marche

15:20-15:40      *E-PMS and Minimum Environmental Criteria (CAM): residual service life prediction of existing pavements using TSD*  
 Davide Chiola – MOVYON

15:40-16:00      *Use of TSD in Roadworks Quality Control and in Road Maintenance Plans of Anas SpA*  
 Cristiano Sartori & Stefano Drusin – Anas SpA

16:20-16:40      *Coffee Break*

#### Session 2: International experiences on TSD structural monitoring

16:40-17:10      *Status of the introduction of traffic-speed bearing capacity measurements in Germany*  
 Dirk Jansen - BASt

17:10-17:40      *Utilising network level TSD/iPAVe data for structural and functional status monitoring and reporting in Europe and the USA*  
 Klavs Olsen & Ildiko Boström – ARRB Systems

17:40-18:10      *Advances in TSD Data Analysis and Application*  
 Hao Wang – Rutgers University

18:10-18:30      *Discussion and final remarks*

The Local Organizing Committee is pleased to propose to all registered participants and their accompanying persons socio-cultural initiatives that we hope will brighten up your stay in Ancona and make this occasion even more enjoyable and memorable.

## Evening program



*Welcome cocktail and Conference Venue-Omero Tactile Museum tour, Monday 9<sup>th</sup> June, 17.00 – 20.00*

The welcome reception is courtesy of the Conference. It takes place at the Conference Venue (Mole Vanvitelliana, Foyer of the *Auditorium Tamburi*), an impressive pentagonal fortified island in the city's harbour. During the event, we will offer the opportunity to participate in a guided tour of the architectural beauties of the Mole Vanvitelliana and will lead participants through a special sensory experience at the Omero Museum, one of the few tactile museums in world, where visitors can learn about art through touch.



*Sunset Happy Hour and city tour, Tuesday 10<sup>th</sup> June, 19.00*

Let us lead you to the discovery of Ancona, a city of sea, port, hills, art, history and traditions. Capitol of the Marche region, result of a thousand-year history that originates from the ancient Greeks, it is a unique window on the Adriatic sea and represents a special hub for international trade and cultural exchanges. A guided tour at sunset will illustrate the main historical and architectural beauties of the ancient roman port and the historic center, and will culminate in Piazza del Plebiscito, one of the largest and most iconic squares in the downtown, with a happy hour courtesy of the Conference for registered participants.



*Gala Dinner, Wednesday 11<sup>th</sup> June, 19.45*

The gala dinner is courtesy of the Conference for registered participants. It takes place at "Fortino Napoleonico", Via Poggio, Portonovo (AN). It is situated inside the Conero's park, in a magnificent position among the green of the woods and the blue sea, created by an ancient military fortress (<http://www.hotelfortino.it/>).

Transport facility before and after the Gala Dinner will be arranged for registered participants (intermediate stops will be provided in the town centre area on the return journey).

For more detailed information please refer to the registration desk at the Conference Venue.

Welcome to Ancona, a city rich in history, culture, and unique coastal charm. Explore some of the city's most iconic attractions through virtual tours and digital experiences — perfect for getting inspired for planning your visit to the EATA2025 conference.



## Explore More with the Official Tourism QR Code

Scan the QR code provided by the City of Ancona's Tourism Office to discover more places, itineraries, and experiences across the city.



## Grand Tour “Vanvitelli”

For the 250<sup>th</sup> anniversary of the death of the great architect, here is the itinerary of the works created or designed by Luigi Vanvitelli in the city:

<https://anconatourism.it/en/itineraries/grand-tour-vanvitelliano-ad-ancona/>



## Porta Pia – 3D Model

Located near the Mole Vanvitelliana, Porta Pia is one of Ancona's historic city gates. Discover it in full detail through this interactive 3D model (or scan the QR code):

<https://sketchfab.com/models/7f115afba5ee4f15b6ea9ab39afbcfeb/embed>



## Pinacoteca Civica “Francesco Podesti” – Virtual Tour

Take a virtual stroll through Ancona's Civic Art Gallery. While some of its works are temporarily housed at the Mole, you can explore the gallery's architecture and masterpieces online:

[https://dhekalos.it/VIRTUAL\\_TOUR/pinacoteca-civica-podesti/tour.html](https://dhekalos.it/VIRTUAL_TOUR/pinacoteca-civica-podesti/tour.html)



## Crivelli's Masterpiece – Gigapixel View

Get up close with Carlo Crivelli's “Madonna and Child”, one of the most important works in the Civic Art Gallery's collection. This ultra-high-resolution gigapixel lets you explore every detail of this Renaissance masterpiece:

[https://dhekalos.it/VIRTUAL\\_TOUR/pinacoteca-civica-podesti/tour.html](https://dhekalos.it/VIRTUAL_TOUR/pinacoteca-civica-podesti/tour.html)



## Omero Tactile Museum

The Omero Museum is a unique cultural institution dedicated to the experience of art through touch. Discover how this inclusive museum brings sculpture to life — both virtually and in person.:

[https://dhekalos.it/VIRTUAL\\_TOUR/pinacoteca-civica-podesti/tour.html](https://dhekalos.it/VIRTUAL_TOUR/pinacoteca-civica-podesti/tour.html)







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**MOLE VANVITELLIANA ANCONA, ITALY 10/12 JUNE**



 **EIFFAGE**

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 **infraTest**  
TESTING SYSTEMS

**APS**

 **Anton Paar**

 **arrb**  
SYSTEMS

**CONTROLS**

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