



**ICTR** 2023

**11<sup>th</sup> INTERNATIONAL  
CONGRESS on  
TRANSPORTATION  
RESEARCH**

**Clean and  
Accessible to All  
Multimodal Transport**



# Final Congress Programme

Under the auspices of



HELLENIC REPUBLIC  
MINISTRY OF INFRASTRUCTURE  
AND TRANSPORT



HELLENIC REPUBLIC  
MINISTRY OF  
TOURISM



MUNICIPALITY OF  
HERAKLION



Organized by

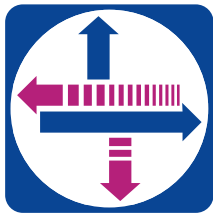


CERTH / HIT  
HELLENIC  
INSTITUTE OF  
TRANSPORT



HELLENIC INSTITUTE  
OF TRANSPORTATION  
ENGINEERS

## About the Organizers



[www.hit.certh.gr](http://www.hit.certh.gr)

**The Hellenic Institute of Transport (HIT)** was established in 2000 and is one of the five institutes of the Centre for Research and Technology Hellas (CERTH), which is under the supervision of the General Secretariat for Research and Innovation (GSRI) of the Ministry of Development and Investment. Since its establishment, HIT has evolved towards becoming the leading research institution in transport in Greece. It is also a highly accredited, internationally recognized, and acclaimed research organization that is considered to be a source of innovation and entrepreneurship in the field of transport in Europe and is identified as a Center of Excellence. HIT provides specialized research and technical services and cooperates with local private and public bodies, as well as a large number of other institutions in Europe and all over the world.

HIT's Primary objectives are:

- ▶ Promoting and conducting advanced research in the transportation field.
- ▶ Providing high-level services in the transportation sector.
- ▶ Supporting transport innovation.
- ▶ Supporting the decision-making process at government level.
- ▶ Provision of education and training of scientists and professionals in transport.
- ▶ Disseminating and exploiting research results.
- ▶ Cooperating with national, local, private, and public bodies and with many European and international institutes and research centers.



[www.ses.gr](http://www.ses.gr)

**The Hellenic Institute of Transportation Engineers (HITE)** was founded in 1976 in Athens, Greece. It currently includes over 900 members, all of them holding a postgraduate degree in transportation and carrying a long experience in the subject matter. The main objectives of HITE are:

- ▶ The promotion and propagation of scientific and technological knowledge in the field of transport by organizing seminars, conferences and roundtables, participating in international conferences and maintaining a library and archives of relevant editions and journals.
- ▶ The support of scientific and technological research in the domain of transport at national level by collaborating with public and private organisations.
- ▶ The co-operation with competent or relevant to the Institute, scientific foundations of national and international level for exchanging information, organising joint scientific meetings etc.
- ▶ The recognition on the part of decision makers, public authorities, the private sector, the educational sector and the society at large, of the necessity for scientific approach and solutions to various transport related problems.
- ▶ The establishment and dissemination of technical standards for the study, realisation and management of projects related to passenger and cargo transportation.
- ▶ The advisory role to public authorities and corporations as scientific expert supporting decision making.





The ICTR has been a major event in the field of transportation research for the past 21 years. Potential ICTR participants include the research and academic community, as well as the public and private sector involved in the development and implementation of innovative projects in the field of transport.

Providing sustainable, safe and inclusive transport solutions is vital for meeting the needs of people and ensuring the efficient transportation of goods both within and between cities. Sustainable Urban Mobility and Logistics Plans are the cornerstones of transport within Europe's towns and cities. At the same time, the current energy crisis affects all transport sectors, while the environmental goals set worldwide to achieve climate-neutral transport make research a priority for formulating proposals about the future of transport.

In this context, the objective of the Conference is to showcase recent top-notch research activities in transportation, merge research findings and policy making tasks, facilitate the exchange of knowledge at the local and international level and draw conclusions and shape recommendations for clean and accessible multimodal transportation in Greece and abroad.

The Hellenic Institute of Transport (HIT/CERTH) and the Hellenic Institute of Transportation Engineers (HITE) co-organize the «11th International Congress on Transportation Research», which will be held on September 20-22, 2023. The spotlight theme of the 2023 Congress is «Clean and Accessible to All Multimodal Transport».

## Welcome Letters



Dear ICTR friends and Colleagues,

It is with great pleasure and enthusiasm that I welcome you to the 11th International Congress on Transportation Research, in the beautiful city of Heraklion in Crete.

For more than 20 years, ICTR provides an excellent forum for exchanging information and discussions on a wide variety of Transportation Research topics, representing the latest developments and future trends in Transport sector. Both the Hellenic Institute of Transportation Engineers and the Hellenic Institute of Transport work together harmoniously all these years for the successful implementation ICTR Conferences, managing to attract in every Conference a large number of participants from research and academia throughout Greece, Europe and internationally.

This year's conference theme, "Clean and Accessible to All Multi-modal Transport" resonates deeply with the challenges and opportunities that lie ahead in our research and professional activities.

During the three days of the Conference, apart from the scientific papers that will be presented, insightful discussions and networking opportunities will enable exploring new horizons and address the pressing issues that confront our field.

As the President of the Organizing Committee I would like to extend my gratitude to Dr Ioanna Pagoni, co-chair of the Organizing Committee and to the dedicated members of the Organizing Committee and the Scientific Committee who have worked tirelessly to ensure the success of this event. Furthermore, I would like to express my sincere appreciation to our sponsors for their unwavering support in the implementation of a high quality conference.

Finally, I extend my warmest welcome to all participants and I encourage you to actively engage in discussions, share your insights and be part of all the latest developments in transport and mobility.

Sincerely,

Panagiotis Papantoniou  
Assistant Professor at University of West Attica  
President of HITE/ ICTR Organizing Committee

Dear colleagues and Congress participants,

On behalf of the Scientific Committee, I am happy to welcome you to the 11th International Congress on Transportation Research in the lively city of Heraklion! As the President of the Scientific Committee, I am excited to be a part of this extraordinary event in the field of transportation that brings together professionals, researchers, academics and experts, from the national and international community

This year's Congress promises to be a success, with a diverse and engaging programme designed to inspire, transfer knowledge and foster collaboration. The topic of ICTR2023 is 'Clean and Accessible to All Multimodal Transport', as sustainability, safety and inclusiveness of transport and mobility, for people and goods, are highly placed in the EU research agenda; and well-aligned to the energy crisis worldwide and relevant key environmental goals affecting the transportation sector. The Congress programme includes 19 sessions that cover all modes of transport, as well as infrastructure, vehicles and operations, with 133 papers - presenting original research results, new ideas and practical development experiences which concentrate on both research theory and practices - and encompasses a wide range of topics and interests within the transportation field, i.e. transport safety, sustainability of urban mobility, CCAM, AI, big data, C-ITS, air and rail research, freight and logistics, tourism, simulation and modeling, inclusive, climate neutral and energy efficient transport, the pandemic's impact on mobility. Moreover, the Congress opens with an insightful keynote speech from the esteemed Professor G. Giannopoulos, Emeritus Professor AUTH, C. Member of Academy of Athens.



We made every effort to create a programme that caters to the multiple interests and expertise of our participants.

I express my gratitude to the members of the Scientific Committee who have dedicated their time and expertise to review the submitted papers and ensure the high quality level of this Congress. Moreover, I would like to thank the Organising Committee for their hard work and excellent collaboration. I extend my appreciation to the Congress sponsors who have played a central role in making this event possible.

In closing, let me highlight that together we can make ICTR2023 an exceptional experience with active participation and collaboration of each one of you. Let us make the most of this occasion to learn from one another, build new connections, and work towards advancing the field of transportation research and innovation. Get ready to immerse yourself in cutting-edge research and networking opportunities.

I hope that you leave this Congress excited to return in two years and continue to be a part of this amazing community!

Mary Panou  
Director of Research, Hellenic Institute of Transport  
President, ICTR 2023 Scientific Committee

### Special Sessions/Workshops: Wednesday 20/09/2023

09:00 – 18:00 EEST

#### Pre-conference Special Sessions/Workshops supported by dedicated projects

Room: PLAZA	14:00-16:00	<p><b>Workshop II - Violations of the Traffic Law in Greece and the treatment of Juvenile offenders: good practices, challenges and future perspectives</b></p> <p><i>Session Organizers: Associate Professor Maria Papadakaki, Emeritus Professor Joannes Chliaoutakis [Laboratory of Health and Road Safety (LaHeRS) &amp; Department of Social Work, Hellenic Mediterranean University]</i></p>
	16:00-18:00	<p><b>Workshop III - Συνεργατικοί Σχηματισμοί επιχειρήσεων και ερευνητικών ιδρυμάτων για την αένην δημιουργία και βιώσιμη διαχείριση της Καινοτομίας στον Τομέα της Έξυπνης Κινητικότητας και των Logistics</b></p> <p><i>Session Organizer: Dr Georgia Ayfantopoulou [Hellenic Institute of Transport (HIT)/ Centre for Research and Technology Hellas (CERTH)]</i></p>
Room: PARK	10:00-13:00	<p><b>Workshop IV – Smart Public Transport Initiatives for Climate-neutral Cities in Europe</b></p> <p><i>Session Organizers: Dr. Ioanna Pagoni, Professor Amalia Polydoropoulou [Department of Shipping, Trade and Transport, University of the Aegean], Dr. Juan S. Angarita Zapata, Dr. Jordi Casas, Dr. Mark Brackstone [Aimsun]</i></p>
	14:00-16:00	<p><b>Workshop V – EN.I.R.I.S.S.T. and EN.I.R.I.S.S.T. Plus: Innovation in Shipping, Supply Chain, Transport and Logistics</b></p> <p><i>Session Organizers: Professor Amalia Polydoropoulou, Dr. Ioanna Pagoni, Dr. Ioannis Karakikes [Department of Shipping, Trade and Transport, University of the Aegean]</i></p>
	16:00-18:00	<p><b>Workshop VIII – Digital Transformation: A Case that concerns all of Us</b></p> <p><i>Session Organizers: Charalampos Dimitrakopoulos, Dimitris Chatzigeorgiou [Softweb Adaptive IT Solutions]</i></p>



Room: PHAEDRA II	09:30-13:30	<b>Workshop VI – Sustainable Tourism &amp; Mobility: Redesigning &amp; Regenerating sustainable and innovative tourism</b>  <i>Session Organizers: Dr. Maria Morfoulaki, Dr. Glykeria Myrovali [Hellenic Institute of Transport (HIT)/ Centre for Research and Technology Hellas (CERTH)]</i>
	14:00-18:00	<b>Workshop VII – Sustainable Tourism Mobility and Accessibility for Smart Destinations</b>  <i>Session Organizers: Manos Vougioukas [DESTI-SMART Partnership]</i>

		09:00	09:30	13:00	14:00	16:00	18:00
Room	PLAZA			Lunch break	Workshop II	Workshop III	
	PARK	Workshop IV			Workshop V	Workshop VIII	
	PHAEDRA		Workshop VI		Workshop VII		

### Thursday 21/09/2023 • Sessions

09:00-10:15

#### Session I (A) – User-centred design in Transport

Room: Park

Session Chairman: G. Ayfantopoulou

Rapporteur: E. Magkos

Duration: 1,5 hour

Number of papers: 4

247 Marios Sekadakis, Marianthi Kallidoni, Christos Katrakazas, Sandra Trösterer, Cyril Marx, Peter Moertl and George Yannis

*Impact Assessment of a novel Human-Machine Interface Prototype: A descriptive analysis from the HADRIAN project*

7527 Panagiotis Tzouras, Stefanos Tsigdinos, Jason Plymenos, Zoe Petrakou, Konstantinos Athanasopoulos, Christos Karolemeas, Alexandros Georgakopoulos, Evi Papagerasimou, Giorgos Kolovirnas, Maria Siti and Thanos Vlastos

*Investigating the stated preferences of potential users towards the creation of on-demand bus lines in rural areas of Greece*

## Programme Overview

744 Panagiota Mavrogenidou, Amalia Polydoropoulou, Athina Tsirimpa and Ioanna Pagoni

*Bike-sharing or e-scooter sharing? What Gen G prefers*

5232 Dionysia-Georgia Perperidou, Panagiotis Papantoniou and Virginia Petraki

*Acceptance Parameters Investigation of a New Bus Route*

### Session I (B) – Inclusive Transport

**Room: Phaedra**

**Session Chairman: M. Panou**

**Rapporteur: M. Oikonomou**

**Duration: 1,5 hour**

**Number of papers: 4**

6341 Dimosthenis Pavlou, Georgios-Nikolaos Frintzilas, Efthalia Angelopoulou, Dionysia Kontaxopoulou, Stella Fragkiadaki, Evangelia Stanitsa, George Yannis and Sokratis Papageorgiou

*Can we predict safe driving for the elderly through a self-assessment of driving behaviour?*

2729 Alexandros Deloukas, Katerina Papamichail and Ivor Ambrose

*AccessibleEU and Transport Accessibility: Current State and Future Challenge of Autonomous Vehicles in Greece*

8694 Nikolaos Gavanas, Alexandros Sdoukopoulos and Gabriela Plaka

*Assessment of daily accessibility of university students to main activities using open-software and open-data. The case of Volos, Greece*

1628 Katerina Toulou, Nikolaos Maglaveras, Miranda Maglavera, Maria Panou and Evangelos Bekiaris

*Olfactory identification as a prognostic marker of older drivers' ability*

**10:15-11:45**

### OPENING CEREMONY

**Room: Plaza**

**Session Chairman: P. Papantoniou**

**Rapporteur: M. Panou**

#### **10:15-10:30 Conference objectives and welcome by the Organisers**

- Dr. Panagiotis Papantoniou, President of HITE/ ICTR23 Organizing Committee, Assistant Professor at University of West Attica
- Dr. Evangelos Bekiaris – Director of CERTH/HIT
- Dr. Maria Panou, President of ICTR23 Scientific Committee, Director of Research at CERTH/HIT



### 10:30-11:00 / The role that the conference plays on transport and mobility policy for the country, the region, and the cities

- Intervention by the Vice-Minister of Development, M. Senetakis
- Intervention by the General Secretary of Ministry of Infrastructure and Transport, J. Xifaras
- Intervention by the General Secretary of Ministry of Tourism, M. Flouris
- Intervention by a representative of Region of Crete
- Intervention by a representative of Municipality of Heraklion

### 11:00-11:15 / Keynote speech: Transport sector adaptation for climate change

- G. Giannopoulos, Emeritus Professor AUTH, C. Member of Academy of Athens

### 11:15-11:45 Honorary Awards ICTR2023 will honor:

- Mr. K. Zekkos
- Dr. M. Papageorgiou

### 11:45-12:15 • Coffee Break

### 12:15-14:00

#### Session II (A) – CCAM

**Room: Plaza**

**Session Chairman: E. Mitsakis**

**Rapporteur: M. Loukea**

**Duration: 2 hours**

**Number of papers: 7**

9564 Christian Groß, Caitlin Velasquez and Peter Mörtl

*Assessing human reliability to evaluate advanced driving automation solutions*

8480 Dimitrios G. Triantis, Emmanouil Ph. Kampitakis and Eleni I. Vlahogianni

*A comparative study of deep learning multi-agent trajectory prediction models for autonomous vehicle-pedestrian interactions in urban environments*

6894 Maria Oikonomou, Marios Sekadakis, Christos Katrakazas, Asier Arizala Goñib, Ray Alejandro Lattarulob and George Yannis

*Impacts of automated driving vehicles on bus depot operation using naturalistic data*

7351 Evangelia Gaitanidou, Evangelos Bekiaris, Matina Loukea

*Myths and Facts about Autonomous Vehicles user acceptance*

5452 Ioannis Karakikes, Helen Thanopoulou, Amalia Polydoropoulou and Cristina Pronello

*Mitigating the Adverse Impact of Automation and Digitalisation on the Transportation Workforce: Key Actions to Consider*

## Programme Overview

991 Foteini Orfanou, Eleni Vlahogianni and George Yannis

*Modelling the behaviour of automated vehicles when interacting with pedestrians in jaywalking*

4998 Evangelos Mitsakis and Areti Kotsi

*Large scale deployment of C-ITS: impact assessment results of the C-Roads Greece pilots*

### **Session II (B) – Transport and Tourism**

**Room: Park**

**Session Chairman: E. Bekiaris**

**Rapporteur: M. Papandreou**

**Duration: 2 hours**

**Number of papers: 8**

2112 Maria Morfoulaki, Glykeria Myrovali and Thomai Baltzi

*GoBike app: a tourist service created from the bottom up with a view to sustainability*

9685 Vasileios Mizaras, Afroditi Stamelou, Alexandros Deligiannis and Georgia Ayfantopoulou

*Data driven dashboard for accountable decision-making for SSTPAs in Greece*

812 Glykeria Myrovali, Maria Morfoulaki, Spyros Avdimiotis, Apostolos Karakitsios and Alexandros Asimakopoulos

*Sustainable urban mobility and tourism hand by hand promotion; the #Thessaloniki\_Tourism\_Block-chain initiative*

1166 Eleni Anoyrkati, Vladislav Maras, Stefania Paladini and Dimitrios Nalmpantis

*Delivering sustainable tourism with active mobility solutions: a comparative analysis of schemes, practices and policies*

952 Léo Leroy, Eleni Anoyrkati, Vladislav Maraš and Dimitrios Nalmpantis

*User-centric design of European cities' walkability from tourists' perception: a comparative study of Thessaloniki and Lyon*

2884 Vasiliki Amprasi, Panagiotis Papantoniou and Dimosthenis Pavlou

*Trends and perspectives of flagship initiatives on marine tourism infrastructure*

3052 Aggelos Aggelakakis and Maria Boile

*Port Infrastructure Resilience Assessment - The State of Practice*

1011 Afroditi Stamelou, Vasileios Mizaras, Andreas Nikiforiadis and Georgia Ayfantopoulou

*Investigation of users' needs in touristic islands for the provision of electric car sharing services*

### Session II (C) – Transport Safety I

**Room:** Phaedra

**Session Chairman:** G. Yannis

**Rapporteur:** E. Michelaraki

**Duration:** 2 hours

**Number of papers:** 6

2069 Josep Ramon Morros, Antoni Broquetas Ivars, Alex Mateo Remacha, Jordi Puig Rabat and Manel Davins

*Real-time lane classification and accident detection for safer micromobility*

4443 Katerina Toulidou, Anna Anund, Maria Panou and Evangelos Bekiaris

*Supporting the well-being of commercial drivers: The PANACEA approach*

6064 Nikolaos Perivolaris, Georgios Laskaris, Katerina Koliou and Ioanna Spyropoulou

*Speeding behaviour of professional drivers: the case of urban motorway patrol drivers*

6304 Maria Konstantinidou, Panagiotis Tzenos, Athanasios Tolikas, Alexandros Siomos, Josep Maria Salanova Grau, Sotiris Karagiannis, Vasilis Efstathiou and Marios Zacharias

*Interconnection of Smart Infrastructures to Create Safe Cities*

7680 Dimitrios Nikolaou, Armira Kontaxi, Apostolos Ziakopoulos and George Yannis

*Spatial analysis of telematics surrogate safety measures across road environments*

514 Afroditi Anagnostopoulou and Christos Perentis

*Evaluating Social and Safety Aspects of Public Transport: A Comprehensive Framework*

**14:00-15:00 • Lunch Break**

**15:00-17:00**

### Session III (A) – Sustainable Urban Mobility

**Room:** Plaza

**Session Chairman:** N. Stamatiadis

**Rapporteur:** P. Sarri

**Duration:** 2 hours

**Number of papers:** 7

582 Theodoros Gounaridis and Apostolos Papagiannakis

*Measurement and mapping of traffic noise on urban roads in the Municipality of Thessaloniki*

## Programme Overview

1783 Nikolaos Gavanas, Eftihia Nathanail, Iordanis Stylidis, Anastasia Trampa, Georgios Kalogerakos and Fotini-Magdalini Kravariti

*Integrated transport planning and urban design to promote sustainable development in a university campus. The case of the "Pedion Areos" campus of the University of Thessaly in Volos, Greece*

5726 Annie Kortsari, Lambros Mitropoulos, Vasilis Mizaras and Georgia Ayfantopoulou

*Planning and challenges for adopting MaaS: Athens as a case study*

3702 Michael Hardinghaus and Julia Jarass

*Systemic barriers and drivers for a sustainable transformation of urban mobility: Lessons from Athens and Berlin*

797 Jasso Espadaler Clapés, Emmanouil Barmponakis and Nikolas Geroliminis

*Estimation of CO<sub>2</sub> and Noise Emissions Using Trajectory Data Collected With Drones*

700 Theodoros Ballis and Loukas Dimitriou

*Improving Traffic Signal Control Performance within a Scalable Reinforced Learning Environment*

2826 Panagiotis Papantoniou, Virginia Petraki and Dimosthenis Pavlou

*Feasibility study of an underground parking garage in Alexandroupolis*

### Session III (B) – Air & Rail Research

**Room: Park**

**Session Chairman: V. Kappatos**

**Rapporteur: A. Karagkouni**

**Duration: 2 hours**

**Number of papers: 6**

7146 Alexandros Dolianitis, Christos Pyrgidis, Evangelos Manthos and Anastasia Nikolaidou

*A literature-based and empirical comparison of commonly used Railway Level Crossing accident prediction models*

3514 Christian Wille and Miriam Grünhäuser

*Transformation of Vehicle 2 Everything (V2X) communication to the railway sector (Rail2X)*

9216 Aristi Karagkouni, Dimitrios Dimitriou, Evangelos Kaiser, Alexander Skabardonis and Maria Sartzetaki

*Linkage of Corporate Performance and Sustainability in Supply Chain: The Case of Airports*



6697 Ioanna Lekea, Dimitrios Stamatelos and Vassilios Kappatos

*Preventing and dealing with in-flight crises: is there room for ethics?*

919 Konstantinos Kouretas and Konstantinos Kepaptsoglou

*Designing Combined UAV and Conventional Vehicle Delivery Operations under Constrained Airspace*

9367 Athanasios Georgakis, Vassilios Profillidis and George Botzoris

*Exploring the application of search query data in air travel demand forecasting - the case of five London airports*

### Session III (C) – Simulation and Modelling I

**Room: Phaedra**

**Session Chairman: O. Barzilai**

**Rapporteur: F. Orfanou**

**Duration: 2 hours**

**Number of papers: 6**

2472 Eva Michelaraki, Christos Katrakazas, Stella Roussou, Amir Pooyan Afghari, Evita Papazikou, Rachel Talbot, Christelle Al Haddad, Md Rakibul Alam, Muhammad Adnan, Wisal Khattak, Eleonora Papadimitriou, Constantinos Antoniou, Tom Brijs and George Yannis

*Modelling the inter-relationship between driving task complexity, coping capacity and crash risk – From methodology to practical results using the i-DREAMS naturalistic driving database*

5753 Katerina Deliali, Anastastios Dragomanovits and George Yannis

*A novel methodology for crash hotspot identification and network-wide safety ranking*

8062 Antonios Trakakis, Konstantinos Apostoleris, Basil Psarianos, Marios Lytras and Konstantinos Kepaptsoglou

*Investigation of lateral acceleration on a large radius curve of a diamond interchange*

2073 Georgia Xanthopoulou, Athanasios Salamanis and Dionysios Kehagias

*Traffic Prediction for More Accurate Last-Mile Delivery Management*

9930 Vasiliki-Maria Perra, Xenofon Kitsios, Sotirios Theofanis and Maria Boile

*Investigating the contribution of digital tools in planning of passenger ferry transport services*

9133 Orly Barzilai, Havana Rika, Nadav Voloch, Maor Meir Hajaj, Orna Lavi Steiner and Niv Ahituv

*Using Machine Learning Techniques to Incorporate Social Priorities in Traffic Monitoring in a Junction with a Fast Lane*

## Programme Overview

### Session III (D) – Poster Session I

**Room: Mezzo**

**Session Chairman: M. Sartzetaki**

**Rapporteur: M. Sekadakis**

**Duration: 2 hours**

**Number of papers: 10**

1152 Sofia Xesfingi, Markos Tselekounis and Sotirios Karkalakos

*Mobility as a Service for Insurance Companies*

4996 Maria Morfoulaki, Glykeria Myrovali, Anna Laskou and Spyros Fragos

*COVID-19 impact on mobility habits of Adriatic - Ionian Region citizens*

8597 Christina Georgopoulou, Panagiotis Papantoniou

*Road freight transport disruptions due to Covid-19*

7038 Konstantinos Lykostratis, Alexandros Kokkalis, Georgios Botzoris and Ioannis Dokas

*Road Network Vulnerability in Natural Disasters. The Case of the Eastern Macedonia and Thrace Region*

590 Kilikidou Maria, Theocharis Tsenis, Alkiviadis Tromaras and Vassilios Kappatos

*Selection of Optimal Acoustic Emission Parameters for the Detection of Defects in Composite Materials Used in Rail Carbody Shells*

9136 Dimitris Tzanis, Kornilia Maria Kotoula, Vasileios Giannoudis and Georgia Aifadopoulou

*Traffic impact assessment from the redevelopment of Thessaloniki's Exhibition and Conference Centre – ConfExPark*

1198 Ioannis Delis and Konstantinos Kepaptsoglou

*Evaluation of Alternative Methods of Estimating Road Transport Origin-Destination Matrices Using TransCAD Software*

7932 Dimitrios Zavantis, Dimitrios Mandalozis, Nafaa Jabeur and Ansar Yasar

*The Importance of Implementation of Traffic Light Optimization System: A Greece Case Study*

6512 Sophia Vardaki

*Self-Explaining Roads: underlying theoretical constructs and implementation*

3450 Charis Chalkiadakis and Eleni Vlahogianni

*Investigating the Resilience of Links, Nodes, and Paths on an Urban Road Transportation Network*

### Official Dinner

**Thursday 21/09/2023**

**Time: 20:00pm**

**Place: AVLI Project Heraklion Restaurant/Bar**

**<https://www.facebook.com/AvliProject/>**

### Friday 22/09/2023 • Sessions

09:00–11:00

#### Session IV (A) – Climate Neutral and Energy Efficient Transport

**Room:** Plaza

**Session Chairman:** A. Ziakopoulos

**Rapporteur:** V. Petraki

**Duration:** 2 hours

**Number of papers:** 8

964 Christos Kalantzis and Basil Psarianos

*The effect of climate change on the development of the hydroplaning phenomenon. Application in Greece.*

1005 Anastasios Ziakas and Maria Boile

*Shipping energy transition: state-of-the-art and challenges for coastal shipping*

1372 Michalis Bratitsis, Maria Panou, Maria Papandreou and Stavros Kyzalas

*Electromobility in small islands*

4634 Eleftherios Sdoukopoulos, Vasiliki-Maria Perra, Maria Boile and Anastasios Ziakas

*Profiling the Greek coastal shipping network for identifying greening opportunities*

7232 Maria Papandreou, Michalis Bratitsis, Maria Panou, Stavros Kyzalas, Vasilios Vasiliadis, Nikola Dozic, Ioannis Logothetis, Adamantios Mitsotakis, Panagiotis Grammelis

*Elektron Project: Assessing Air Quality and Bioclimatic Conditions in the Touristic Hub of Rhodes during the Off-Peak Season*

2525 Maria Boile, Sotirios Theofanis, Eleftherios Sdoukopoulos and Konstantia Karagouni

*The environmental implications of seaports: a comprehensive literature review*

6382 Maria Lamprianidou, Fotini Kehagia and Magdalini Pitsiava-Latinopoulou

*The Transition to Electromobility in Greece*

7530 Attila Akac and Afroditi Anagnostopoulou

*An environmental assessment of international shipping: Preliminary benchmarking according to the requirements of MARPOL's Annex VI to decarbonize maritime industry*

## Programme Overview

### Session IV (B) – Transport Safety II Room: Park

**Session Chairman: D. Nalmpantis**

**Rapporteur: V. Amprasi**

**Duration: 2 hours**

**Number of papers: 7**

7810 Virginia Petraki, Stella Roussou, Christos Katrakazas, Md Rakibul Alam, Christelle Al Haddad, Constantinos Antoniou, Kris Brijs, Muhammad Adnan, Tom Brijs and George Yannis

*Evaluation of safety interventions on risky driving behavior using data from a novel naturalistic driving experiment*

3036 Maria Makari, Orfeas Karountzos, Georgios Kagkelis and Konstantinos Kepaptsoglou

*Spatial Distribution of Road Traffic Accidents in Crete: Identifying Accident Hotspots and Contributing Factors for Effective Road Safety Management*

6131 Alexandros Sdoukopoulos, Efthymios Papadopoulos, Eleni Verani, Ioannis Politis and Magda Pitsiava-Latinopoulou

*Evaluating the school zone implementation through szindex: The case of Thessaloniki, Greece*

1829 Katerina Folla, Marianthi Kallidoni and George Yannis

*Road Safety Key Performance Indicators in Greece*

2516 Marilena Merakou, Dimitrios Nikolaou, Katerina Folla and George Yannis

*Analysis of distraction characteristics due to mobile phone use in Greece*

2588 Dimosthenis Pavlou, Maria-Panagiota Adam, Vasiliki Amprasi, Panagiotis Papantoniou, Miltiadis Lazoglou and Vasiliki Pougkakioti

*The impact of climate change on road safety in a rural network: The case of Zagori*

8792 Christos Gioldasis, Emmanouil Orfanos, Aikaterini Maria Manoura, Maria Giannoulaki, Zoi Christoforou and George Yannis

*Risk analysis of Western Greece road network using the Highway Safety Manual*

### Session IV (C) – Pandemic's impact on Mobility

**Room: Phaedra**

**Session Chairman: M. Papadakaki**

**Rapporteur: A. Kontaxi**

**Duration: 2 hours**

**Number of papers: 6**

5789 Sotirios Theofanis and Maria Boile

*Impacts of the pandemic on container shipping and supply chains*

8946 Evangelos Spyrou and Vassilios Kappatos

*Integrated Passenger Routing System in Airport Common Areas for Preventing the Spread of COVID-19*



9387 Dimitrios Tolikas, Evangelos Spyrou and Vassilios Kappatos

*Agent Based Modelling of COVID-19 Transmission at an Airport*

9684 Ioannis Politis, Valia Aranitou, Gregoris Simos, Georgios Georgiadis, Anastasia Nikolaidou, Alexandros Sdoukopoulos, Manolis Manioudis, Milena Panagiotopoulou and Olga Zikopoulou

*The impact of COVID-19 pandemic containment measures on local communities: Conclusions from focus group discussions*

6414 Roman Klementsitz, Oliver Roider and Valerie Batiajew

*Recovering from Covid and step into a sustainable transport system at the same time. The case study of the Austrian alpine region of East Tyrol*

1848 Aikaterini-Panagiota Chrinta and Pantelis Kopelias

*Assessment of the impact of the temporary traffic management measures implemented during the Covid-19 period on the behaviour of commuters. The case of the city of Thessaloniki.*

### Session IV (D) – Poster Session II

**Room: Mezzo**

**Session Chairman: K. Apostoleris**

**Rapporteur: I. Karakikes**

**Duration: 2 hours**

**Number of papers: 9**

8234 Ioannis Politis, Georgios Georgiadis, Ioannis Fyrogenis, Alexandros Sdoukopoulos, Eleni Verani and Aristomenis Kopsacheilis

*Measuring and assessing the perceived quality of service and the future needs of bus public transport users in Thessaloniki, Greece*

2746 Afroditi Stamelou, Ioannis Mallidis, Georgia Ayfantopoulou and Despoina Tsavdari

*Assessment of the main reasons causing delays in various stages of a supply chain*

1047 Emmanouela Papadaki and Maria Papadakaki

*Emergency Department visits due to injury sustained in a road traffic incident: Evidence from a Greek general hospital*

3152 Foteini Mikiki, Paraskevi Tarani and Maria Daniil

*New synergies for urban mobility and public space policies: engaging local people*

3619 Spyridon Krouskos, Dimitrios Nikolaou, Katerina Folla and George Yannis

*Analysis of speeding characteristics in Greece*

4889 Georgios Kakalettris, Sotirios Karkalakos and Markos Tselekounis

*Road safety: Assessing the effect of passive driving behavior*

## Programme Overview

5838 Slobodan Mitrović, Marijana Petrović, Eleni Anoyrkati, Vladislav Maraš and Dimitrios Nalmpantis

*Scaling up the innovation mobility networks in Europe through collaboration platform*

7224 Georgia Ayfantopoulou and Maria Konstantinidou

*Designing long-term systemic transformation frameworks towards climate neutrality: the approach of Transition Super Lab in Western Macedonia region*

2079 Leonidas Bakouros, Ioannis Mallidis, Georgia Ayfantopoulou

*Literature review of machine learning algorithms for estimating the security specification values of perishable products*

### 11:00–11:30 • Coffee Break

### 11:30–14:00 • Session V

#### Session V (A) –Freight and Logistics

**Room:** Plaza

**Session Chairman:** I. Pagoni

**Rapporteur:** E. Magkos

**Duration:** 2,5 hours

**Number of papers:** 9

1190 Zisis Maleas, Georgia Ayfantopoulou and Josep-Maria Salanova

*A digital twin solution for evaluating Physical Internet inspired urban logistics models*

894 Ioannis Karakikes and Amalia Polydoropoulou

*Overcoming the Hurdles of Road Freight Transport Data in Greece: Challenges and Solutions*

5803 Sofoklis Dais and Georgia Ayfantopoulou

*Requirements and functional capabilities of data spaces in transport and logistics: The case of the Greek Transport & Logistics Observatory*

9681 Vasiliki-Maria Perra, Eleftherios Sdoukopoulos and Maria Boile

*Prospects of supporting cruise supply chain with local products through an e-marketplace in Greece*

2798 Vasileios Giannoudis, Elpida Xenou and Dr. Georgia Ayfantopoulou

*Investigation of the external environment factors affecting the logistics of the Greek Fashion Industry*

2845 Dimitrios Kapetanakis and Tatiana Moschovou

*Efficiency of the Mediterranean container ports: A Data Envelopment Analysis approach*

7408 Orfeas Karountzos, Konstantinos Kepaptsoglou and Orestis Schinas

*Developing an Integrated Efficiency Index for Coastal Shipping Networks Incorporating Connectivity, Spatial Analysis and Decarbonization Factors*

5899 Maria Morfoulaki, Maria Natalia Konstantinidou, Kornilia Maria Kotoula and Glykeria Myrovali

*Impact analysis framework for smart and clean passenger and freight mobility solutions*

9730 Sofoklis Dais and Georgia Ayfantopoulou

*Customer and retailer expectations from urban freight transport: A comparative analysis of the market in Thessaloniki, Greece*

### Session V (B) – AI & Big Data Analytics

**Room: Park**

**Session Chairman: J. Salanova**

**Rapporteur: E. Mintsis**

**Duration: 2,5 hours**

**Number of papers: 7**

1861 Chrysostomos Mylonas, Maria Stavara and Evangelos Mitsakis

*All you need is data: the added value of National Access Points as backbone European ITS data exchange infrastructures*

7693 Konstantinos Christidis, Vassilios Profillidis and George Botzoris

*Interurban Trip Mode Choice Models with the Use of Machine Learning*

540 Anna Kontini, Alexandros Papacharalampous and Michela Apruzzese

*Key Success Factors for implementing Mobility Data Spaces*

1657 Katerina Koliou and Ioanna Spyropoulou

*Exploring Spatio-Temporal Dynamics of Speed through Big Data Analysis and Clustering Techniques*

4329 Stella Roussou, Christos Katrakazas, Eva Michelaraki, Christelle Al Haddad, Md Rakibul Alam, Constantinos Antoniou, Tom Brijs and George Yannis

*Identification of safe driving behavior using an ensemble of machine learning algorithms and data from the i-DREAMS experiment*

7047 Theocharis Tsenis, Xristos Skliros, Vassilios Kappatos and Mihai Iovea

*Inspection of Ship Hulls with the Use of an Ultrasonic Autonomous Drone*

7314 Nikiforos Stamatiadis, Caitlin Pope, Reginald Souleyrette and Tony Fields

*Identifying work-related crashes through crash narrative mining*

### Session V (C) – Mobility services

**Room:** Phaedra

**Session Chairman:** M. Boile

**Rapporteur:** C. Chalkiadakis

**Duration:** 2,5 hours

**Number of papers:** 8

5607 Georgios Papaioannou, Amalia Polydoropoulou, Athena Tsirimpa, Ioannis Tsouros and Ioanna Pagoni

*Mobility as a Service in Rural & Island Areas: A case study for Greece*

5813 Christos Gkartzonikas and Loukas Dimitriou

*Rethinking Shared Mobility: Investigating Young People's Attitudes towards Demand-Responsive Transportation and Ride-Matching App*

7407 Maria Repanou, Fotini Kehagia and Magdalini Pitsiava-Latinipoulou

*Investigating drivers' choices in car-sharing services*

8600 Chrysa Vizmpa, George Botzoris, Vassilios Profillidis and Alexandros Kokkalis

*Micromobility in the 15-Minute City: Challenges and limitations*

1127 Andreas Nikiforiadis, Panagiotis Tzenos, Thanasis Tolikas, Alexandros Siomos, Josep Maria Salanova Grau and Georgia Ayfantopoulou

*Micromobility city dashboard: Monitoring safety-related aspects and establishing restrictions*

6402 Georgios Papaioannou, Amalia Polydoropoulou, Athena Tsirimpa and Ioanna Pagoni

*A hybrid latent variable choice model for innovative maritime transport services in the Aegean Archipelago*

4193 Despoina Tsavdari, Andreas Nikiforiadis, Vasilis Mizaras, and Georgia Ayfantopoulou

*Barriers and expectations in MaaS: Users' and stakeholders' perspective*

3173 Maria Chatziathanasiou, Maria Morfoulaki and Natalia Maria Constantinidou

*A KPI framework for assessing knowledge performance for sustainable mobility solutions*

**13:00-14:00 • Lunch Break**



### 14:00-16:00 • Session VI

#### Session VI (A) – Transport Safety III & C-ITS

**Room: Park**

**Session Chairman: D. Pavlou**

**Rapporteur: D. Nikolaou**

**Duration: 2 hours**

**Number of papers: 6**

354 Konstantinos Makrydakis, Virginia Petraki, Armira Kontaxi and George Yannis

*Cost Benefit Analysis of reducing speed limits at the Greek interurban road network*

3534 Chiara Gruden, Laura Brigita Parežnik, Matjaž Šraml and Marko Renčelj

*An exploratory review on road safety management*

5527 Panagiotis Papantoniou, Kalliopi Sytermegia, Eva Michelaraki and Dimosthenis Pavlou

*Correlation of mobile phone use with harsh events while driving in rural areas*

6984 Stella Nikolaou, Ioannis Gragkopoulos, Ioannis Tsetsinas and Jacint Castells

*A C-ITS based system for enhancing cyclists' safety*

7755 Areti Kotsi, Vasiliki Klimi and Evangelos Mitsakis

*An innovative tool for C-ITS-enabled dynamic traffic and fleet management as a service*

5409 Eva Michelaraki, Stella Roussou, Christos Katrakazas, Md Rakibul Alam, Christelle Al Haddad, Constantinos Antoniou, Tom Brijs and George Yannis

*How do task complexity and coping capacity influence risk? Findings from a novel naturalistic driving experiment in Greece and Germany*

#### Session VI (B) – Transportation planning

**Room: Plaza**

**Session Chairman: C. Gartzonikas**

**Rapporteur: S. Roussou**

**Duration: 2 hours**

**Number of papers: 7**

927 Maria Boile, Vasiliki-Maria Perra, Aggelos Aggelakakis, Peter Medica, Elena Banci and Vanessa Sanson

*Blue innovation in Greece and the Adriatic – Ionian Region: Solutions and recommendations for enhancing cooperation.*

2600 Nikiforos Stamatiadis, Daria Korostina, Wang Teng and Reginald Souleyrette

*Evaluation of a scoring approach for pedestrian and bicycle projects*

## Programme Overview

3754 Matina Loukea, Eleni Chalkia and Lazaros Georgiadis

*Status of national policies and recommendations for the integration of the EU Strategy on Green Infrastructure into transport infrastructure development in EU Member States*

3591 Katerina Kattavenaki, Ioanna Pagoni and George Yannis

*Meta-analysis of the ticket price elasticity for air travel demand*

4938 Petros Rodakinias and Nikolaos Gavanias

*Public transport in blended space: Implications and policy considerations for public transport in the Industry 4.0 era*

5267 Vasiliki Amprasi, Panagiotis Papantoniou, Dimosthenis Pavlou, Theodoros Mavrogeorgis and Efthimios Bakogiannis

*Investigation of international requirements of parking policies in urban areas*

5373 Apostolos Anagnostopoulos, Fotini Kehagia and Georgios Aretoulis

*Prediction models for roundabout capacity in Greece*

### **Session VI (C) – Simulation and Modelling II**

**Room: Phaedra**

**Session Chairman: A. Anagnostopoulou**

**Rapporteur: A. Akac**

**Duration: 2 hours**

**Number of papers: 7**

1811 Eleni Mantouka, Christos Konstantinou, Charis Chalkiadakis, Eleni Vlahogianni and Petros Fortsakis

*Green Driving: From Fuel Consumption modelling to Recommendations and Route Planning*

5110 Joe Preece, Qian Fu and Edward Shelley

*Exploring the Travel Patterns and Behaviours of University of Birmingham Staff and Students: A Sentiment and Topic Analysis Study*

6284 Konstantinos Apostoleris and Epameinontas Theodorakos

*Influence on vehicle traffic speed before and after commercial development construction and operation in four-lane urban arterial highway*

7893 Paraskevi Sarri, Ioannis Kaparias, John Preston and David Simmonds

*Modelling New Transport Vehicle Technologies and Business Models to Forecast Regional Land Use and Accessibility Impacts*

8290 Lukas Merk, Yun-Pang Flötteröd, Andreas Leich and Sten Ruppe

*Developing an sensor agnostic Infrastructure-Based Control Approach for Crossroad Assistance using Simulation*

8993 Panagiotis Tzouras, Parmenion Delialis, Orfeas Karountzos, Konstantinos Kouretas, Vasiliki Gkatzelia, Stefanos Tsigdinos and Konstantinos Kepaptsoglou

*A dashboard to explore the spatiotemporal traffic flow variations and mobility patterns in Athens, Greece*

4291 Maria Oikonomou, Apostolos Ziakopoulos and George Yannis

*Implementing traffic simulation for road safety assessment: A systematic literature review*

### 16:00–16:30 • Closing Ceremony

#### Closing Ceremony

- Short presentation and announcement for TRA Visions 2024

**Room: Plaza**

**Session Chairman: E. Bekiaris**

**Rapporteur: P. Papantoniou, I. Pagoni**

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