



International Conference on Sustainable Transport

Opatija, Croatia, 29 September – 1 October 2022
HOTEL **AMBASADOR**¹ | HOTEL **IMPERIAL**

CONFERENCE & EVENTS PROGRAMME

Organisers and co-organisers



Univerza v Ljubljani
Fakulteta za pomorstvo in promet



LÜRSSEN

¹ Hotel Ambassador is the venue for all conference events, except the Cocktail Party which will be held at the Hotel Imperial.

Thursday, 29 September 2022

CONFERENCE RECEPTION DESK

08:30 – 09:00	Registration
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CONGRESS HALL

09:00 – 09:15	Opening of Scientific and Specialist Sessions
09:15 – 10:00	Plenary lecture Prof. Dr. Bettar el Moctar Director of the Institute of Ship Technology and Ocean Engineering, Director of Model Basin Development Center for Ship Technology and Transport Systems, University of Duisburg-Essen Challenges and Perspectives for the Reduction of Ship Emissions

TERRACE/LOBBY

10:00 – 10:30	Coffee break
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CONGRESS HALL

Maritime and Inland Transportation: Specialist Session I	
Chairs: Prof. Dr. Đani Mohović , University of Rijeka, Faculty of Maritime Studies, Prof. Dr. Mate Barić , University of Zadar, Maritime Department	
10:30 – 10:45	<u>Nermin Hasanspahić</u> , Srđan Vujičić, Miho Kristić, Maro Car: Near-Miss in Shipping: A Sign of Resilience or Vulnerability?
10:45 – 11:00	Đani Mohović, Robert Mohović, <u>Antonio Blažina</u> , Marko Šuljić: Use of Fast Time Simulation Tool for Ship Manoeuvre Plan
11:00 – 11:15	Marina Brodarić Ivačić, <u>Luka Vukić</u> : The Impact of Covid-19 Pandemic on the Financial Indicators of Maritime Companies in Croatia
11:15 – 11:30	<u>Tanja Brcko</u> , Jure Srše, Marko Perković, Peter Vidmar: Criteria for Public Transport on the Drava River
11:30 – 11:45	<u>Nermin Hasanspahić</u> , Marijana Pećarević, Niko Hrdalo, Leo Čampara: Analysis of Ballast Water Discharged in the Port According to Origin and Ship Details (a Case Study)
11:45 – 12:00	<u>Bernard Vušković</u> , Igor Rudan, Matthew Sumner: Environmental/Safety Requirements for LNG Bunkering

Thursday, 29 September

CONFERENCE HALL MAGNOLIJA

ITS and Telecommunications: Specialist Session I	
Chairs: Prof. Dr. Jasmin Ćelić , University of Rijeka, Faculty of Maritime Studies, Dr. Nikola Lopac , University of Rijeka, Faculty of Maritime Studies	
10:30 – 10:45	<u>David Kundih</u> , Nikola Biškup, Krešimir Buntak: Digital Transformation of Sustainable Mobility Systems Using Artificial Neural Networks
10:45 – 11:00	<u>Marija Jović</u> , Edvard Tijan, Burkhard Lemper, Frank Arendt: Technological Aspects of Digital Transformation in the Maritime Transport Sector
11:00 – 11:15	<u>Neven Grubišić</u> , Tomislav Krljan: Developing General Transit Feed Specification Data for Modeling and Simulation of Public Transit Network: A Case Study of Rijeka, Croatia
11:15 – 11:30	Siniša Vilke, Krešimir Vidović, Neven Grubišić, Jasmin Ćelić, <u>Frane Tadić</u> : Innovative Methods of Traffic Management in the City of Rijeka
11:30 – 11:45	Zdravko Paladin, <u>Nexhat Kapidani</u> , Piero Scrima, Georgios Vosinakis, Guillaume Hajduch, Marios Moutzouris, Christos Bolakis, Alkiviadis Astyakopoulos: Maritime Information Sharing Environment Deployment Using the Advanced Multilayered Data Lake Capabilities: EFFECTOR Project Case Study
11:45 – 12:00	<u>Ivan Panić</u> , Jasmin Ćelić, Aleksandar Cuculić: Power Consumption Analysis of Wireless IoT Devices

RESTAURANT

12:00 - 13:15	Lunch
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CONGRESS HALL

13:15 – 13:30	Keynote lecture Ms. Maja Bakran Marcich Deputy Director General, Directorate General for Mobility and Transport of the European Commission Putting European Mobility on Track for a Sustainable Future
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CONGRESS HALL

Maritime and Inland Transportation: Specialist Session II	
Chairs: Prof. Dr. Srdan Vujičić , University of Dubrovnik, Maritime Department, Dr. Jakša Mišković , University of Split, Faculty of Maritime Studies	
13:30 – 13:45	Mohan Saini, <u>Anastasia Efimova</u> : Assessing Carbon Emissions Reduction by Incorporating RFID Tracking System During Transit: A Case Study

Thursday, 29 September

CONGRESS HALL cont.

13:45 – 14:00	Alen Jugović, Daniela Gračan, <u>Marina Barkidžija Sotošek</u> : Environmental Requirements for Passenger Terminal Development (Case Study Zadar County)
14:00 – 14:15	Radoslav Radonja, <u>Matija Šarić</u> , Ivan Plješa, Vladimir Pelić: Effects of Global Warming and Increasing Maritime Traffic on Eutrophication in the Northern Adriatic Sea
14:15 – 14:30	<u>Rainer Müller</u> : Strengthening Resiliency Against Extreme Weather Events
14:30 – 14:45	<u>Mark Černela</u> : Encouraging the Use of Renewable Energy Sources through Remodeling of Port Tariffs on Inland Waterways - Port of Vukovar Case Study
14:45 – 15:00	<u>Srđan Vujičić</u> , Nermin Hasanspahić, Martina Hrnić: Insights into MET Practice - Exploring the Position of Instructors, Assessors, Supervisors

CONFERENCE HALL MAGNOLIJA

Logistics and Supply Chain: Specialist Session I	
Chairs: Prof. Dr. Ivana Martinčević , University North; Dr. Mladen Jardas , University of Rijeka, Faculty of Maritime Studies	
13:30 – 13:45	<u>Bennet Zander</u> , Kerstin Lange: Beneficial Impacts of Digital Twins on Smart Factory Logistics: A Case Study for the Prefabricated Construction Industry
13:45 – 14:00	<u>Christian Vollrath</u> , Bernd Nieberding: New Approaches to Business Field Extension in Media Logistics: Cooperative Parcel Delivery
14:00 – 14:15	<u>Patric Stanoiu</u> , Luminita Parv: Machine Learning Validation Solution in Supply Chain Management
14:15 – 14:30	<u>Ivana Martinčević</u> , Katerina Fotova Čiković, Vesna Sesar: Influence of Blockchain Technology Application on Sustainable Supply Chain: A Review and Bibliometric Analysis
14:30 – 14:45	Dario Ogrizović, Ana Perić Hadžić, Mladen Jardas, <u>Valentina Šutalo Šamanić</u> : Green Travel Planner and Infomobility Modular Software Platform
14:45 – 15:00	<u>Matija Kovačić</u> , Maja Mutavdžija, Krešimir Buntak, <u>Bruno Cesarec</u> : The Impact of the Circular Economy on the Supply Chain - A Systematic Review of the Literature

TERRACE/LOBBY

15:00 – 15:30	Coffee break
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Conference Journals/Sponsors



sustainability



logistics



Thursday, 29 September

CONGRESS HALL

Maritime and Inland Transportation: Specialist Session III Chairs: Prof. Dr. Nermin Hasanspahić , University of Dubrovnik, Maritime Department, Dr. Goran Vizentin , University of Rijeka, Faculty of Maritime Studies	
15:30 – 15:45	<u>Roko Glavinović</u> , Luka Vukić, Ivan Peronja, Gorana Jelić: Hydrogen-Powered Ferries Challenges
15:45 – 16:00	Nataša Kovač, <u>Špiro Ivošević</u> , Nikola Momčilović: The Structural Integrity of Aging Bulk Carrier's Inner Bottom Plating with Respect to Corrosion
16:00 – 16:15	<u>Darijo Mišković</u> : MASS IV: Cost-Effectiveness and Reliability of the Concept
16:15 – 16:30	Maro Ćorak, <u>Srđan Vujičić</u> , Joško Parunov, Tamara Petranović: Practice Based Operability Limiting Criteria in the Adriatic Sea
16:30 – 16:45	Peter Vidmar: Risk Assessment Outcomes for the Maritime Oil Trade
16:45 – 17:00	<u>Miljen Sirotić</u> , Alen Jugović, Tanja Poletan Jugović, Ivica Krmek: Sustainable Governance of Seaports as Key Components of the Emerging Concept of the Blue Economy: A Critical Review of the Maritime Industry and Future Research Directions

CONFERENCE HALL MAGNOLIJA

Sustainable Mobility: Specialist Session I Chairs: Prof. Dr. Merica Slišković , University of Split, Faculty of Maritime Studies; Prof. Dr. Predrag Brlek , University North	
15:30 – 15:45	<u>Valentina Šutalo Šamanić</u> , Mladen Jardas, Ana Perić Hadžić, Dario Ogrizović: E-CHAIN Web Platform for Sustainable Passenger Transport
15:45 – 16:00	Predrag Brlek, Ana Globočnik Žunac, <u>Nikola Biškup</u> : Employee Sustainable Mobility Management
16:00 – 16:15	<u>Vladimir Šimović</u> , Katarina Stojanović, Robert Maršanić: Analysis of Student and Employee Mobility Towards the University Campus and Integration with Urban Areas
16:15 – 16:30	Katarina Balić, Dražen Žgaljić, <u>Merica Slišković</u> : Key Performance Indicators (KPIs) of the Top 20 European Passenger Ports
16:30 – 16:45	<u>Dea Aksentijević</u> , Gorana Mudronja, Alen Jugović: Nautical Tourism Ports in the Function of Sustainable Development of Croatian Islands
16:45 – 17:00	<u>Danijela Tuljak-Suban</u> , Patricija Bajec: An Adaptive Multi-Criteria Hybrid DEA Approach to Upgrade an Existing Bike-Sharing System with Electric Bikes: The Case of Ljubljana City Center

Friday, 30 September 2022

CONFERENCE RECEPTION DESK

08:30 – 09:00	Registration
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CONGRESS HALL

Maritime and Inland Transportation: Specialist Session IV Chairs: Dr. Tanja Brcko , University of Ljubljana, Faculty of Maritime Studies and Transport; Prof. Dr. David Brčić , University of Rijeka, Faculty of Maritime Studies	
09:00 – 09:15	<u>Jakša Mišković</u> , Ivica Pavić, Josip Kasum: Analysis of the Use of Charts on SOLAS and Non-SOLAS Vessels from the Point of View of Navigational Safety
09:15 – 09:30	<u>Miho Kristić</u> , Srđan Žuškin, Nermin Hasanspahić, Srđan Vujičić: Reliability and Acceptance of Near-Miss System in Shipping
09:30 – 09:45	Alen Jugović, Helga Pavlić Skender, <u>Petra Zaninović</u> : The Impact of Port Infrastructure and Container Traffic on the Regional Development: Evidence from Port of Rijeka
09:45 – 10:00	<u>Rikard Miculinić</u> , Goran Vukelić: Additive Manufacturing - A Disruptive Technology for the Maritime Spare Parts Supply Chain

CONFERENCE HALL MAGNOLIJA

Smart and Sustainable Cities: Specialist Session I Chairs: Prof. Dr. Ana Globočnik Žunac , University North; Prof. Dr. Predrag Brlek , University North	
09:00 – 09:15	Katarina Stojanović, Robert Čoban, Dejan Čavić, <u>Ivan Cvitković</u> : Urban Development Through a Smart City as a Sustainable Ecosystem
09:15 – 09:30	<u>Saša Petar</u> , Elie Mina, Husein Sakerwala, Mladen Jardas: Smart Security Logistics of Port Cities
09:30 – 09:45	<u>Maja Mutavdžija</u> , Matija Kovačić, Krešimir Buntak: The Influence of ISO 37120 and ISO 37122 Indicators on Smart City Maturity: A Case Study of Croatian Cities
09:45 – 10:00	<u>Ljudevit Krpan</u> , Ivan Cvitković, Tanja Poletan Jugović, Ines Kolanović: Spatial Planning Documents as a Basic Precondition for the Development of a Quality Transport Infrastructure System

CONGRESS HALL

10:00 – 11:00	SuTra 2022 Conference Opening Ceremony
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Friday, 30 September

TERRACE/LOBBY

11:00 – 11:30	Coffee Break
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CONGRESS HALL

Professional Panel I: Nautical and Cruising Tourism in the Function of Sustainable Development Moderator: Prof. Dr. Alen Jugović , Dean, University of Rijeka, Faculty of Maritime Studies	
11:30 – 12:30	Panelists: Prof. Dr. Sandra Jakovljević , Dean, University of Rijeka, Faculty of Tourism and Hospitality Management Mr. Đoni Štambuk , Assistant Director, Commercial-operational affairs and marketing, Port Authority Zadar Mr. Sean Lisjak , President, Association of Marinas, Croatian Chamber of Economy Dr. Donald Schiozzi , Director, Port Authority Rovinj Mr. Robert Pende , Assistant Minister, Ministry of Tourism and Sports Mr. Kristijan Pavić , Chairman of the Board, ACI, Rijeka

CONFERENCE HALL MAGNOLIJA

Road Transport: Specialist Session I Chairs: Prof. Dr. Ljudevit Krpan , University North, Prof. Dr. Krešimir Buntak , University North	
11:30 – 11:45	<u>Tomislav Krljan</u> , Ana Grbčić, Tanja Poletan Jugović, Nikola Lopac: Performance Evaluation of Advanced Algorithms for Traffic Flow Forecasting
11:45 – 12:00	<u>Kerstin Lange</u> , <u>Bennet Zander</u> : Beyond High and Heavy: An Open Database Approach Facilitating the Transportation Planning Process
12:00 – 12:15	<u>Ivan Cvitković</u> , Tanja Poletan Jugović, Ines Kolanović, Ljudevit Krpan: Population Mobility Trends and Road Traffic Safety in the Republic of Croatia Respecting the Covid-19 Pandemic
12:15 – 12:30	<u>Goran Kos</u> , Predrag Brlek, Zlatko Sovreski, Mario Šimunović: Effective Solutions of Traffic Calming in Urban Areas

CONGRESS HALL

Professional Panel II: Analysis of the Global Maritime Market with the Impact on Global Economy Moderator: Prof. Dr. Srđan Žuškin , University of Rijeka, Faculty of Maritime Studies	
12:30 – 13:30	Panelists: Mr. Marin Škufca , Chief Executive Officer and co-founder, Liburnia Maritime Agency Mr. Mario Štefanić , General Manager, Jadroagent, Rijeka Mr. Ivić Vodopija , Managing director, Maersk Croatia Prof. Dr. Jakov Karmelić , General Manager, CMA CGM Croatia Prof. Dr. Alen Host , Dean, University of Rijeka, Faculty of Economics and Business

Friday, 30 September

CONFERENCE HALL MAGNOLIJA

Transport and Traffic Problems and Solutions: Specialist Session I Chairs: Prof. Dr. Neven Grubišić , University of Rijeka, Faculty of Maritime Studies, Prof. Dr. Dražen Žgaljić , University of Rijeka, Faculty of Maritime Studies	
12:30 – 12:45	<u>Milan Pavlović</u> , Miloš Ristić, Petar Đekić, Biljana Milutinović: Advanced Image Processing Based System for Obstacle Detection on Rail Tracks
12:45 – 13:00	<u>Bojan Jovanović</u> , Kamer Shabanaj, Marko Ševrović: Conceptual Model for Determining the Statistical Significance of Predictive Indicators for Bus Transit Demand Forecasting
13:00 – 13:15	<u>Ante Klečina</u> , Predrag Brlek, Ivan Cvitković, Kristijan Solina: The Proposal of the New Categorization of Nodes and Trains - Case Study of the Čakovec - Varaždin - Lepoglava - Zabok - Zagreb Future High-Capacity Railway Line
13:15 – 13:30	<u>Mladen Turuk</u> , Davor Grgurević, Krešimir Buntak: Analysis of the Transport and Warehousing Sector in the Republic of Croatia

RESTAURANT

13:30 - 14:30	Lunch
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CONGRESS HALL

Professional Panel III: Technology Development for Greener Maritime and Land Transportation Moderator: Prof. Dr. Vlado Frančić , University of Rijeka, Faculty of Maritime Studies	
14:30 – 15:30	Panelists: Prof. Dr. Josip Orović , University of Zadar, Maritime Department Mr. Ante Klečina , Chief Coordinator, Alliance for Railways Prof. Emer. Dr. Frano Barbir , President, Croatian Hydrogen Association Dr. Predrag Čudina , Director, Classis Ship Design and Consulting

CONGRESS HALL

Professional Panel IV: Maritime Education Challenges Moderator: Prof. Dr. Ana Perić Hadžić , University of Rijeka, Faculty of Maritime Studies	
15:30 – 16:30	Panelists: Prof. Dr. Peter Vidmar , Dean, University of Ljubljana, Faculty of Maritime Studies and Transport Prof. Dr. Špiro Ivošević , Dean, University of Montenegro, Faculty of Maritime Studies Prof. Dr. Pero Vidan , Dean, University of Split, Faculty of Maritime Studies Prof. Dr. Srdan Vujičić , Head of Maritime Department, University of Dubrovnik Prof. Dr. Luka Grbić , Head of Maritime Department, University of Zadar

HOTEL IMPERIAL CAFE

17:00 - 20:00	Cocktail Party
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Saturday, 1 October 2022

CONFERENCE RECEPTION DESK

08:30 - 09:00	Registration
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CONGRESS HALL

09:00 – 10:00	Professional Panel V: Opportunities for Connecting the Academic Community and the Economy for Scientific and Professional Projects Moderator: Prof. Dr. Krešimir Buntak , University North
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TERRACE/LOBBY

10:00 - 10:30	Coffee Break
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CONGRESS HALL

Panel Discussion Moderator: Prof. Dr. Krešimir Buntak , University North	
10:30 – 11:15	Panelists: Prof. Dr. Aleksandra Kostić-Ljubisavljević , Vice Dean, University of Belgrade, Faculty of Transport and Traffic Engineering Mr. Matej Plenča , University of Rijeka, Faculty of Maritime Studies Mr. Goran Lampelj , Civinet/Odraž Ms. Petra Grgasović , EIT Urban Mobility RIS Hub Hrvatska Prof. Dr. Predrag Brlek , Civitas Educational Network EU

CONGRESS HALL

11:30	Closing Ceremony
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Partnering Societies



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