

# RelStat-2022

“RELIABILITY and STATISTICS in TRANSPORTATION and COMMUNICATION”  
(RelStat-2022)

## Agenda

**Date:** 19-22 October 2022

**Time:** 9:00 – 18:00

**Organizer:** Transport and Telecommunication Institute

## Keynote Speakers



**DR. ENRIQUE ONIEVA**

Professor, Vice-Dean for International Relationships and Online Teaching, Deusto, Spain

Artificial Intelligence in Transport: state of the art and future trends



**PROF. DR. WALTER NEU**

Institute of Hyperloop Technology, Board of Directors, University of Applied Sciences Emden/Leer

CargoTube: Next generation sustainable transportation by Hyperloop technologies



**VLADISLAV CHASCHIN**

Deputy Head of Technical Department, SJSC "Latvijas gaisa satiksme", Latvia

A paradigm shift in Modern Air Traffic Management: better now than never



**JELENA POPOVA**

Associate Professor, Transport and Telecommunication Institute, Latvia

Economic Substantiation of Smart City Dimensions

Date	Time	Virtual room #1 (Aud.130)	Virtual room #2 (Aud. I)	Virtual room #3 (Aud. II)
20.10.2022	09:00 – 10:00	Registration for RelStat'22		
	10:00 – 12:30	Opening and Plenary Session (Aud.130)		
	12:30 – 13:30	Lunch		
	13:30 – 15:30	Parallel Sessions		
		Session 1 AI in Transportation	Session 2 Aviation	Session 6 Economics & Business
	15:30 – 15:45	Break		
	15:45 – 17:15	Parallel Sessions		
		Session 7 Education and Training in Engineering	Session 2 Aviation	Special Session ePcenter Project
18:30	Dinner (Restaurant "LIDO")			
End of day 1				
21.10.2022	10:00 – 12:30	Parallel Sessions		
		Session 3 Smart Logistics	Session 5 Smart Transport and Mobility	Session 4 Smart Technology
	12:30 – 13:30	Lunch		
	13:30 – 15:15	Parallel Sessions		
		Session 6 Economics & Business	Session 4 Smart Technology	
	15:30 – 16:00	Closing remarks, end of the Conference		
16:30 – 18:30	Old Riga Town (Guided Walking Tour)			
22.10.2022	10:00 – 13:00	Social Program (Riga Motor Museum)		

**PLENARY SESSION**  
**(AUD.130)**

Moderator:	TTI Chairwoman of the Board, Prof. Irina Yatskiv (Latvia)	
10:00 – 10:10	Welcome speech	<b>Dr. sc. pol. Juris Kanels</b> , TTI Rector
10:10 - 12:30	Artificial Intelligence in Transport: State of the Art and Future Trends	<b>Prof. Dr. Enrique Onieva</b> , Vice-Dean for International Relationships and Online Teaching, Deusto (Spain)
	CargoTube: Next Generation Sustainable Transportation by Hyperloop Technologies	<b>Prof. Dr. Walter Neu</b> , Institute of Hyperloop Technology, Board of Directors, University of Applied Sciences Emden/Leer (Germany)
	Train Scheduling Algorithm in Nordic Railway Company	<b>Dr. Roman Taranov</b> , Director in Artificial Intelligence & Data of Deloitte (Latvia)
	A Paradigm Shift in Modern Air Traffic Management: Better Now Than Never	<b>Vladislav Chaschin</b> , SISC "Latvijas gaisa satiksme" Deputy Head of Technical Department (Latvia)
12:30 - 13:30	Break	
13:30 – 17:15	<b>Parallel Sessions</b>	

**THURSDAY, OCTOBER 20**

<b>THURSDAY, OCTOBER 20</b>			
<b>Time</b>	<b>Session 1 (Aud. 130)</b>	<b>Session 2 (Aud. I)</b>	<b>Session 6 (Aud. II)</b>
	<p><b>AI in Transportation</b> Moderators: <i>Prof. Dmitry Pavlyuk (Latvia)</i> <i>Prof. Dr. Enrique Onieva (Spain)</i></p>	<p><b>Aviation</b> Moderators: <i>Prof. Igor Kabashkin (Latvia)</i> <i>Prof. Aleksandr Grakovski (Latvia)</i></p>	<p><b>Economics &amp; Business</b> Moderators: <i>Prof. Inna Stecenko (Latvia)</i> <i>Prof. Irina Kuzmina-Merlino (Latvia)</i></p>
13:30	Effect of Spatio-Temporal Granularity on Demand Prediction for Deep Learning Models - <i>Ken Koshy Varghese, Sajjad Mahdaviabbasabad, Guido Gentile (Italy)</i>	Value Entity Recognition Task in the Air Transportation on the Base of E-Texts Analysis- <i>Olga Zervina, Yulia Stukalina, Dmitry Pavlyuk (Latvia)</i>	Effective Change Management and Continues Improvements on Smart Governments - <i>Ioseb Gabelaia, Abdelrahman Sheri (Latvia; Egypt)</i>
- 15:30	Autonomous Mobile Robot Navigation Issues in Terms of Obstacles Detection in Disrupting Operating Conditions Case Study - <i>Robert Giel; Sylwia Werbińska-Wojciechowska; Jakub Malewicz (Poland)</i>	Model of decision support system with artificial intelligence for aircraft fuselage damage assessment - <i>Irina Bodrova (Russia)</i>	Advances in the Research Domain of Crowdfunding: A Systematic Literature Review - <i>Oksana Adlere, Svetlana Saksonova (Latvia)</i>
	Contribution Determination of The Statistical Loading of The Crossroads by Means of The YOLO5 Neural Network - <i>Andrei Kazinski, Aliaksandr Puptsau (Belarus, Lithuania)</i>	Continuing Airworthiness Monitoring and Control as a Part of Aircraft Operation Ecosystem - <i>Leonid Shoshin; Vitalii Susanin (Russia) online</i>	The Impact of User-Generated Content on Customer Purchase Intentions of Online Shoppers - <i>Ioseb Gabelaia (Latvia)</i>
	Spatio-Temporal Attention Based Graph Convolutional Networks – a Systematic Review - <i>Jelena Larina, Dmitry Pavlyuk (Latvia)</i>	Factors Influencing Value Proposition in the Aviation Industry in the Context of Customer Centric Digital Economy - <i>Olga Zervina, Yulia Stukalina (Latvia)</i>	Internet Retailers' Valuation: Why Intangible Assets Matters and How to Assess Them - <i>Neli Abramishvili, Anthony Herman, Nadezhda Lvova, Nino Pailodze, Ekaterina Yanshina (Russia; Georgia)</i>
	Autonomous Cargo Bike Fleets-Approaches for AI-Based Trajectory Forecasts of Road Users - <i>Stefan Sass, Markus Höfer, Michael Schmidt, Stephan Schmidt (Germany)</i>	Drawbacks of Demand Accuracy Assessment Models on the Example of Slow Moving Spare Parts in Civil Aviation - <i>Danila Larin (Russia)</i>	Accounting Outsourcing: Increasing the Possibility of its Use in Latvia - <i>Natalia Konovalova, Ludmila Rozgina (Latvia)</i>
<b>15:30 -15:45</b>	<b>Break</b>		

<b>Time</b>	<b>Session 7 (Aud. II)</b>	<b>Session 2 (Aud. I)</b>	<b>Special Session ePcenter (Aud. 130)</b>
	<p><b>Session 7</b> <b>Education and Training in Engineering</b> <i>Moderators:</i> <i>As. Prof. Juris Kanels (Latvia)</i> <i>Prof. Aliaksandr Puptsau (Lithuania)</i></p>	<p><b>Session 2</b> <b>Aviation</b> <i>Moderators:</i> <i>Prof. Aleksandr Grakovski (Latvia)</i> <i>Prof. Dmitry Pavlyuk (Latvia)</i></p>	<p><b>Special Session</b> <b>ePcenter Project</b> <b>Moderators:</b> <i>Prof. dr. Walter Neu (Germany)</i> <i>Prof. Irina Yaskiv (Latvia)</i></p>
15:45 - 17:15	Application of Project Management Principles When Adapting the Study Subject to the E-Learning Environment - <i>Olga Navickienė, Aidas Vasilis Vasiliauskas (Lithuania)</i>	Aircraft Intellectual Records Management System - <i>Vitalii Susanin, Leonid Shoshin (Russia)</i>	Relevance of Regulatory and Data Availability Issues to Transport and Logistics Processes, Based on the Insights of the ePcenter Project - <i>Darius Bazaras, Viktor Skrickij, Algirdas Šakalys Raimondas Šakalys (Lithuania)</i>
	Blended Learning as one of the Factors for Attractiveness of Studies: Case Study of KTK - <i>Lina Girdauskiene; Giedre Adomaviciene; Judita Streimikiene (Lithuania)</i>	Impact of Unpredictable Major Events on Aviation Industry: Challenges, Benefits and Prospects for Recovery - <i>Iyad Alomar, Viktorija Gorodnicka (Latvia)</i>	Lessons Learned from EC-funded Projects in Earth Friendly Freight Transportation - <i>Irina Yatskiv, Thomas Brauner, Vladimir Petrovs, Aleksejs Vesjolijs (Latvia; Germany)</i>
	Online Collaborative Learning: Use and Efficiency Evaluation - <i>Ryhor Miniankou; Aliaksandr Puptsau (Lithuania)</i>	Jet Engine Health Assessment Using EGT Time Series - <i>Vladislav Zhdanov, Alexander Grakovski (Russia; Latvia)</i>	A Modelling System for Evaluating Options for Building and Using a Fleet of Battery Electric Trucks - <i>Irina Yatskiv (Jackiva), Vladimirs Petrovs, Jurijs Tolujevs, Aleksejs Vesjolijs (Latvia)</i>
	Human resources management and training in aviation - <i>Federico de Andreis (Italy)</i>	Opportunities and Challenges for Sustainable Aviation Development in Latvia - <i>Sandra Jekabsons, Ilze Sproģe (Latvia)</i>	
	Peculiarities of Implementation of Advanced Distributed Learning in Lithuanian Armed Forces - <i>Aidas Vasilis Vasiliauskas, Ieva Meidutė - Kavaliauskienė, Olga Navickienė (Lithuania)</i>	Option models in candidate's selection for predictive maintenance in maintenance, repairs, and overhaul organizations - <i>Roman Fedorov, Dmitry Pavlyuk, Lubov Rozhkova (Russia; Latvia)</i>	
	Services Delivery Model for Education-as-a-Service Based Framework - <i>Boriss Misnevs, Igor Kabashkin (Latvia)</i>		
18:30	<b>Dinner (Restaurant “LIDO”)</b>		
<b>End of day 1</b>			

**FRIDAY, OCTOBER 21**

<b>Time</b>	<b>Session 3 (Aud. I)</b>	<b>Session 5 (Aud. II)</b>	<b>Session 4 (Aud. 130)</b>
	<p><b>Smart Logistics</b> Moderators: <i>Asoc. Prof. Genadijs Gromovs (Latvia)</i> <i>Prof. Gunnar Prause (Germany)</i></p>	<p><b>Smart Transport and Mobility</b> Moderators: <i>Prof. Eftihia Nathanail (Greece)</i> <i>Prof. Paulius Skačkauskas (Lithuania)</i></p>	<p><b>Smart Technology</b> Moderators: <i>Prof. Boriss Misnevs (Latvia)</i> <i>Prof. Jarosław Sugier (Poland)</i></p>
	Impact of Stockout-Based Substitution on Optimal Inventory in Management Science and Microeconomic Implications - <i>Berdymyrat Ovezmyradov (Sweden)</i>	Comparison Analysis Between Pneumatic and Airless Tires by Computational Modelling for Avoiding Road Traffic Accidents - <i>Mykola Karpenko, Olegas Prentkovskis, Paulius Skačkauskas (Lithuania)</i>	Avatar: A Telepresence System for the Participation in Remote Events - <i>Dietrich Trepnau, Klaus Richter (Germany)</i>
10:00	Classification of Inventory Management Methods Based on Demand Analysis in Supply Chains - <i>Valery Lukinskiy; Vladislav Lukinskiy, Darya Bazhina, Ekaterina Gazizova, Igor Bernadskii (Russia)</i>	A Single Level Formulation for Travel Demand Estimation Under Stochastic User Equilibrium - <i>Mohamed Eldafrawi, Guido Gentile (Italy)</i>	Improvement of the Feature Selection Method for Network Attacks Classification Using Machine Learning in Digital Forensics - <i>Boriss Misnevs, Aleksandr Krivchenkov, Alexander Grakovski (Latvia)</i>
12:30	Stakeholder-Oriented Investment Activities for Sustainable Supply Chain Management - <i>Harald Kitzmann, Gunnar Prause (Estonia; Germany)</i>	Bicycle sharing systems: a comparative analysis in Greece and Cyprus - <i>Georgia Savva; Giannis Adamos; Eftihia Nathanail (Greece)</i>	Autonomous Mobile Robot Study in the Context of Maintenance 4.0 - <i>Robert Giel, Alicja Dąbrowska (Poland)</i>
	Use of Operational Research in Car Transport Logistics - <i>Martin Jurkovic, Tomas Kalina, Piotr Gorzelanczyk, Maria Stopkova (Slovakia, Poland, Czechia)</i>	Reliability Model of Autonomous Transport with Life Support Systems Based on Closed Biotechnological Complexes - <i>Sergey Glukhikh (Russia)</i>	Scripting Complex Events and Behaviours in Computer Simulation of a Security Monitored Area - <i>Jarosław Sugier (Poland)</i>
	Reduction of Supply Chain Risks by Using Blockchain Technology - <i>Meike Schroeder, Gunnar Prause (Germany, Estonia)</i>	Assessing the Mobility Impact on the Corporate Social Responsibility - <i>Mahnaz Babapourdiyojin, Guido Gentile (Italy)</i>	Development of a Reliable and Offline Capable Hard-And Software Technology for Long-Term Machine Data Acquisition, Data Storing and Data Exportation - <i>Nicolas Dolle, Christian Wilhelm, Kirill Anikin (Germany)</i>
	The Horns of the Uncertainty Dilemma as a Determination of Interrupted Supply Chains Reconfiguration - <i>Łukasz Marzantowicz (Poland)</i>	Detection of Edges in Transport Networks which are Critical for Public Service Systems - <i>Peter Czimmermann (Poland)</i>	Optimisation of Quay Crane Scheduling Problem at the Port of Algeria - <i>Hizia Amani; Linda Bouyaya; Rachid Chaib; Fatma Zohra Djekrif; Mouna Aizi (Algeria)</i>
	Efficiency Assessment System Based on Analytical Approach for Sustainable Development of Transport Logistics - <i>Anna Strimovskaya; Galina Sinko; Elena Tsyplakova (Russia)</i>	Smartphone Based Recognition of Trip Phase at Public Transport Stops VIA Machine Learning Models – <i>Seyed Hassan Hosseini, Guido Gentile (Italy)</i>	Anomaly Detection for Predictive Maintenance on the Example of an Induced Draft of a Waste Power Plant - <i>Nicolas Dolle, Christian Wilhelm, Kirill Anikin (Germany)</i>
12:30 -13:30	<b>Break</b>		



Time	Session 6 (Aud. I)	Session 4 (Aud. 130)
	<p><b>Economics &amp; Business</b> Moderators: <i>Prof. Yulia Stukalina (Latvia)</i> <i>Prof. Svetlana Saksonova (Latvia)</i></p>	<p><b>Smart Technology</b> Moderators: <i>Prof. Aleksandr Grakovski (Latvia)</i> <i>As.Prof. Maksim Smoljaninovs (Latvia)</i></p>
13:30 - 15:15	Using AI for scaling up a business in the age of digital Transformation - <i>Yulia Stukalina, Olga Zervina (Latvia)</i>	Smart Process Observer for Crane Automation - <i>Daniel Sopauschke, Erik Trostmann, Klaus Richter (Germany)</i>
	Assessment of the dependence of insurance volumes on various socio-economic factors of regional development in countries with a transitive economy - <i>Svetlana Saksonova, Evgenia Prokopjeva, Oksana Adlere (Latvia; Russia)</i>	Fast Timeline Based Multi Object Online Tracking - <i>Martin Hünermund, Maik Groneberg, Nils Brauckmann (Germany)</i>
	Possibilities and Barriers in Implementing of AI-Based Automation Techniques in Management - <i>Nicolas Dolle, Irina Kuzmina-Merlino (Germany, Latvia)</i>	Piezoelectric Films Application for Vibration Diagnostics - <i>Aleksey Mironov, Pavel Doronkin, Aleksejs Safonovs, Vitalijs Kuzmickis (Latvia)</i>
	Problems of Banking Stability and Efficiency: Comparative Analysis of Latvia and Turkey - <i>Natalia Konovalova, Mustafa Akan (Latvia; Turkey)</i>	LiDAR and AI based surveillance of industrial process environments - <i>Maik Groneberg, Olaf Poenicke, Chirag Mandal, Nils Treuheit (Germany)</i>
	Formation of the Insurance Market of the Region Taking into Account the Impact of Specific Risks - <i>Prokopjeva Evgenia, Saksonova Svetlana, Shibaeva Tatyana, Chezybaeva Natalya (Latvia; Russia)</i>	Analysis of Air Pollution Monitoring System in Lithuania - <i>Marius Mazeika; Darius Juodvalkis (Lithuania)</i>
	Aspects of Digital Manufacturing for Smart city - <i>Popova Yelena, Olegs Cernisevs, Surmach Andrey (Latvia)</i>	Investigation of Loads in the Company's Cable Network with Digital Oscilloscope - <i>Gediminas Daukšys (Lithuania)</i>
		Training Environment for Rare Events Learning a Feasibility Study - <i>Przemysław Śliwiński, Jacek Mazurkiewicz, Jarosław Sugier, Tomasz Walkowiak (Poland)</i>
15:30 -16:00	<b>Closing remarks, and end of the Conference (Aud. 130)</b>	
16:30 -18:30	<b><u>Old Riga Town (Guided Walking Tour)</u></b>	