



PROGRAMME

of the 18th International Conference

**“RELIABILITY and STATISTICS in
TRANSPORTATION and COMMUNICATION”
*(RelStat-2018)***

17–20 October 2018

Riga, Latvia

Transport and Telecommunication Institute

Lomonosova 1, 9-floor building

<http://RelStat.tsi.lv>

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“Reliability and Statistics in Transportation and Communication” (RelStat-2018)

17–20 October 2018. Riga, Latvia
Transport and Telecommunication Institute
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Date	Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 223)
16.10.2018	9.30-17.00	Project Sci-Bi: Digitalization in Transport and Logistics. PhD Workshop		
17.10.2018	13.30-14.00	Registration for Final Conference of Project ALLIANCE		
	14.00-17.30	Project ALLIANCE. Final Conference		
	18.00-20.00	Registration for RelStat'18		
	18.30	Welcome Party (Hall #1)		
18.10.2018	9.15 –14.00	Registration		
	10.00 –12.30	Opening and Plenary Sessions		
	12.30–13.30	Lunch		
	13:30 – 15:30	Parallel Sessions		
		Session Statistics and Modelling in Transport Applications	Session Transport for Smart City	Session Smart Solutions for Supply Chain Management
	15:30 – 16:00	Coffee Break		
	16:00 – 18:00	Parallel Sessions		
		Session Statistics and Modelling in Transport Applications	Session Sustainable Aviation and Maritime Transport	Session Education and Training in Engineering (Project ALLIANCE)
19:00	Dinner (Restaurant “LIDO”)			
19.10.2018	10:00 – 12:30	Parallel Sessions		
		Session Sustainable Transport Interchange (Project ALLIANCE)	Session Intelligent Transport Systems and Telematics	Session Sustainable Transport Development. Economics and Policy
	12:30 – 13:30	Lunch		
	13:30 – 15:30	Parallel Sessions		
		Session Innovative Economics	Session Intelligent Transport Systems and Telematics	Session Reliability, Safety and Risk Management
	15:30 – 16:00	Coffee Break		
	16:00 – 16:30	Closing Session		
16:30 – 18:30	Social Programme			
20.10.2018	09:00 – 15:00	Social Programme		

TUESDAY, OCTOBER 16

9.30 – 17.00 **Project Sci-Bi: Digitalization in Transport and Logistics. PhD Workshop** (Hall#1 – Aud. 130)
(Hall#1 – Aud. 130)

WEDNESDAY, OCTOBER 17

9.00 – 17.00 Project ALLIANCE. WORKSHOP
18:00–20:00 Registration (Hall#1 – Aud. 130)
18:30 Welcome Party (Hall#1 – Aud. 130)

THURSDAY, OCTOBER 18

09:15–10:00 *Registration and Welcome Coffee (Hall#1 – Aud. 130)*
10:00–10:15 *Opening Session (Hall#1 – Aud. 130). Moderator: TTI Vice-Rector, Prof. Irina Yatskiv (Latvia)*

- *TTI Acting Rector Juris Kanels (Latvia)*

10:15–12:30 *Plenary Session (Hall#1 – Aud. 130). Moderator: TTI Acting Rector Juris Kanels (Latvia)*

- **Prof. Enrique Onieva (Spain)**
Artificial Intelligence and Data Analysis Applications in Intelligent Transportation Systems
- **Prof. Itzhak Benenson (Israel)**
SMART-PT: Adaptive Public Transport for a Smart City
- **Prof. Gunnar Prause, Karin Reinhold, Marina Järvis, Eunice O. Olaniyi, Sigrid Kalle, Ülle Lahe (Estonia)**
The Socio-Economic Impact of Green Shipping: A Holistic View from the Baltic Sea Region

12:30–13:30 *Lunch*
13:30–15:30 *Parallel Sessions*
15:30–16:00 *Coffee Break*
16:00–18:00 *Parallel Sessions*
19:00 *Dinner (Restaurant “LIDO”)*

FRIDAY, OCTOBER 19

10:00–12:30 *Parallel Sessions*
12:30–13:30 *Lunch*
13:30–15:30 *Parallel Sessions*
15:30–16:00 *Coffee Break*
16:00–16:30 *Closing Session*
16:30– 18:30 *Social Programme*

SATURDAY, OCTOBER 20

09:00–15:00 *Social Programme*

THURSDAY, OCTOBER 18

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 223)
13:30–15:30	<p>Session. Statistics and Modelling in Transport Applications</p> <p>Moderators: <i>Prof. Irina Yatskiv</i> <i>Prof. Igor Bessmertny</i></p>	<p>Session. Transport for Smart City</p> <p>Moderators: <i>Prof. Igor Kabashkin</i> <i>Prof. Gunnar Prause</i></p>	<p>Session. Smart Solutions for Supply Chain Management</p> <p>Moderators: <i>Prof. Valery Lukinskiy</i> <i>As.Prof. Genady Gromov</i></p>
	<p>Exploring Women Travel Behaviour in the Region of Žilina from Large Scale Mobility Survey <i>Ghadir Pourhashem, Ľuboš Buzna, Tatiana Kováčiková, Martin Hudák (Slovakia)</i></p> <p>Reduction of Dimensionality of Feature Vectors in Subject Classification of Text Documents <i>Tomasz Walkowiak, Szymon Datko, Henryk Maciejewski (Poland)</i></p> <p>A System of Data Processing as Two-Phase Queueing System <i>Iakov Dalinger (Russia)</i></p> <p>Investigation of Contemporary Neuroevolution Methods <i>Elena Yurshevich, Angelina Soboleva (Latvia)</i></p> <p>Multi-Agent Approach to Optimization of Tariffs for the Air Navigation Service <i>Igor Bessmertny, Nikolai Sukhikh (Russia)</i></p> <p>Combinatory Method of Optimization of Regional Basing of Mobile Units of Commercial Unmanned Aircraft Vehicles <i>Nikolajs Sulima (Latvia)</i></p> <p>Power Plant Optimal Operation Time Approach in Best Energy Mixture Model with Simulation Analysis <i>Tatiana Endrjukaite, Alexander Dudko, Kunihiro Okano, Hiromi Yamamoto (Latvia, Japan)</i></p> <p>Data Preparation Framework Development for Markov-Modulated Linear Regression Analysis <i>Irina Yatskiv (Jackiva) and Nadezda Spiridovska (Latvia)</i></p>	<p>Exploring the Potential of Social Media Content for Detecting Transport-Related Activities <i>Dmitry Pavlyuk, Maria Karatsoli, Eftihia Nathanail (Latvia, Greece)</i></p> <p>Socio-Economic Aspects of Free Public Transport <i>Tarmo Tuisk, Gunnar Prause (Estonia)</i></p> <p>Evaluation of the Quality of Public Transport Stops <i>Ivana Olivková (Czech Republic)</i></p> <p>Environmental Safety of City Transport Systems: Problems and Influence of Infrastructure Solutions <i>Irina Makarova, Ksenia Shubenkova, Vadim Mavrin, Kirill Magdin (Russia)</i></p> <p>Tram Service Quality and Its Impact on The Passengers' Modal Choice in Constantine City (Algeria) <i>Mouloud Khelf, Salim Boukebbab, Bhourri Neila, Mohamed Salah Boulahlib (Algeria)</i></p> <p>Factors Affecting the Efficiency Indicator of the Public Transport System – Case Study <i>Franciszek J. Restel, Łukasz Wolniewicz (Poland)</i></p> <p>Decision-Making Process for Choosing Technology of Diesel Bus Conversion into Electric Bus <i>Kristine Malnaca, Mikhail Gorobetz, Irina Yatskiv (Jackiva) (Latvia)</i></p> <p>Evaluation of a Necessity for Subsidies for Electric Vehicle Purchases in Latvia: 2013-2017 <i>Aivars Rubenis, Aigars Laizāns, Andra Zvirbule (Latvia)</i></p>	<p>Operational Simulation-Based Decision Support in Intralogistics Using Short-Term Forecasts <i>Marcel Müller, Tobias Reggelin, Stephan Schmidt (Germany)</i></p> <p>Choosing the Localisation of Loading Points for the Cargo Bicycles System in the Kraków Old Town <i>Vitalii Naumov, Jakub Starczewski (Poland)</i></p> <p>The Role of Reverse Logistics in the Transition to a Circular Economy <i>Irina Makarova, Ksenia Shubenkova, Anton Pashkevich, Vladimir Shepelev (Russia)</i></p> <p>Increasing the Adequacy of Management Decision Making for Choosing Intermediaries in Supply Chains <i>Valery Lukinskiy, Vladislav Lukinskiy, Darya Bazhina (Russia)</i></p> <p>Blockchain Application for Supply Chain Management <i>Genady Gromovs, Eduard Shevtshenko, Alex Norta, Mika Lammi (Latvia, Finland, Estonia)</i></p> <p>Assessment of Inventory Indicators for Nomenclature Groups with Rare Demand <i>Valery Lukinskiy, Vladislav Lukinskiy, A. Strimovskaya (Russia)</i></p> <p>Assessment of the influence of social-cultural environment in the context of global logistics <i>Darius Bazaras, Ramūnas Palšaitis, Kristina Čižiūnienė, Artūras Petraška, Karolis Kaminskas (Lithuania)</i></p> <p>How logistics is connected to Industry 4.0 <i>Béla Illés, János Végh (Hungary)</i></p> <p>The Possibilities of Supplying Processing Lines with the Material <i>Juraj Vaculik, Ema Havranová, Ivan Otto (Slovakia)</i></p>
15:30–16:00	Coffee Break		

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #4 (Aud. 223)
16:00– 18:00	<p align="center">Session. Statistics and Modelling in Transport Applications</p> <p align="center">Moderators: <i>Prof. Olegas Prentkovskis</i> <i>As. Prof. Pavlyuk Dmitry</i></p>	<p align="center">Session. Sustainable Aviation and Maritime Transport</p> <p align="center">Moderators: <i>Prof. Darius Bazaras</i> <i>Prof. Vladislav Lukinskiy</i></p>	<p align="center">Session. Education and Training in Engineering <i>(Project ALLIANCE)</i></p> <p align="center">Moderators: <i>As. Prof. Mihails Savrasovs</i> <i>Prof. Yulia Stukalina</i></p>
	<p>Spatiotemporal Feature Selection for Urban Traffic Flow Forecasting <i>Dmitry Pavlyuk, Edgars Mertens (Latvia)</i></p> <p>Natural Language Processing Knowledge Network Approach for Interactive Highlighting and Summary <i>Alexander Dudko, Tatiana Endrjukaitė, Yasushi Kiyoki (Latvia, Japan)</i></p> <p>Baltic Sea Region States in the Logistics Services' Market: Key Success Factors <i>Elena Cherniavskaya (Russia)</i></p> <p>Fatigue Life Dependence on Non-Uniform Hardening Effect after Surface Rolling <i>Aleksei Kurushin, Vitalijs Zaharevskis, Olegs Kovzels (Latvia)</i></p> <p>Identification of Reliability Models for Non-Repairable Railway Component <i>Jaroslav Selech, Karol Andrzejczak (Poland)</i></p> <p>Feasible Path Planning Algorithm for City Road Network <i>Paulius Skačkauskas, Edgar Sokolovskij (Lithuania)</i></p> <p>Generalised Gamma Distribution in the Corrective Maintenance Prediction of Homogeneous Vehicles <i>Karol Andrzejczak, Jarosław Selech (Poland)</i></p> <p>Impact of Sulphate Reducing Bacteria on Biocorrosion of Pipe Steels <i>Miroslava Polutrenko, Pavlo Maruschak, Olegas Prentkovskis, Anatolij Tymoshenko, Olena Maruschak (Ukraine, Lithuania)</i></p>	<p>Integrating Air Cargo Road Feeder Services into Green Transport Corridors <i>Anatoli Beifert, Gunnar Prause (Germany, Estonia)</i></p> <p>Simulation Model of Check-In Management Regarding the IATA Level of Service Standards <i>Artur Kierzkowski, Tomasz Kisiel, Maria Pawlak (Poland)</i></p> <p>Small and Medium-Sized Ports in the Digital Boom: The Case of Smart Growth and Sustainable Value Creation in the Regions <i>Laima Gerlitz (Germany)</i></p> <p>Condition Monitoring of Helicopter Main Gearbox Planetary Stage <i>Aleksey Mironov, Deniss Mironovs (Latvia)</i></p> <p>Research and Practical Application of Vibration Transfer Functions in Diagnostics of Jet Engine <i>Aleksey Mironov, Pavel Doronkin, Deniss Mironovs (Latvia)</i></p> <p>Measurements of the Parameters of a Broadband Satellite Data Channel in the SAVSAT Ship System <i>Aleksandr Krivchenkov, Aleksej Skrunds (Latvia)</i></p> <p>Assessment of Management Opportunity of Aircraft Spare Parts for Maintenance <i>Murat Amelov, Alexander Medvedev (Latvia)</i></p>	<p>On Higher Education Realities: Supporting Education and Research <i>Yulia Stukalina, Milan Pol (Latvia, Czech Republic)</i></p> <p>Developing a Marketing Strategy for a Higher Education Institution in the Agenda of Customer-Driven Education <i>Olga Zervina, Yulia Stukalina (Latvia)</i></p> <p>E-Learning and E-Teaching Effectiveness: Academic Staff Perception <i>Jekaterina Bierne, Anna Svirina, Jelena Titko (Latvia)</i></p> <p>Supporting Lifelong Learning in Transportation Industry – Alliance E-Learning Approach <i>Irina Yatskiv (Jackiva), Mihails Savrasovs, Nadezda Pizika, Evelyn Fischer (Latvia, Germany)</i></p> <p>Application of Process Approach to Knowledge Management in Education Institutions: Competence Centres <i>Natalia Salienko, Victoria Klyueva (Russia)</i></p> <p>Conflict Management in the Educational Process at the University <i>Oksana Pozdnyakova, Anatoly Pozdnyakov (Latvia)</i></p> <p>Logistics Management Games for Actors of Geographically Distributed Supply Chains <i>Tobias Reggelin and David Weigert (Germany)</i></p>
19:00	Dinner (LIDO)		

FRIDAY, OCTOBER 19

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 223)
10:00–12:30	<p align="center">Session. Sustainable Transport Interchange <i>(Project ALLIANCE)</i></p> <p align="center">Moderators: <i>Prof. Irina Yatskiv</i> <i>Dr. Giannis Adamos</i></p>	<p align="center">Session. Intelligent Transport Systems and Telematics</p> <p align="center">Moderators: <i>Prof. Igor Kabashkin</i> <i>As. Prof. Jacek Mazurkiewicz</i></p>	<p align="center">Session. Sustainable Transport Development. Economics and Policy</p> <p align="center">Moderators: <i>Prof. Gabriel Nowacki</i> <i>Prof. Krzysztof Olejnik</i></p>
	<p>Conceptual Models for Better Interoperability between Road and Rail Transport in Lithuania <i>Aidas Vasilis Vasiliauskas, Virgilija Vasilienė-Vasiliauskienė, Jolanta Sabaitytė (Lithuania)</i></p> <p>Techniques for Smart Logistics Solutions’ Simulation: A Review <i>Ioannis Karakikes, Eftihia Nathanail, Mihails Savrasovs (Greece, Latvia)</i></p> <p>Possible Consequences of the Implementation of Transport Integration in the Riga Planning Region <i>Julius Uhlmann (Germany)</i></p> <p>Environmentally Friendly Transport Interchanges: Active Travel Accessibility and Policy <i>Vissarion Magginas, Eftihia Nathanail, Giannis Adamos, Maria Tsami, Irina Yatskiv , Evelina Budilovich (Greece, Latvia)</i></p> <p>A Cross-Case Analysis of Riga Interchanges’ Information Services and Technologies <i>Irina Yatskiv, Evelina Budilovich , Iveta Blodniece, Eftihia Nathanail, Giannis Adamos (Greece, Latvia)</i></p> <p>Optimization of Interaction of Automobile and Railway Transport at Container Terminals <i>V.D. Shepelev, L.A. Zverev, Z.V. Almetova, K.A. Shubenkova (Russia)</i></p> <p>Unsupervised Learning-Based Stock Keeping Units Segmentation <i>Ilya Jackson, Aleksandrs Avdeikins, Jurijs Tolujevs (Latvia)</i></p>	<p>Use Cases and Introductory Analysis of the Dataset Collected Within the Large Network of Public Charging Stations <i>Milan Straka, Ľuboš Buzna (Slovakia)</i></p> <p>Off-The-Shelf Convolutional Neural Networks Low-Light Object Detection Comparison <i>Przemysław Śliwiński, Jacek Mazurkiewicz, Jarosław Sugier, Tomasz Walkowiak, Krzysztof Helt (Poland)</i></p> <p>Performance Evaluation of Event-Driven Software Applied in Monitoring Systems <i>Jarosław Sugier, Tomasz Walkowiak, Jacek Mazurkiewicz, Przemysław Śliwiński, Krzysztof Helt (Poland)</i></p> <p>Checkers Player Next Move Aided System <i>Agata Filar, Jacek Mazurkiewicz (Poland)</i></p> <p>The performance wall of large parallel computing systems <i>János Vég, József Vásárhelyi, Dániel Drótos (Hungary)</i></p> <p>Availability of Applications in Container-Based Cloud PaaS Architecture <i>Igor Kabashkin (Latvia)</i></p> <p>Increasing the Efficiency of the Wireless Charging System for Mobile Devices that Support Qi Standard <i>Aleksandr Krivchenkov, Rodion Saltanovs (Latvia)</i></p> <p>3D-Reconstruction of Human's Face in Person’s Identification Problem from Video Stream Data <i>Fyodor Panchuk, Alexander Grakovski (Latvia)</i></p>	<p>Impact of Joining the European Union on the Development of Transport Policy in the Republic of Latvia <i>Juris Kanelis (Latvia)</i></p> <p>Safety Status on Road Transport System in the European Union <i>Gabriel Nowacki, Krzysztof Olejnik, Bartosz Zakrzewski (Poland)</i></p> <p>Testing of the Drivers Ability to Assess the Distance on the Road While Driving <i>Krzysztof Olejnik, Marcin Łopuszyński, Gabriel Nowacki, Bartosz Zakrzewski (Poland)</i></p> <p>Directions of Development of Eastern Poland’s Transport Infrastructure by the Example of the Lublin Province <i>Bartosz Zakrzewski, Jacek Brdulak, Gabriel Nowacki, Krzysztof Olejnik (Poland)</i></p> <p>Problems of the Warsaw Metropolitan Area in Shaping the Principles of Sustainable Transport Development <i>Cezary Krysiuk, Gabriel Nowacki, Jacek Brdulak (Poland)</i></p> <p>Innovative Solution of Security System at International Airport <i>Bohdan Paszukow (Poland)</i></p> <p>The Problems of Changing Rules of Foreigners Employment in Poland <i>Małgorzata Walendzik, Cezary Krysiuk, Rafał Kopczewski, Arkadiusz Matysiak (Poland)</i></p> <p>Assessment of SECA–Related Administrative Burden in the Baltic Sea Region <i>Eunice O. Olaniyi, Gunnar Prause (Estonia)</i></p>
	<p align="center">12:30–13:30 Lunch</p>		

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 223)
13:30–15:30	<p align="center">Session. Innovative Economics</p> <p align="center">Moderators: <i>Prof. Irina Kuzmina-Merlino</i> <i>Prof. Yulia Stukalina</i></p>	<p align="center">Session. Intelligent Transport Systems and Telematics</p> <p align="center">Moderators: <i>Prof. Alexander Grakovski</i> <i>As. Prof. Jarosław Sugier</i></p>	<p align="center">Session. Reliability, Safety and Risk Management</p> <p align="center">Moderators: <i>Dr. Arnold Warchał</i> <i>Prof. Gabriel Nowacki</i></p>
	<p>An Information-Theoretic Approach to Financial Decision Making <i>Alexander Gubenko, Alexander Masharsky, Michel Verlainé (Russia, Latvia, France)</i></p> <p>Tourism Trends and a New Distribution Method of Latvian Domestic and Inbound Tourism Services <i>Kristina Mahareva (Latvia)</i></p> <p>Linkage between Management of Long-Lived Non-Financial Assets and Performance of Latvian Companies Listed on the Baltic Stock Exchange <i>Ieva Kozlovskā, Irina Kuzmina-Merlino (Latvia)</i></p> <p>The Principles of Creating a Balanced Investment Portfolio for Cryptocurrencies <i>Svetlana Saksonova, Irina Kuzmina-Merlino (Latvia)</i></p> <p>Corporate Income Taxation: Challenges of E-Commerce Platforms <i>Māris Jurušs, Sigita Ragucka-Ragovska, Monta Sandore (Latvia)</i></p> <p>The Mechanism for Creating an Effective International Strategic Alliance in the Field of Air Transportation <i>Nataliya Kazakova, Elena Shuvalova, Alisa Chemarina, Artem Nikanorov, Irina Kurochkina, Elizaveta Sokolova (Russia)</i></p> <p>Who are Latvian Women Entrepreneurs of Small Businesses? A Preliminary Study <i>Kristine Uzule, Ishgaly Ishmuhametov, Irina Kuzmina-Merlino (Latvia)</i></p> <p>Usage of The Quintuple Helix Innovation Mode: Cooperation for e-Service Development. Case study in Latvia <i>Ina Gudele (Latvia)</i></p> <p>Management of Liquidity and Profitability in Commercial Banks <i>Natalia Konovalova (Latvia)</i></p>	<p>Significant Simulation Parameters for RESTART/LRE Method in Teletraffic Systems of SDN <i>Elena Ivanova, Teodor Iliev, Grigor Mihaylov, Ventsislav Keseev, Ivaylo Stoyanov (Bulgaria)</i></p> <p>Feasibility Study of Modern Intelligent Methods Application for Digital Forensics <i>Aleksandr Krivchenkov, Boriss Misnevs, Dmitry Pavlyuk (Latvia)</i></p> <p>Using Impact-Oscillatory Loading and Nanotechnologies for Improving Mechanical Properties of Two-Phase Titanium Alloy VT23 <i>Mykola Chausov, Pavlo Maruschak, Olegas Prentkovskis (Ukraine, Lithuania)</i></p> <p>Employment of SiC MOSFETs and GaN – Transistors for of Wireless Power Transmission Systems <i>Rodions Saltanovs, Alexander Krainyukov (Latvia)</i></p> <p>Required Depth of Electricity Price Forecasting in the Problem of Optimum Planning of Manufacturing Process Based on Energy Storage System (ESS) <i>Aleksandr Krivchenkov, Alexander Grakovski, Ilya Balmages (Latvia)</i></p> <p>Influence of Constructive Materials of Road Cover on Magnetic Field Dispersion of WirelessPower Transmission Systems <i>Rodions Saltanovs, Alexander Krainyukov (Latvia)</i></p> <p>Implementation of a multiple remote tower <i>Darius Bazaras, Vaidotas Kondroška, Giedrė Rakauskienė, Jonas Vytautas Jusionis (Lithuania)</i></p> <p>Speed Management in Zones of Crosswalks <i>Antonina Korzhova, Denis Kapski (Belarus)</i></p>	<p>Dimensions of Security System Complexity and Risk Detection Praxis <i>Arnold Warchał (Poland)</i></p> <p>Information Support Systems for Crisis Management <i>Bogusław Jagusiak, Anna Chabasińska (Poland)</i></p> <p>Risk Management in Crisis Management Process <i>Natalia Moch, Robert Maciejczyk (Poland)</i></p> <p>Safety Problems in the Implementation of Paying Transactions without Cash <i>Robert Maciejczyk, Natalia Moch (Poland)</i></p> <p>The Continuity of Local Governments in Poland during Disasters <i>Krzysztof Szwarz, Piotr Zaskórski (Poland)</i></p> <p>Business Continuity Assurance in Creative Industries <i>Jacek Woźniak, Piotr Zaskórski (Poland)</i></p>
15:30–16:00	Coffee Break		
16:00 – 16:30	Closing Session (Hall#1 – Aud.130)		