



# PROGRAMME

of the 15<sup>th</sup> International Conference

**“RELIABILITY and STATISTICS in  
TRANSPORTATION and COMMUNICATION  
*(RelStat’15)*”**

21–24 October 2015. Riga, Latvia

Transport and Telecommunication Institute  
Lomonosova 1, 9-floor building

# PROGRAMME

of the 15<sup>th</sup> International Conference

## “Reliability and Statistics in Transportation and Communication” (RelStat’15)

21–24 October 2015. Riga, Latvia  
Transport and Telecommunication Institute  
Lomonosova 1, 9-floor building

Date	Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 106)
21.10.2015	10.00 – 17.00	Workshop. Project ENDURANCE		
	18.00-20.00	Registration		
	18.30	Welcome Party (Hall #1)		
22.10.2015	9.15 –14.00	<b>Registration and Welcome coffee</b>		
	10.00–12.30	<b>Opening and Plenary Sessions</b>		
	12.30–13.30	<b>Lunch</b>		
	13:30 – 15:30	Parallel Sessions		
		<b>Session 2.</b> Transport Systems	<b>Session 3.</b> Transport and Logistics	<b>Session 7.</b> Information Technologies
	15:30 – 16:00	Coffee Break		
	16:00 – 18:00	Parallel Sessions		
<b>Session 4.</b> Transport and Logistics Systems Modelling		<b>Session 1.</b> Reliability and Maintenance	<b>Session 8.</b> Aviation	
19:00	Dinner (Restaurant “LIDO”)			
23.10.2015	10:00 – 12:30	Parallel Sessions		
		<b>Session 6.</b> Intelligent Transport Systems	<b>Session 5.</b> Applications of Mathematical Methods to Transport and Logistics	Workshop. Project
	12:30 – 14:00	Lunch		
	14:00 – 16:00	Parallel Sessions		
		<b>Session 2.</b> Transport Systems	<b>Session 4.</b> Transport and Logistics Systems Modelling	Workshop. Project
16:00 – 16:30	Coffee Break			
16:30 – 18:00	<i>Participants will be offered the chance to visit the scientific facilities and laboratories of the Transport and Telecommunication Institute (TTI)</i>			
24.10.2015	09:00 – 15:00	Social Programme		

## WEDNESDAY, OCTOBER 21

10:00–17:00	Workshop. Project ENDURANCE (Hall#1 – Aud. 130)
18:00–20:00	Registration (Hall#1 – Aud. 130)
18:30	Welcome Party (Hall#1 – Aud. 130)

## THURSDAY, OCTOBER 22

09:15–14:00	Registration (Hall#1 – Aud. 130)
09:15–10:00	Welcome Coffee (Hall#1 – Aud. 130)
10:00–10:15	Opening Session. Moderator: Vice-Rector, Prof. Irina Yatskiv (Hall#1 – Aud. 130) <ul style="list-style-type: none"><li>• Dr.phil. Igor Graurs, TTI Rector (Latvia)</li></ul>
10:15–12:30	Plenary Session. Moderator: Dr.phil. Igor Graurs, TTI Rector (Hall#1 – Aud. 130) <ul style="list-style-type: none"><li>• <b>Invited speaker. Dr. Modris Greitans</b>, Scientific Director of Institute of Electronics and Computer Science ( Latvia) <i>Original Signal Processing - a Key Component for IECS Success Stories</i></li><li>• <b>Invited speaker. Prof, PhD Eftihia Nathanail</b>, Head of Transportation Engineering Laboratory, University of Thessaly, Department of Civil Engineering, School of Engineering (Greece) <i>Transportation Interchanges as a Key Component of Sustainable Urban Mobility - The European Experience</i></li><li>• <b>Invited speaker. Dr. Gatis Krūmiņš</b>, Rector of Vidzemes Augstskola ( Latvia) <i>Does modern higher education correspond to technological reality?</i></li><li>• <b>Prof., Dr.habil.sc.ing. Igor Kabashkin</b>. Transport and Telecommunication Institute (Latvia) <i>The Future of Freight Transport and Intelligent Logistics</i></li><li>• <b>Prof., Dr. Irina Yatskiv</b>, Prof., Dr.habil.sc.ing. Igor Kabashkin, As.Prof., Dr. Mihail Savrasovs. Transport and Telecommunication Institute (Latvia) <i>Development of TTI Research Strategy and Main Directions of Research Activities</i></li></ul>
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 23

10:00–12:30	Parallel Sessions
12:30–14:00	Lunch
14:00–16:00	Parallel Sessions
16:00–16:30	Coffee Break
16:30–	

Participants will be offered the chance to visit the scientific facilities and laboratories of the Transport and Telecommunication Institute (TTI)

## SATURDAY, OCTOBER 24

09:00–15:00	Social Programme
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**THURSDAY, OCTOBER 22**

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 126)
13:30–15:30	<p align="center"><b>Session 2. Transport Systems</b></p> <p align="center">Moderators: <i>Prof. Ramūnas Palšaitis</i> <i>Prof. Gunnar Prause</i></p>	<p align="center"><b>Session 3. Transport and Logistics</b></p> <p align="center">Moderators: <i>Prof. Eftihia G. Nathanail</i> <i>Prof. Valery Lukinskiy</i></p>	<p align="center"><b>Session 7. Information Technologies</b></p> <p align="center">Moderators: <i>Prof. Alexander Grakovski</i> <i>Prof. Sergey Orlov</i></p>
	<p>KPI Building Blocks for Successful Green Transport Corridor Implementation <i>Gunnar Prause, Meike Schröder</i></p> <p>Evaluation of Efficiency of Inter-Terminal Goods Transportation <i>Darius Bazaras, Gintautas Labanauskas, Ramūnas Palšaitis</i></p> <p>Quality Evaluation of Time Accessibility of a Urban Public Transport System <i>Ivana Olivková</i></p> <p>EV charging planning for micro districts <i>Larisa Grackova, Irina Oleinikova, Gaidis Klavs</i></p> <p>Analysis of the Cargo Transportation Models <i>Dmitry L. Golovtsov, Alexander V. Kirichenko, Elena A. Koroleva</i></p>	<p>Life – Cycle Evaluation of Urban Logistics Processes <i>Eftihia G. Nathanail, Michael Gogas, Giannis Adamos</i></p> <p>Analysis of Intermediaries Choice Methods in the Supply Chains at Execution of Transport-Logistic Operations <i>Valery Lukinskiy, Vladislav Lukinskiy</i></p> <p>Ship-To-Shore English: The General Concept of the Blue-Color Training Course for Dockers <i>Albina M. Korshunova, Olga I. Molkina</i></p> <p>Driver inattention at signalized intersections: a comparison of self-reported and observed data <i>Eftihia G. Nathanail, Giannis Adamos</i></p> <p>Impact of Food Embargo on Supply Chains <i>Alexander Andronov, Tatjana Jurkina</i></p> <p>Development of Proposals to Minimize Commercial Risks in Logistics <i>V.A. Glinskiy, I.I. Lysenko</i></p>	<p>Criteria Importance Theory for Architecture Selection of Logistics and Transport Software <i>Sergey Orlov, Andrei Vishnyakov</i></p> <p>Prevention the Critical Situations on Transport Terminal on the Basis Information Systems <i>Vaira Gromule, Irina Yatskiv, Juris Pēpulis</i></p> <p>Synchronous vs Asynchronous Processing in High Throughput Web Applications <i>Marek Pałczyński, Tomasz Walkowiak</i></p> <p>Challenges in Implementation of Cryptographic Algorithms in Field Programmable Gate Array <i>Jarostaw Sugier</i></p>
15:30–16:00	Coffee Break		

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 126)
16:00– 18:00	<p align="center"><b>Session 4.</b> <b>Transport and Logistics Systems Modelling</b></p> <p align="center">Moderators: <i>Prof. Jacek Mazurkiewicz</i> <i>Prof. Dariusz Bazaras</i></p>	<p align="center"><b>Session 1.</b> <b>Reliability and Maintenance</b></p> <p align="center">Moderators: <i>Prof. Igor Kabashkin</i> <i>Prof. Valery Lukinskiy</i></p>	<p align="center"><b>Session 8.</b> <b>Aviation</b></p> <p align="center">Moderators: <i>Prof. Alexander Grakovski</i> <i>Prof. Vladimir Labendik</i></p>
	<p>The Comparison of Postal Transportation Network's Optimization Based on P-Median and Uncapacitated Fixed Charge Location Model in the Conditions of Large Countries <i>Radovan Madleňák, Lucia Madleňáková, Jozef Štefunko</i></p> <p>Groupage Cargo Transportation Model <i>Alexander Medvedev, Sharif Guseynov</i></p> <p>City Growth Hybrid Model Development for Strategic Decision Making on Urban Planning <i>Mihails Savrasovs, Andrejs Gailans, Jurijs Maksimovs</i></p> <p>Investigation of Neural Networks Application for Data Actualization for Microscopic Models <i>Elena Yurshevich, Angelina Sorokina</i></p> <p>Simulated Annealing Algorithm for Solving the Optimization Problem on Traffic Lights <i>Sergey Anfilets, Vasili Shut</i></p>	<p>Evaluation of the Influence of the Logistic Operations Reliability on the Total Costs of a Supply Chain <i>Valery Lukinskiy, Vladislav Lukinskiy</i></p> <p>Selected Issues of the Maintenance Process Analysis of Power Supply Systems of the Transport Telematics <i>Mirosław Siemiejczyk, Adam Rosiński</i></p> <p>Operational Modal Analysis (OMA) Application for Condition Monitoring of Operating Pipelines <i>Aleksey Mironov, Pavel Doronkin, Aleksander Priklonsky, Igor Kabashkin</i></p>	<p>Analysis of Meteorological Conditions Related to Low Visibility Procedures Requirements at Bratislava Airport <i>Sandra Krollová</i></p> <p>On Sharing of Uncontrolled Airspace for Low Flying Unmanned Aerial Vehicle Systems <i>Dmitrijs Lancovs</i></p> <p>Use of the Diagnostic Matrix to Teach Neural Network to Recognize Technical State of Gas Turbine Engine <i>Sergey Yunusov, Vladimir Labendik</i></p> <p>Statistical Monitoring Models of Accredited Agencies in Air Transport Settlement System <i>Marina Rebezova</i></p>
19:00	Dinner		

**FRIDAY, OCTOBER 23**

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 126)
10:00–12:30	<p align="center"><b>Session 6. Intelligent Transport Systems</b></p> <p align="center">Moderators: <i>Prof. Alexander Grakovski Dr. Peter Kolarovszki</i></p>	<p align="center"><b>Session 5. Applications of Mathematical Methods to Transport and Logistics</b></p> <p align="center">Moderators: <i>Prof. Jarosław Sugier Prof. Irina Yatskiv</i></p>	<p align="center">Moderator:</p>
	<p>Impact of Sorting Machine on Life Cycle Passive UHF RFID Tags Placed on Letter Mail <i>Jiří Tengler, Peter Kolarovszki</i></p> <p>Secondary Processing of Radar Subsurface Data for Civil Engineering Applications <i>Alexander Krainyukov, Valery Kutev</i></p> <p>The Convergence of Telecommunication and Postal Services and Their Impact on Regulatory Approaches <i>Lucia Madleňáková, Radovan Madleňák</i></p> <p>Multi-Purpose Fiber Optic System for Automated Measurement of Vehicle's Parameters and Classification <i>Alexander Grakovski, Alexey Pilipovets</i></p> <p>Effective Permittivity of a Toroid in a Uniform Field <i>Yury A. Krasnitsky</i></p> <p>The Performance Analysis of Wireless Data Networks Used in Automation Systems <i>Aleksandr Krivchenkov, Dmitry Sedykh</i></p>	<p>Innovative Pattern Recognition Technique Based on Minimization of Misclassification Probability <i>Konstantin N. Nechval, Nicholas A. Nechval</i></p> <p>A Methodological Framework of the Spatial Analysis of Transport Nodes' Efficiency <i>Dmitry Pavlyuk</i></p> <p>Contemporary Discrete Transport Systems Availability Analysis <i>Jacek Mazurkiewicz</i></p> <p>Innovative Technique for Constructing Tolerance Limits on Future Order Statistics Coming From the Two-Parameter Exponential Distribution <i>Konstantin N. Nechval, Nicholas A. Nechval</i></p> <p>Uncertainty and Sensitivity Analysis in Constructing the Urban Public Transport Service Quality Index <i>Irina Pticina, Irina Yatskiv</i></p>	
12.30–14.00	Lunch		

Time	Hall #1 (Aud. 130)	Hall #2 (Aud. 230)	Hall #3 (Aud. 126)
14:00– 16:00	<p align="center"><b>Session 2.</b> <b>Transport Systems</b></p> <p align="center">Moderators: <i>Prof. Igor Kabashkin</i> <i>Prof. Valery Lukinskiy</i></p>	<p align="center"><b>Session 4.</b> <b>Transport and Logistics Systems Modelling</b></p> <p align="center">Moderators: <i>Prof. Eftihia G. Nathanail</i> <i>Prof. Irina Yatskiv</i></p>	
	<p>Theoretical Estimation of Fuel Consumption of Shared Taxis: A Case Study for Isfahan, Iran <i>Mohammad Maghrour Zefreh, Adam Torok</i></p> <p>Tracking of Abnormal Transport Using Autonomous Electronic Toll Collection System <i>Karol Hrudkay</i></p> <p>Methodological Foundation of Concept of the Shared Multi-Users Transportation System’s Development in the Northern Sea Route Area <i>Alexander V. Kirichenko, Alexander L. Kuznetsov, Alexander A. Davydenko</i></p> <p>Comparative Study of Different Terminal Allocation Models <i>Dmitry L. Golovtsov, Alexander V. Kirichenko, Elena A. Koroleva</i></p>	<p>Logistics Systems Optimization Via Mesoscopic Modelling <i>Baiba Zvirgzdiņa, Jurijs Tolujevs</i></p> <p>Modelling of Foreign Trade Carriages Considering the Capabilities of Transport Systems’ Elements <i>S. P. Onyshchenko, Y. A. Koskina</i></p> <p>Simulation Tool for Service Quality and Berths Occupancy Assessment <i>Alexander L. Kuznetsov, Alexander V. Kirichenko</i></p> <p>Simulation for Assessment of the Interference between Port Traffic and Dredging Activity <i>Alexander L. Kuznetsov, Adam Kaizer</i></p>	
16:00–Coffee Break			