

Section

# AUTOMOTIVE AND RAILWAY TRANSPORT

29<sup>th</sup> International Scientific Conference

**TRANSPORT  
MEANS  
2025**



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## Session 5

Online presentations

3 October 2025, 9.00 – 15.00

Chairman – Prof. **S. Kilikevičius**

Co-Chairman – Dr. **R. Makaras**

9.00 – 15.00	Session
11.00 – 11.20	Coffee Break
13.00 – 13.30	Coffee Break

### *A Thermal Analysis of a Hopper-Type Container Design*

**A. Lovska, J. Gerlici, J. Dižo**, University of Žilina (Slovak Republic)

### *Design of the Wedge Lifting and Chainsaw Operation Mechanism as Part of the Semi-Automatization of a Mobile Working Machine*

**M. Blatnický, J. Dižo, A. Lovska**, University of Žilina (Slovak Republic), **S. Semenov**, Volodymyr Dahl East Ukrainian National University (Ukraine)

### *Features of a Container Design Consisting of a Truss Frame*

**J. Gerlici, A. Lovska**, University of Žilina (Slovak Republic), **M. Pavliuchenkov**, O.M. Beketov National University of Urban Economy in Kharkiv, Sumy National Agrarian University (Ukraine)

### *A Modification of a Locomotive Bogie Frame*

**M. Bučko, K. Kravchenko, A. Lovska, J. Dižo, M. Blatnický**, University of Žilina (Slovak Republic)

***Experimental Assessment of Temperature and Speed Effects on Hyundai Kona Electric Driving Range and Energy Consumption***

**A. Hnatov**, Kharkiv National Automobile and Highway University (Ukraine), **Shch. Arhun**, Kharkiv National Automobile and Highway University (Ukraine), University of Birmingham (United Kingdom), **V. Migal**, State Biotechnological University (Ukraine)

***Features of Electric Vehicle Diagnostics Using the Car Scanner ELM OBD-II Application***

**A. Hnatov**, Kharkiv National Automobile and Highway University (Ukraine), **Shch. Arhun**, Kharkiv National Automobile and Highway University (Ukraine), University of Birmingham (United Kingdom), **N. Hryhorenko**, Kharkiv National Automobile and Highway University (Ukraine), **S.-A. Mitoulis**, University of Birmingham (United Kingdom)

***Modern Technologies in Railway Applications***

**M. Andrzejewski**, Association of Railway Transport Experts and Managers, **M. Nowak**, Poznan University of Technology, **P. Knast**, The President Stanislaw Wojciechowski Calisia University (Poland)

***Enhancing Battery Charging Efficiency in Vehicles Under Low-Speed Operating Conditions Using Harmonic Energy Recovery***

**S. Arhun**, **V. Dvadnenko**, **A. Hnatov**, Kharkiv National Automobile and Highway University (Ukraine)

***Investigation of Dosage Non-Repeatability of an LPG Injector in Various Stages of Wear***

**R. Poplawski**, **D. Szpica**, Bialystok University of Technology (Poland), **M.R. Oliveira Panão**, University of Coimbra (Poland)

***Extending the Service Life of Railway Transport Wheels Based on the Strategy of Partial Reprofilng and Optimisation of the Rolling Surface***

**S. Saponova**, National Transport University, **O. Vorobjov**, Volodymyr Dahl East Ukrainian National University, **E. Zub**, **S. Syvakivskiy**, National Transport University (Ukraine)

***Experimental Performance Evaluation of the Differential Section of a Prototype Pneumatic Brake Valve***

**M. Kisiel**, **D. Szpica**, Bialystok University of Technology (Poland)

***Reliability Assessment of the Outer Surface of the ICE Piston Skirt Based on the Material Creep Limit Criterion***

**V.V. Pylyov**, **A. Marchenko**, **O. Linkov**, National Technical University "Kharkiv Polytechnic Institute", **S. Lykov**, SE "MALYSHEV PLANT" (Ukraine)

***Features of the Experimental Study of the Processes of Thermal Preparation of an Internal Combustion Engine Using a Phase Transition Heat Accumulator***

**D. Pohorletskyi**, **N. Pohorletska**, Kherson State Maritime Academy, **M. Skalyha**, Lutsk National Technical University, **V. Chernenko**, **Yu. Losynsky**, **A. Kotov**, Kherson State Maritime Academy (Ukraine)

***Setting the All-mode Electronic Speed Regulator for Automotive Diesel***

**O. Verbovskiy**, The Gas Institute of the National Academy of Sciences of Ukraine, **A. Lisoval**, National Transport University, **H. Zhuk**, **V. Verbovskiy**, The Gas Institute of the National Academy of Sciences of Ukraine, **A. Dzygar**, Kherson State Maritime Academy (Ukraine)

***Features of Computational Analysis of a Contact-Type Heat Accumulator in an ICE Thermal System***

**Yu. Grytsuk**, National University of Ostroh Academy, **A. Yurzhenko**, **O. Volska**, **A. Leshchenko**, **O. Litikova**, Kherson State Maritime Academy, **S. Dotsenko**, Admiral Makarov National University of Shipbuilding (Ukraine)

***Vibration and Stability Analysis of Variable-Section Composite Beams as Structural Members in Transport Systems***

**V.N. Burlayenko**, **S.D. Dimitrova-Burlayenko**, **G.I. Lvov**, National Technical University "Kharkiv Polytechnic Institute" (Ukraine)

***KPI for Evaluating Overtaking Maneuvers in Railway Traffic***

**T. Vyčítal**, **L. Křížan**, **M. Vyhnanovský**, University of Economics and Management (Czech Republic)

*Development of a Multifunctional Transport and Technological Machine Based on a Passenger Car*  
**R. Zaripov**, R. Elzhan, Torgyrov University (Kazakhstan), **P. Gavrilovs**, Riga Technical University (Latvia)

*Quo Vadis Silesian Interurban Trams?*

**A. Soczówka**, **P. Chyliński**, Railway Research Institute (Poland)

*Study of Energy Consumption of an Electric Bus Operating in Lithuania – The Case of Kaunas City*

**R. Makaras**, Kaunas University of Technology, **M. Natanas**, ALTAS Commercial Transport, **U.K. Medževėprytė**, Kaunas University of Technology (Lithuania)