21 -23 MAY 2025
Grand Hotel Bellevue
High Tatra Mountains
Slovakia

CONFERENCE PROGRAM

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SCHEDULE – PAPER PRESENTERS

WEDNESDAY, 21 MAY 2025		THURSDAY, 22 MAY 2025		FRIDAY, 23 MAY 2025	
10:00 – 14:00	**Registration**	**8:30 – 10:30**	**Registration**	**8:30 – 10:00**	**Registration**
13:00 – 13:10	**Opening ceremony:** Grand Bellevue	**8:30 – 9:15**	**Plenary session:** Salónik Silver	**8:30 – 10:30**	**Poster session:** Kongres Foyer
13:10 – 13:50	**Plenary session** Grand Bellevue	**9:30 – 10:30**	**2 Parallel sessions:** Salónik Silver, Dámsky salónik	**10:30 – 11:00**	**Coffee break**
14:00 – 15:30	**2 Parallel sessions:** Salónik Silver, Dámsky salónik	**10:30 – 11:00**	**Coffee break**	**11:00 – 13:00**	**3 Parallel sessions:** Salónik Silver, Dámsky salónik, Salónik Kristal
15:30 – 16:00	**Coffee break**	**11:00 – 13:00**	**Poster session:** Kongres Foyer	**13:00 – 14:00**	**Lunch**
16:00 – 18:00	**Poster session:** Kongres Foyer	**13:00 – 14:00**	**Lunch**		
19:00 – 20:00	**Dinner**	**19:00 – 22:00**	**Social Evening**		

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KEYNOTE SPEAKERS

Ing. Marek Štulrajter, PhD.,

NXP Semiconductors Czech Republic, s.r.o.

Software Defined Vehicle

GRAND BELLEVUE
WEDNESDAY
21 MAY 2025
13:10 - 13:30

prof. Ing. David Řehák, Ph.D.

VSB – Technical University of Ostrava

Resilience of Critical Entities in the Transport Sector

GRAND BELLEVUE
WEDNESDAY
21 MAY 2025
13:30 - 13:50

doc. Ing. Otakar Jiří Mika, CSc.

Police Academy of the Czech Republic

Improving Safety in the Transport of Hazardous Chemicals by Road in the Czech Republic

SALÓNIK SILVER
WEDNESDAY
21 MAY 2025
14:00 - 14:20

Dipl. Ing. Hendrik Ammoser

IFB Institut für Bahntechnik GmbH

Perception for automated train driving: Transferring the ODDconcept from road into the railway sector

SALÓNIK SILVER
THURSDAY
22 MAY 2025
8:40 - 9:00

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TOPICS

1. Operation and Economics in Transport

2. Mechanical Engineering in Transport

3. Electrical Engineering in Transport

4. Civil Engineering in Transport

5. Management Science and Informatics in Transport

6. Safety and Security Engineering in Transport

7. Education in Transport

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1. Operation and Economics in Transport

Wednesday, 21 May 2025, 14:00 - 15:30 | **Grand Hotel Bellevue - SALÓNIK SILVER** | **Component A** | **PARALLEL SESSION**

Chairperson: doc. Ing. Benedikt Badánik, PhD. | **Co-chairperson: prof. Ing. Alica Kalašová, CSc.** | **Technical staff: Ing. Zdenka Bulková, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0020	J. Caban, A. Nieoczym, L. Krzywonos, K. Drozd	Statistical analysis of vehicle usage intensity in a transport company	Jacek Caban
2	0022	J. Caban, A. Nieoczym, L. Krzywonos, K. Drozd	Statistical analysis of vehicle repair costs in a transport company	Jacek Caban
3	0051	A. Török	Economic Growth and Transport Emissions: Testing the Environmental Kuznets Curve in Austria and the Netherlands	Ádám Török
4	0093	A. Pálková, Z. Bulková, B. J. Gašparík, J. Čamaj	Innovative Integrated Transport Systems: Digital Solutions for Stakeholder Collaboration and Sustainability	Adriana Pálková
5	0111	A. Dávid, S. Blaško, A. Olei, A. Midan	The Port of Constanta: A Logistics Hub for the Black Sea and Danube Regions	Andrej Dávid
6	0113	Y. Douimia, M. Klosak, A. Dávid	Seagoing Vessels Sailing through the Northern Sea Route and their Construction Materials	Yasser Douimia
7	0116	H. Luketić, D. Šipuš, B. Abramović	High-Speed Night Trains: Case study China	Helena Luketić
8	0173	D. Jonasíková, V. Konečný	Assessing logistics performance in global regions using selected multi-criteria assessment methods	Dominika Jonasíková
9	0226	P. Ficzere	Anisotropy on the surfaces of additive manufactured models	Peter Ficzere
10	0232	E. Lévai, B. Ákos	Examination of fuel cell temperature limits	Emese Lévai

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6. Safety and Security Engineering in Transport

Wednesday, 21 May 2025, 14:00 - 15:30 | **Grand Hotel Bellevue - DÁMSKY SALÓNIK** | **Component B** | **PARALLEL SESSION**

Chairperson: prof. Ing. Jozef Ristvej, PhD., EMBA | **Co-chairperson: prof. Ing. David Řehák, PhD.** | **Technical staff: prof. Ing. Tomáš Loveček, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0133	O. Mika, L. Loufkova, J. Bárta	Improving Safety in the Transport of Hazardous Chemicals by Road in the Czech Republic	Otakar Jiří Mika **KEYNOTE SPEAKER**
2	0003	D. Chovanec, B. Kollár, Z. Zamiar	Concept of eCall for Transportation of Dangerous Goods	Boris Kollár
3	0019	D. Rehak, H. Janečková, M. Hromada, V. Stritecky, E. Speldovad, P. Benekoue	Use of TEN-T for the movement of Search & Rescue teams within the framework of CBRN-E response	Heidi Janečková
4	0044	I. Majchút	Military Mobility as a Challenge for Europe	Ivan Majchút
5	0050	A. Kardošová, J. Pokorný, L. Brumarová	Case Study on Determining the Design Fire when Installing Sprinkler Systems in Railway Halls	Alexandra Kardošová
6	0027	D. Brezina, J. Kompan	Capability of the Armed Forces of the Slovak Republic to provide logistical support for a pandemic crisis response	Daniel Brezina
7	0074	K. Marzęda-Młynarska, J. Kięczkowska	Alternative Food Transportation Routes from Ukraine	Katarzyna Marzęda-Młynarska
8	0138	J. Sabol	EU projects aimed at radiation protection in the case of CBRN releases in urban areas and closed spaces	Jozef Sabol
9	0139	J. Sabol	Basic safety and security requirements for the transport of CBRN agents with special emphasis on R and N components	Jozef Sabol
10	0149	J. Kompan, D. Brezina, M. Hrnčiar	Interoperability requirements for enhanced military mobility during water crossing operations	Daniel Brezina
11	0007	S. Ricci, F. Martini, A. Quattrini	Simulation-based design of railway tunnels' safety assets	Stefano Ricci

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2. Mechanical Engineering in Transport

Wednesday, 21 May 2025, 16:00 - 18:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component C** | **POSTER SESSION**

Chairperson: dr hab. inż. Marek Jaśkiewicz prof. | **Co-chairperson: Dr. Ádám Török, DSc.** | **Technical staff: Ing. Marek Matejka, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0013	M. Vicen, O. Bokůvka, R. Joch, P. Belány, P. Špuro, R. Nikolić	Wear-resistance of the DLC AF+ coating investigated by the Tip-on-Flat method	Martin Vicen
2	0031	L. Svačinová, J. Vojtesek, L. Miskarik, J. Turek, A. Mizera	Mechanical Safety of Re-injected Carbon Fiber Reinforced Acrylonitrile-butadiene-styrene Components in Transportation Applications	Lucie Svačinová
3	0072	M. Karhankova, J. Turek, M. Adamek, L. Svacinova, L. Miskarik, A. Mizera	Mechanical Resistance of PC and PMMA Safety Components in Transportation	Michaela Karhankova
4	0075	E. Kantoríková, M. Matejka, J. B. Jamrozek, J. Kasińska	Effect of Ti and Zr on the Microstructure of Al-Si-Cu-Based Casting Alloys	Marek Matejka
5	0087	M. Medňanský, M. Brůna, M. Kuriš, P. Oslanec	Additive manufacturing of cellular cores for overcasting technology	Marek Brůna
6	0077	M. Bučko, D. Barta, J. Dižo, M. Blatnický, A. Lovska, S. Kowalski	Analysis of the current state of motor units with single-axle bogies	Martin Bučko
7	0102	L. Kopeček, P. Stoklasek, M. Karhankova, J. Turek, A. Mizera	The Effect of Post-Curing on Static Flexural Behavior in Carbon-Filled Laminating Epoxy Resins	Lukáš Kopeček
8	0105	K. Hornická, P. Ďurčanský	Capturing solid pollutants transported from small heat sources using cyclones	Katarína Hornická
9	0195	V. Samaš	Design of an Electronic Control PCB for Thermoelectric Modules Using Relay Circuits and Hysteresis Loop Regulation in Railway Braking Systems	Vladimír Samaš
10	0241	M. A. Sej	Problems in Assessing the Accuracy of Mass Comparators: Analysis of the Impact of External Factors	Monika Sej
11	0180	J. Harušinec, K. Kozáková, A. Suchánek	Validation of a virtual model of a contact thermocouple with real measurements	Kristína Kozáková
12	0009	M. Brzozowski	Influence of determining the normal reaction on the autonomous vehicle motion	Michał Brzozowski
13	0130	M. Smieszek, V. Mateichyk, J. Mościszewski	The impact of electrification of public transport on environmental pollution on the example of the city of Rzeszów	Miroslaw Smieszek
14	0099	J. Mościszewski, M. Śmieszek, O. Stadnyk, V. Mateichyk, R. Ihnatiuk, R. Marchuk	Improving the recycling technology of consumable vehicle components	Jakub Mościszewski

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5. Management Science and Informatics in Transport

Wednesday, 21 May 2025, 16:00 - 18:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component C** | **POSTER SESSION**

Chairperson: dr hab. inż. Marek Jaśkiewicz prof. | **Co-chairperson: Dr. Ádám Török, DSc.** | **Technical staff: Ing. Marek Matejka, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
15	0004	R. Neumannová, K. Repková Štofková	Industry 4.0 in Transportation: Blockchain technology	Rebecca Neumannová
16	0028	L. Bukvić, B. Abramović	Node Criticality Estimation in Intermodal Networks	Lucija Bukvić
17	0065	N. Mardešić, T. Erdelić, M. Erdelić, T. Carić	Population Control Genetic Algorithm for Enhanced Diversity in the Travelling Salesman Problem	Nikola Mardešić
18	0070	M. Miletić, M. Gregurić, L. Novačko, E. Ivanjko	Intersection Queue Length Estimation Using Connected Vehicles	Mladen Miletić
19	0078	J. J. Cieśla, R. Ulewicz	Analysis of the determinants of the quality of outsourcing services in B2B relations in the automotive industry	Jakub Cieśla
20	0081	D. Findriková, M. Kubina	Implementation of Information Security Management System in Transport Company	Dominika Findriková
21	0098	V. Mateichyk, I. Gritsuk, M. Śmieszek, A. Holovan, O. Volska, A. Navrotskyi	Systematization of Information and Hardware Support for Vehicle Operation Monitoring Systems	Vasyl Mateichyk
22	0122	V. Harantová, K. Ovary Bulková	The traffic lights timer optimization model at frequented intersection in small urban area in Slovakia	Kristína Ovary Bulková
23	0128	I. Gabrišová, G. Koman	The Impact of Information and Communication Technology Adoption for Management in Road Freight	Ivana Gabrišová
24	0131	S. Krúpová, G. Koman	The Role of IoT and Big Data in Smart City Transport Management: Lessons Learned from Case Studies in Slovakia and the EU	Silvia Krúpová
25	0144	M. Kostrzewski, A. Merdjani, N. Kizilova	Digital Twin and Virtual System Representation: Methodologies, Tools, and Practical Applications	Mariusz Kostrzewski
26	0211	A. Michalek, P. Tarábek	Formulating the Electric Bus Fleet Scheduling Problem for Reinforcement Learning	Andrej Michalek
27	0214	D. Gachulinec	Using Large Language Models in Autonomous Driving Systems	Daniel Gachulinec
28	0215	M. Smieszek, V. Mateichyk, N. Kostian, P. Mateichyk, J. Mościszewski, M. Marchuk	Study of the Influence of Traffic on the Charging Stations Efficiency	Jakub Mościszewski

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7. Education in Transport

Wednesday, 21 May 2025, 16:00 - 18:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component C** | **POSTER SESSION**

Chairperson: dr hab. inż. Marek Jaśkiewicz prof. | **Co-chairperson: Dr. Ádám Török, DSc.** | **Technical staff: Ing. Marek Matejka, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
29	0006	Y. Y. Cornet, C. Georgouli, T. Petrov, T. Kováčiková, A. Kulla, J. Bruk	Advancing Education for Inclusive, Sustainable and Resilient Cities: Insights from the UNIZA Pilot Course on Learning by Developing (LbD)	Yannick Cornet Christina Georgouli
30	0030	B. Suriaková, M. Šucha	Drive Smart Edu: Traffic psychological program for young drivers	Beáta Suriaková
31	0043	J. Sobotka, J. Kafková, E. Bubeníková, R. Pirník, P. Kuchár	Interactive Software for Exploring Discrete Orthogonal Transforms	Júlia Kafková
32	0112	A. N. AlAkoum, E. Nica, M. Abiad, A. Bîgu	Benchmarking Employee Performance Management Systems: Insights from the Transport Sector for Academia	Alice AlAkoum
33	0159	E. Madudova, M. Majerčáková	Temporal Trends in Household Consumption of Transport, Recreation, and Cultural Services a COICOP Analysis	Emilia Madudová
34	0171	M. Tomkova, A. Corejova, K. Hornicka	Patent Searches in the University Environment – New Challenges Related to AI	Maria Tomkova
35	0193	E. Madudova, M. Majerčáková	The Structure of Selected Household Expenditures on Recreation and Transport in V4 Countries: A Hierarchical Clustering Perspective	Emilia Madudová

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2. Mechanical Engineering in Transport

Thursday, 22 May 2025, 9:30 - 10:30 | **Grand Hotel Bellevue - SALÓNIK SILVER** | **Component D** | **PARALLEL SESSION**

Chairperson: prof. Ing. Otakar Bokůvka, PhD. | **Co-chairperson: Ing. Marek Matejka, PhD.** | **Technical staff: Ing. Marek Matejka, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0002	V. Ishchuk, J. Dižo, M. Blatnický, A. Lovska, S. Semenov, E. Mikhailov	Safety against derailment of a container freight wagon with flexible components according to the EN 14363 standard – the Method 1	Vadym Ishchuk
2	0011	A. Patlins, D. Fadejevs, P. Gavrilovs	Transforming Urban Mobility - The Role of 3D Modeling in Designing Sustainable and User-Friendly Public Transport Stops	Antons Patlins
3	0175	J. Minárik, M. Sága, M. Vaško, B. Ftorek	Road vehicle model with hysteretic suspension	Ján Minárik
4	0061	J. Dižo, A. Lovska, M. Blatnický, V. Ishchuk, R. Melnik, S. Koziak	Analysis of long freight wagon running safety depending on wheel/rail contact friction coefficient	Vadym Ishchuk
5	0018	O. Piroh, J. Majko, M. Handrik, M. Vaško, M. Fusek, M. Šofer, J. Cienciala, M. Sága	Comparison of a non-contact extensometer using image analysis and digital image correlation for non-contact displacement measurement	Ondrej Piroh
6	0224	H. S. Muhssen, Á. Bereczky, Z. Máté, K. Lukács	The impact of hydrogen percentage on the combustion, performance, and emissions of NG-H2-diesel naturally aspirated engine at high engine load	Kristóf Lukács
7	0220	L. Deganová, V. Dekýš, B. Drvárová, M. Švantner, A. Sapietová	Defect Analysis in 3D-Printed PLA Materials Using Pulsed Thermography and Advanced Post-Processing Technique	Lucia Deganová

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4. Civil Engineering in Transport

Thursday, 22 May 2025, 9:30 - 10:30	**Grand Hotel Bellevue - DÁMSKY SALÓNIK**	**Component E**	**PARALLEL SESSION**

Chairperson: prof. Andrea Segalini, Ph.D.	**Co-chairperson: prof. Felice Giuliani, Ph.D.**	**Technical staff: doc. Ing. Matúš Kováč, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0054	M. Belhaj, J. Valentin	Reference Temperature's Influence in the Construction of Asphalt Mixtures Master Curve	Majda Belhaj
2	0067	N. Brycht	Comparative analysis of the quality of local road repairs in the context of road traffic safety	Natalia Brycht
3	0073	A. Valletta, A. Segalini	Risk assessment of the Groppo Sovrano rock wall: interaction between rockfall dynamics and a Provincial Road through 3D analysis	Alessandro Valletta
4	0083	M. Zahuranec, M. Vavruš	The effect of low quality of surface treatment of reinforced concrete layers and the consequent impact on non-destructive measurements and localization of concrete reinforcement	Michal Zahuranec
5	0141	F. Cigáň, M. Buková, T. Bukový	Physics-Informed Neural Network for 2D Steady Seepage	Filip Cigáň
6	0146	J. Mešková, J. Mikolaj	The Application of Pavement Performance Models in Pavement Asset Management System for the Purpose of Improving the Structural Pavement Condition	Júlia Mešková

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1. Operation and Economics in Transport

Thursday, 22 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component F** | **POSTER SESSION**

Chairperson: doc. PaedDr. Peter Hockicko, PhD. | **Co-chairperson: prof. Ing. Martin Hromada, Ph.D.** | **Technical staff: prof. Ing. Tomáš Loveček, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0012	M. Dellbrügge, U. Clausen	Establishing New Connections in Combined Road-Rail Transport – BPMN Model Derived from an Interview Study	Marius Dellbrügge
2	0039	J. Krejčí, L. Týfa	Is hydrogen suitable for powering railway vehicles in the Czech Republic?	Jiří Krejčí
3	0041	S. Janikovičová, P. Pártlová, F. Pollák	Comparative analysis of Road Safety, Air Pollution, Public Transport and Noise Disturbance Policies in the V4 countries	Sabina Janikovičová
4	0080	N. Stalmašeková, J. Fabuš, R. Chinoracký, A. Bálintová	Customers' willingness to use electric vehicles in the ride sharing market in Zilina	Natália Stalmašeková
5	0084	M. Jurkovič, R. Kadnár, J. Sosedová, T. Kalina, A. Rio Prabowo, O. Melnyk, S. Hasan	Decarbonizing Inland Waterway Transport: Transition to Low and Zero Carbon Fuels	Martin Jurkovič
6	0085	M. Jurkovič, A. Molnárová Baracková, A. Rio Prabowo, P. Gorzelanczyk, O. Melnyk	Transformative Technology for Inland Waterway Navigation: AIS AtoNs	Martin Jurkovič
7	0107	K. Čulík, A. Kalašová, P. Fabian	Capacity and safety aspects of turbo-roundabouts	Kristián Čulík
8	0169	V. Wohlmuthová, M. Labuda, M. Šmondrk, Ľ. Trpiš, B. Babušiak	Seat Belt Cover for Monitoring the Driver's Physiological Functions – Laboratory Prototype	Veronika Wohlmuthová
9	0170	Ľ. Trpiš, M. Šmondrk, V. Wohlmuthová, B. Babušiak	Real-time EEG-based mental fatigue estimation model	Ľubomír Trpiš
10	0172	K. Ujlacká, V. Konečný	Comparative analysis of GHG emission calculation procedures according to EN 16258 and ISO 14083	Karolína Ujlacká
11	0190	P. T. Grabski, D. Frej, M. Jaśkiewicz, Ł. Karwala, R. Chaba	Experimental analysis of vertical vibrations in child car seats with a swivel base	Marek Jaśkiewicz
12	0207	A. Poliakova, J. Malik	Impact of the efficient use of the motor vehicle tax on road infrastructure quality and safety	Jakub Malik
13	0217	V. Cvacho, R. Madleňák	Consumer Behaviour and Infrastructure Challenges in the Adoption of Battery Electric Vehicles in Slovakia	Viktória Cvacho
14	0244	K. Turoń, A. Kubik	Vehicle Features Influence Peer-to-Peer Car-Sharing: A Social Network Analysis Findings from Emerging Car-Sharing System	Katarzyna Turoń
15	0129	A. Holovan, M. Smieszek, I. Gritsuk, V. Mateichyk, I. Honcharuk, J. Mościszewski	Adaptive Maintenance Strategies for Cargo Ships: Digital Approaches and Cost Optimization	Miroslaw Smieszek

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3. Electrical Engineering in Transport

Thursday, 22 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component F** | **POSTER SESSION**

Chairperson: doc. PaedDr. Peter Hockicko, PhD. | **Co-chairperson: prof. Ing. Martin Hromada, Ph.D.** | **Technical staff: prof. Ing. Tomáš Loveček, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
16	0049	K. Pradeniaková, P. Hockicko	Ferrofluids: properties, preparation and their transport engineering applications	Karolína Pradeniaková
17	0053	M. Šimčák, M. Frivaldský	Changes in internal resistance RS after LiFePO4 cell cycling	Marek Šimčák
18	0089	V. Švárna, M. Frivaldský	A Comparison of Switching Conditions in SiC MOSFET Driving	Veronika Švárna
19	0091	E. B. Spilak, P. Makys, A. Franko	Sensorless Control of Brushed DC Motors: A Cost and Space Efficient Approach Using Sliding Mode and State Space Observers	Eliáš Baltazár Špilák
20	0094	J. Škorvaga, M. Frivaldský, P. Resutík	Experimental evaluation of the influence of coupling coils geometry on transmitting performance of wireless power transfer system (WPT)	jakub Škorvaga
21	0097	J. Šimko, M. Praženica, R. Koňarik	Neural Network-Controlled Buck Converter for Power Management in Electric Vehicles	Juraj Šimko
22	0165	J. Markovič, M. Frivaldský	New trends in automotive – Electric drives and power electronics	Ján Markovič
23	0166	T. Paulec, P. Špánik, J. Tvarožek, M. Praženica	Designing of the Ramp Reference for Buck Converter for Hydrogen production	Tomáš Paulec
24	0189	J. Tvarožek, M. Praženica, T. Paulec	Optimization of Buck-Boost converter for automotive applications	Juraj Tvarožek
25	0228	M. Frivaldsky, J. Sedo, M. Sladek	Control system design of NPC converter for possible use in charging infrastructure	Michal Frivaldsky
26	0060	J. Kekelák, M. Motýľ, D. Nemec, P. Peniak	Tracking Object and Personnel Positions in Outdoor Industrial Environments Using LoRaWAN Technology	Juraj Kekelák
27	0023	R. Pirník, O. Gallo, R. Slaninka, J. Kafková, P. Kuchár	Robotic Automation of Car Seat Reloading Workstation	Pavol Kuchár
28	0186	A. Tropp, M. Benova	Analysis of electromagnetic field values in real space with multiple non-harmonic supplies	Alek Tropp

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6. Safety and Security Engineering in Transport

Thursday, 22 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component F** | **POSTER SESSION**

Chairperson: doc. PaedDr. Peter Hockicko, PhD. | **Co-chairperson: prof. Ing. Martin Hromada, Ph.D.** | **Technical staff: prof. Ing. Tomáš Loveček, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
29	0008	K. K. Holla, S. Kockar, S. Polikarpus, R. Kasepalu, A. Kuricova	A Comparative Analysis of Major Industrial Accident Prevention Strategies in the Slovak Republic and Estonia Under the SEVESO III Directive Regulation	Katarina Hollá
30	0014	M. Huliak, I. Marková	Analysis of access roads, boarding areas and arrival times of firefighting units to selected heritage wooden buildings	Michal Huliak
31	0024	L. Valla, E. Sventeková	Competencies of ambulance crews	Lukáš Valla
32	0037	B. Kollár, K. Nováková, M. Paweska	Conceptual proposal for the use of data for risk assessment and decision-making support in the transport of dangerous goods by road	Boris Kollár
33	0069	S. Hubočan, M. Madleňák	Possible Effects of MDMA on Vehicle Driving Competencies	Matúš Madleňák
34	0108	S. Kočkár, Ľ. Buzna, K. Hollá, M. Kalaš, J. Ommer	Overview of Tools and Data Sources for Risk and Vulnerability Analysis in Urban Pilot Areas of the RETIME Project	Samuel Kočkár
35	0132	E. Skýpalová, M. Boroš, E. Sventeková, L. Valla	Testing of the Indoor Positioning System Applicable for Healthcare Facilities	Lukáš Valla
36	0153	D. Hodúlová, S. Gašpercová	Options for simulating stand-off distances with fire models	Dorota Hodúlová
37	0174	M. Madleňák, S. Hubočan	Phishing 2.0: Human Ability to Detect AI-Generated Content	Matúš Madleňák
38	0184	D. Hodúlová, M. Huliak	A study of access roads, boarding areas and firefighting units arrival times at selected heritage theatre buildings	Dorota Hodúlová
39	0188	D. Bóna, I. Marková, J. Svetlík	Experimental verification of engine oil sorption	Dušan Bóna

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1. Operation and Economics in Transport

Friday, 23 May 2025, 8:30 - 10:30	Grand Hotel Bellevue - KONGRES FOYER	Component G	POSTER SESSION

Chairperson: prof. Borna Abramović, Ph.D. | **Co-chairperson: prof. Ing. Jozef Gašparík, PhD., MBA** | **Technical staff: Ing. Zdenka Bulková, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0117	Š. Branislav, M. Loman, D. Rovňaníková	Monitoring the impact of traffic activity in a selected location on air quality	Dominika Rovňaníková
2	0126	G. Fedorko, H. Neradilová, N. Mikušová, V. Molnár, M. Ďuriška	Possibilities of Using Blockchain Technology in Transportation	Gabriel Fedorko
3	0134	V. Zitrický, M. Dedík, P. Meško, D. Pribula	Use of the locomotives with ETCS system on the Bratislava – Žilina railway line	Milan Dedík
4	0135	J. Fabianová, J. Palinsky, L. Rigo, P. Michalik	Railways in Slovakia: Current State and Perspectives of High-Speed Lines	Jana Fabianová
5	0142	M. Václavík, I. Olivková	Quality mapping of public transport service: Case study for Brno, Czech Republic	Martin Václavík
6	0150	M. Konovalova, T. Čorejová	Geopolitical Risk and Its Measurable Impacts on International Trade and Transport Systems	Maryna Konovalova
7	0202	M. Mazur	Qualitative analyses in the quality assurance system for manufacturing processes - a case study for the elements of the car's mechanism movement	Magdalena Mazur
8	0212	A. Bańkowski, M. Jaśkiewicz, D. Frej, R. Chaba	Analysis of the rear-end crash test of a motorcycle at low speed	Marek Jaśkiewicz
9	0216	M. Zuzaniak, V. Konečný	Research on positive externalities from road freight transport, considering the time lag of the studied indicators	Martin Zuzaniak

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2. Mechanical Engineering in Transport

Friday, 23 May 2025, 8:30 - 10:30 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component G** | **POSTER SESSION**

Chairperson: prof. Borna Abramović, Ph.D. | **Co-chairperson: prof. Ing. Jozef Gašparík, PhD., MBA** | **Technical staff: Ing. Zdenka Bulková, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
10	0016	D. Komačka, M. Krajčovič, M. Matys, M. Marčan	Optimization of in-plant logistics processes in assembly systems using digital simulation tools: A case study using AGV and Twiserion Design Manager	Dávid Komačka
11	0064	M. M. Vereš, D. Kozárik, L. Deganová, R. Kohár, R. Madaj	A Modular Test Stand for Studying Rotor Characteristics and Vibration Diagnostics	Daniel Kozárik
12	0076	D. Kozárik, R. Bašťovanský, S. Hrček, M. Vereš	Analysis of Knot Variants and Their Impact on the Mechanical Performance of Dyneema Composite Ropes	Daniel Kozárik
13	0119	P. Bernaciak, K. Stępień	Monitoring Rolling Bearings: Vibration Transducers Calibration System Concept	Paweł Bernaciak
14	0137	M. Marčan, P. Grznár, L. Papánek, D. Komačka	Design and simulation of the AGV logistics system: Case study	Milan Marčan
15	0157	J. Gerlici, A. Lovska, M. Adamkovič	The influence of air parameters on the indicators of air movement in the air pipe of a brake test bench	Matúš Adamkovič
16	0181	J. Filo, P. Šťastniak, P. Golian, J. Grenčík	Evaluation of Current Powertrain for Specific Railway Vehicle: Traction and Energy Characteristics	Jozef Filo
17	0197	J. Dižo, M. Blatnický, A. Lovska, M. Bučko, M. Kostrzewski, O. Kravchenko	Eigenanalysis of wagon wheelsets based on the rigid body dynamics	Martin Bučko
18	0200	D. Frej, M. Jaśkiewicz, R. Chaba	Analysis of Pedestrian Behavior at Crosswalks in Urban Environments	Marek Jaśkiewicz
19	0201	M. Adamkovič, A. Lovska, A. Suchánek, J. Harušinec	Thermal Regulation of Auxiliary Water for UIC Brake Test Bench	Matúš Adamkovič
20	0203	Ľ. Nová, P. Nemec, J. Jandačka, M. Malcho	Effective Heat Transfer-Making Use of Waste Heat to Boost Thermal Efficiency of Small Heat Source	Ľudmila Nová

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4. Civil Engineering in Transport

Friday, 23 May 2025, 8:30 - 10:30 | **Grand Hotel Bellevue - KONGRES FOYER** | **Component G** | **POSTER SESSION**

Chairperson: prof. Borna Abramović, Ph.D. | **Co-chairperson: prof. Ing. Jozef Gašparík, PhD., MBA** | **Technical staff: Ing. Zdenka Bulková, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
21	0029	M. Brna, M. Kováč, P. Pisca	Assessment of road surface roughness before and after surface renewal on road II/584 in the Huty area	Matej Brna
22	0045	W. Qatrameez, F. Miftah, K. Kowalski	Towards Sustainable Cycling: Life Cycle Assessment of bicycle road pavement	Waleed Qatrameez
23	0052	M. Poljak	Temperature and Relative Humidity Distribution in a Heritage Church Attic During Summer	Michal Poljak
24	0063	M. Kováč, M. Brna, P. Pisca, A. Jahn	Friction and Texture Analysis of 3D-Printed Samples	Matúš Kováč
25	0086	J. Čížek, M. Jacura	Development of barrier-free solutions for selected railway station platforms in Central European countries	Jiří Čížek
26	0118	M. Miške, L. Figuli	Correlation Between Structural Condition and Age of Bridges: A Statistical Analysis of Road Bridges in Slovakia	Michal Miške
27	0143	A. Almadhoun, A. Eliwa, M. Kostrzewski	The 79th street in Musaffah Abu Dhabi – The Simulation-Based Alternatives	Mariusz Kostrzewski
28	0178	M. Drličiak, M. Cingel, D. Jandačka, J. Čelko	Mobility data analyses for the transport model of the Slovak Republic in REMOT project	Marek Drličiak
29	0225	M. M. Salamak, P. Łaziński, D. Piotrowski, M. Jasiński, B. Kopeć, M. Gerges	The role of a load test in creating a bridge digital twin	Marek Salamak
30	0229	A. Kniz, A. Kocianova	Analysis of Space-Mean Speed Measurement Methods	Adam Kniz
31	0238	J. Michałek, A. Michałek	Steel crosspieces for medium voltage lines on spun concrete poles	Jarosław Michałek
32	0239	J. Michałek, A. Michałek	Prestressed concrete railway traction poles mounted on prefabricated piles	Jarosław Michałek

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3. Electrical Engineering in Transport

Friday, 23 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - DÁMSKY SALÓNIK** | **Component H** | **PARALLEL SESSION**

Chairperson: doc. Ing. Jozef Hrbček, PhD. | **Co-chairperson: doc. PaedDr. Peter Hockicko, PhD.** | **Technical staff: doc. PaedDr. Peter Hockicko, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0059	M. Zdurienčík, F. Gucmann, D. Pudiš	Preparation of microstructures structures for gallium oxide photonic devices	Marek Zdurienčík
2	0066	M. Horník, P. Rafajdus, H. Chen, A. Blaško	Design of stator-magnet transverse-flux linear oscillatory machine for reciprocating drives in transport	Andrej Blaško
3	0123	A. Franko, B. Takac, P. Makys, E. B. Spilak	Overview Of Sensorless Control Methods Of PMSMs Using High Frequency Injection	Eliáš Baltazár Špilák
4	0145	A. Patlins, K. Vabulnieks, L. Mezule, P. Gavrilovs	Design of a UV-C-LED-Based Prototype for Disinfecting Small Surfaces in Public Transport System under Uncertain Epidemiological Conditions	Antons Patlins
5	0151	T. Petrov, W. Sleiman, P. Beigi, P. Počta, Ľ. Buzna, S. Hamdar	Simulation of Vehicle-to-Pedestrian Communication for Development of Novel C-ITS Services for Vulnerable Road Users	Tibor Petrov
6	0154	P. Belany, P. Hrabovsky, Z. Florkova, I. Zuziakova	Neural Network-Based Prediction of Illumination Intensity in Workplace Environments	Pavol Belany
7	0155	M. Šmondrk, B. Babušiak, I. Gajdáč, T. Gajdošík, M. Labuda, R. Madaj	Advanced Driver Safety: A Steering Wheel Prototype for Real-Time Physiological and Kinematic Monitoring	Michal Labuda
8	0196	J. Hrbček, J. Ždánsky, D. Macko, E. Bubeníková	Development of a Digital Twin Controlled by PLC in a Simulation Environment	Jozef Hrbček
9	0199	A. Blaško, M. Pácha, P. Makyš, M. Horník	Comparison of Robustness of SOGI Synchronization Techniques in Weak Grid Conditions for Railway Converter Applications in DQ Coordinates	Andrej Blaško

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1. Operation and Economics in Transport

Friday, 23 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - SALÓNIK SILVER** | **Component I** | **PARALLEL SESSION**

Chairperson: doc. Ing. Andrej Dávid, PhD. | **Co-chairperson: Ing. Yasser Douimia** | **Technical staff: Ing. Milan Dedík, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0005	V. Němec, J. Šantrůček, D. Hůlek, P. Mrázek, P. Daňko	Aircraft Valuation Method	Vladimír Němec
2	0036	M. A. Pilarczyk, R. M. Ulewicz	Road Transport of Live Animals in the EU: Challenges in Worker Safety and Animal Welfare	Maria Pilarczyk
3	0038	J. Šimko, F. Gubáš	Patient transportation in conditions of the Slovak Armed Forces	Juraj Šimko
4	0040	I. Chupaň Kunertová, M. Strenitzerová	Sustainability and the Circular Economy in the Postal Sector	Ivona Chupaň Kunertová
5	0062	A. Dolinayová, P. Morihladko	Possibilities of using alternative energy sources in rail transport: a case study in the Slovak Republic	Peter Morihladko
6	0115	A. Kalašová, K. Čulík, P. Fabian	Perception of Intelligent Technologies by Road Users	Peter Fabian
7	0120	M. Poliak, L. Škorvánková	Research on pedestrian attention when crossing pedestrian crossings	Laura Škorvánková
8	0177	A. Bohacova, B. Badanik	The Key Role of National Environment Coordinators in Improving Air Traffic Flow and Capacity Management	Andrea Boháčová
9	0179	D. Benčo, I. Kubasáková, P. Čauder	Optimization of intra-company transport and logistics processes within a selected enterprise	Dominik Benčo

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2. Mechanical Engineering in Transport

Friday, 23 May 2025, 11:00 - 13:00 | **Grand Hotel Bellevue - SALÓNIK KRISTAL** | **Component J** | **PARALLEL SESSION**

Chairperson: Prof. P.Cz. dr hab. inż. Robert Ulewicz | **Co-chairperson: Ing. Marek Matejka, PhD.** | **Technical staff: Ing. Marek Matejka, PhD.**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0042	J. Harvanec, J. Moravec, M. Mičian, M. Frátrik	Creation of In-Situ Continuous Cooling Transformation Welding Diagrams of S960 High Strength Steel	Jakub Harvanec
2	0101	J. Sovík, S. Gneiger, N. Papenberg, D. Kajánek, B. Hadzima	Influence of open circuit potential time on the corrosion behavior of heat treated AZ80 magnesium alloy	Ján Sovík
3	0125	K. Kubiak, K. Stępień	Roundness measurement data analysis: A brief review and verification of current practices	Kamil Kubiak
4	0136	L. Rigo, J. Fabianová, M. Duriska, N. Mikusova, G. Fedorko	Optimization of the production system using the selected tools in Tecnomatix Plant Simulation	Jana Fabianová
5	0167	D. Kajánek, J. Pastorková, K. Marušincová, M. Jacková, B. Hadzima	Comparative study of corrosion resistance of magnesium alloys in chloride environment	Daniel Kajánek
6	0168	P. Špuro, M. Sajgalik, J. Mrazik, A. Czan, R. Joch, M. Drbul, J. Markovic	Comparison of Residual Stresses in Tools Used in the Automotive Industry: Conventional vs. Innovative Heat Treatment for Cost-Effectiveness and Efficiency	Peter Špuro
7	0183	P. Šťastniak, J. Filo, J. Krško, M. Adamkovič	Design and validation of a rail vehicle propulsion concept with a traction unit powered by a hydrogen fuel cell	Jozef Filo
8	0185	A. Czán, N. Czánová, J. Holubják, T. Czánová, D. Krišák, J. Markovič	Comparison of Selective Laser Melting and Atomic Diffusion Additive Manufacturing Technologies: Evaluating Stainless Steel Materials in Terms of Accuracy and Key Performance Indicators	Andrej Czán
9	0194	V. Samaš	Electronic Regulation of Thermoelectric Modules in a Flow Cooler	Vladimír Samaš
10	0240	M. Todorov, V. S. Serbezov, F. Panayotov	Development of Aerodynamic Research at the National Center for Mechatronics and Clean Technologies in Sofia	Vladimir Serbezov
11	0242	M. Thakkar, A. A. Lordejani, M. Guagliano	Metal particle acceleration to supersonic speed: Numerical simulation and preliminary results	Monil Thakkar

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Wednesday, 21 May 2025, 17:00 - 18:00	Grand Hotel Bellevue - SALÓNIK KRISTAL/MS TEAM	Component S	SPECIAL SESSION

Chairperson: prof. Ing. Jozef Ristvej, PhD., EMBA | **Co-chairperson: prof. Ing. Pavol Rafajdus, PhD.** | **Technical staff: Mgr. Katarína Poláčková**

SEQUENCE	CODE	AUTHORS	TITLE	PRESENTER
1	0233	S. Channamallu, S. Kermanshachi, J. M. Rosenberger, A. Pamidimukkala, G. Hladik	Evaluating the impact of smart parking applications on university parking efficiency and user satisfaction	Sharareh Kermanshachi
2	0235	H. Wang, D. Alamaskati, S. Kermanshachi, J. Rosenberger, A. Pamidimukkala, C. kan, A. Foss	Data-driven analysis of rideshare spatial travel patterns and ride metrics	Sharareh Kermanshachi
3	0234	S. Channamallu, S. Kermanshachi, J. Rosenberger, A. Pamidimukkala, G. Hladik	Urban parking challenges and solutions: a case study	Sharareh Kermanshachi
4	0236	A. Pamidimukkala, S. Kermanshachi	Grounded Theory in Transportation Research	Sharareh Kermanshachi
5	0035	P. Ovchynnykov, O. Tiutkin, V. V. Lukoševičius, L. Neduzha	Rationale for New Pontoon-Cable Bridge Structure Parameters for Providing Uninterrupted Transportation	Pavlo Ovchinnikov
6	0095	M. Simeonov, P. Kamencay, M. Dado	Investigation of urban routes for autonomous transportation using 5G communication and LiDAR data	Marcel Simeonov

WORKSHOPS/PRESENTATIONS

Grand Hotel Bellevue - SALÓNIK KRISTAL

DATE AND TIME	SPEAKER	TITLE
21.5.2025 14:00 - 15:00	Use Your Talents, s.r.o./Mgr. Joe Palaščák, PhD.	Strengths to success! Harnesing Gallup Cliftonstrengths approach for personal and professional growth
21.5.2025 15:00 – 15:45	SARIO/JUDr. Barbora Szépeová Solved/Radoslav Mizera	Interactive Workshop: Practice for Universities, Solutions for Companies
22.5.2025 8:30 – 9:15	iTranSys, s.r.o./Milan Sarzik	Research in Business, Business in Research: Is there even a difference?
22.5.2025 9:30 – 11:00	Civitta/ Zuzana Kušíková	From Research to Business - How to Assess Market Fit
22.5.2025 11:30 – 13:00	Wroclaw University of Science and Technology/ Dr. Yash Chawla	Societal impact of DeepTech: Multistakeholder perspective
23.5.2025 9:00 – 9:30	ESET/Ing. Paulina Bohmerova	Challenger Science
23.5.2025 9:30 – 10:30	INOVIA/Ing. Vlastimil Kocian	Successful Science Commercialization: Effective Integration of TRL and CRL

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