

October 8, 2026	
8:00-9:00	Registration
9:00-9:10	Welcome & Opening: Prof. Máté Zöldy
9:10-9:35	Keynote: Mr. Zoltán Szőke (Bosch)
9:35-10:00	Keynote: Mr. Hans Peter Kemser (BMW)
10:00-10:25	Keynote: Mr. Bálint Vető (MOL Limo)
10:25-10:55	Coffee break
10:55-12:40	Technical sessions 1

Section A: Cognitive Necessity & Sustainability Drivers 1		
Chair: Adam TOROK		
3	Stephan Kuehnel	Regulation of German Professional Exams – Obscurity vs. Methodology
5	Petra Szakonyi	Transport Infrastructure and Service Quality as Determinants of Employability: A Mixed-methods Territorial Analysis from Hungary
9	Hazem Al-Mahamid, Ammar Al-Lami and Ádám Török	Demographic Risk Profiles of Road Traffic Fatalities in Europe: A Country-Level Analysis of Age and Gender Patterns
55	Balint Csendes	The long-term social effects of increased transport mobility: a historical review
74	Haitham Al Hasanat, Omar Alharasees, Mohammad Fawaier, Farzad Zolfaghari, Artúras Kilikevičius and Utku Kale	Green Mobility through Smart Platforms: Evaluating Tourists' Readiness for Energy-Efficient MaaS in Petra

Section C: Mobility Infrastructure & Resources 1		
Chair: Adrienn BOLIZSAR		
6	Jaroslava Kubáňová and Iveta Kubasakova	Strategy for evaluating and resolving issues with suppliers in the automotive industry
10	Zdenka Bulkova, Jozef Gašparik, Adam Torok, Martin Kendra and Rudolf Kampf	Competitive Tendering as a Tool for Improving Long-Distance Rail Services
15	Andrej Dávid	Handling Equipment in Danube Ports and Possibilities for Increasing Their Performance
40	Ágoston Winkler and Diána Henézi	Safety in the Public Transport of Smart Cities

Section E: Vehicle Systems, Materials & Sensing 1		
Chair: Olja COKORILÓ		
4	Aijuan Li, Liwen Wang, Xiangsen Ning, Chao Sun and Bohan Yao	Optimal Controller Design for Two-wheel Self-Balancing Mobile Robot LQG
26	Alyona Lovska, Juraj Gerlici and Ján Dižo	Strength analysis of an open wagon body with an improved pivot beam design
115	John Yawe	Mathematical Modelling of a Novel Hybrid Solar–Biogas Dryer for Sustainable Agricultural Drying: Towards AI-Driven Digital Twins and Cognitive Control
45	Premal Bhatt, Aashish Baldwa and Pratham Bhatt	Adaptive Workload Scheduling for Efficient Resource Utilization in Cloud-Native Orchestration Systems
46	Aashish Baldwa, Premal Bhatt, Devang Upadhyay and Pratham Bhatt	Artificial Intelligence-Driven Defect Prediction and Risk Analysis Framework Based on SDLC Platforms
12:40-13:20	Lunch & Exhibition visit	
13:20-13:40	Award ceremony	
13:40-14:05	Keynote: Mr. Glenn Schmidt (BMW)	
14:05-14:30	Keynote: Dr. Rita Somogyi (Tern System)	
14:30-14:55	Keynote: Dr. Mária Szalmáné Csete (BME)	
14:55-15:20	Demo Slot 1	
15:20-15:45	Demo Slot 2	
15:45-16:15	Coffee break	
16:15-17:55	Technical sessions 2	

Section A: Cognitive Necessity & Sustainability Drivers 2		
Chair: Csaba Toth-Nagy		
104	Tomáš Blodek, Pavel Vrtal, Tomáš Kohout and Jonáš Maleček	Influence of Vertical Sign Condition and Placement on Traffic Sign Recognition Systems
28	Mariarosaria Picone, Federica Maria Greco and Ilaria Henke	Decarbonization of the Transport Sector in the European Union: A Literature Review and Comparative Analysis of EU-27 Countries
82	Berlan Rodríguez, Yoisdel Castillo Alvarez and Zaur Aliyev	Electric Mass Transit in Lima: A Comparative Policy Analysis and the Circular Economy Imperative
112	Miroslava Mikusova, Antonin Fuchs, Romana Antczak-Jarzabska and Romanika Okraszewska	From Fuel Price Shocks to Sustainable Mobility: A Conceptual Framework for Household Adaptation and Public Transport Resilience in an Era of Recurring Energy Crises
113	Miroslava Mikusova, Azizbek Ergashev and Vladimir Konecny	Economic and Environmental Costs of Public Transport Deficits in a Secondary City: A Data-Driven Cognitive Mobility Assessment of Jizzakh, Uzbekistan

Section C: Mobility Infrastructure & Resources 2		
Chair: Horia Beles		
23	Dr R Raja Guru, T Vinothini, M Meenadharshini, B Prem Kumar, M Lavanya and A Antony Nithin	SmartRoad AI: A Context-Aware Q-Learning-Based Adaptive Traffic Signal Optimization for Priority Urban Zones
29	Maja Violetta Kertész, Richárd Nagy and Zoltán Pásztor	Modeling Organizational and Meteorological Factors in Urban Winter Road Maintenance: Empirical Analysis of the PIARC International Survey Data
37	Assem Hussein, Richárd Horváth and Balázs Horváth	A Hybrid Dynamic Framework for Multimodal Corridor Response to Shock
17	Andrej Dávid	Multimodal Transport Optimization for Automotive Exports from Central Europe to North Africa: A Case Study of Kia Slovakia
53	Roland Csongvai, Samir Rasulov and Péter Pál Bakucz	Low-Dimensional Attractors Meet Fuzzy FTA: Integrated Reliability for Urban Traffic Nodes

Section E: Vehicle Systems, Materials & Sensing 2		
Chair: Omar Alharasees		
48	Albert Kamil, András Pollák, Dániel Hegedűs, Dániel Harrach, Gábor Lekics, Gusztáv Baranyai, Attila Németh and Vivien Révész-Jóvér	Comparison of the Use of Rock Wool Manufacturing Waste in Normal and Lightweight Concrete Based on Physical and Mechanical Properties
92	Arturas Kilikevičius, Vytautas Makarskas, Egidijus Dragašius, Kristina Kilikevičienė, Jonas Matijošius, Algirdas Galdikas, Piotr Dubravskij, Jolanta Donėlienė and Darius Vainorius	Vibration-Based Prediction of EVA Gel Content in Photovoltaic Laminates Without Silicon Cells Using Operational Modal Analysis
42	Vlad Imre Tent, Florin Bogdan Scurt, Tiberiu Vesselenyi, Horia Beles, Bogdan Adrian Tolea and Ion Cosmin Gherghea	Data Acquisition for Load Assessment in the Body Structure of a Freight Transport Trailer
81	Gábor Sipos and Ádám Domina	External sensing for vehicle state estimation: observability of vehicle states using exteroceptive and infrastructure-based sensors
58	Levente Őrsi, Vivien Révész-Jóvér and Szabolcs Szalai	Investigation of the Industrial Applicability of Handheld Optical 3D Scanners
19:30-22:00	Gala Dinner	

Section B: Cognitive Decision-Making in Mobility 1		
Chair: Szilárd Aradi		
1	Ondrej Stopka, Vladimír Čupťák and Jiří Hanzl	Enhancing Intersection Safety with Accident Data and UAV Records: A Case Study
20	Patrik Lukács and Viktor Nagy	Integrated Decision-Support Model for Assessing the Justification of Car-Sharing Implementation
21	Petra Szakonyi	Cognitive Dissonance in Sustainable Mobility: Decision-Making of University Athletes and Non-Athletes in Győr, Hungary
22	Hanan Alkhansa and Emese Makó	Simulation-Based Review of Pedestrian–Vehicle Conflict Analysis for Cognitive and Smart Urban Mobility
101	Anett Verebélyiné Gosztola	Cognitive Factors in Route Choice Decisions Under Congestion: A Stated Preference Study

Section D: Cognitive Powertrain & Propulsion Technology 1		
Chair: András Lajos Nagy		
11	Máté Boros, Ádám Nyerges and Péter Raffai	Thermal Coupling and Surge Dynamics in Turbocharger Compressors: Effects of Coolant Temperature on Flow Separation
18	György Marton and András Lajos Dr. Nagy	A Robust Data Pre-processing and Synchronization Methodology for RDE Measurements
88	Aleksandr Šabanovič, Jonas Matijošius, Darius Vainorius and Arturas Kilikevičius	Machine Learning Driven Adaptive High-Voltage Pulsing for Hybrid DPF-ESP Systems in Urban Cycles
110	Kiran S, Edwin Geo Varuvel, Jonas Matijošius, Artūras Kilikevičius and Utku Utku Kale	Closing the Loop on End-of-Life Tyres: Hydrogen-Enriched Waste Tyre Oil as a Circular Fuel for Sustainable Mobility
99	Mahmoud Said Jineid and Ziad Hakim	CFD-Based Comparative Assessment of Wankel and LiquidPiston Rotary Engine Architectures for Range-Extender Applications

Section B: Cognitive Decision-Making in Mobility 2		
Chair: Dhinesh Balasubramanian		
32	Polina Görbe, Attila Bódis, Márk Bata and Tamás Bódis	Simulation-based learning of adaptive intra-logistics decision support system
54	Amir Hajimirzajan, Milad Kazemian, Ahmad Davari Ghezelhesar and Vivien Révész-Jóvér	Hierarchical DBSCAN Clustering for Railway Accident Analysis: Prioritizing Risk Factors in Train-Pedestrian Collisions
57	Mykola Kurhan, Dmytro Kurhan and Szabolcs Fischer	Cognitive Risk-Oriented Decision-Making for Railway Level Crossing Recovery
90	Sham Sundar Rao	Out-of-Distribution Detection In Safety-critical Autonomous Driving Systems: A Hybrid Meta-cognition Learning Assessment Framework

Section D: Cognitive Powertrain & Propulsion Technology 2		
Chair: Barna Hanula		
108	Melih Yıldız, Serdar Şanlı, Arturas Kilikevičius and Utku Kale	Overcoming the Barriers to Stratospheric Flight: Technological Challenges and Innovative Solutions
19	Bence Zsoldos, András Lajos Nagy and Máté Zöldy	Understanding E85 pre-chamber combustion through computational fluid dynamics simulations of a single-cylinder turbocharged engine
25	Márton Virt	Evaluation of FKM Elastomer Compatibility with Hydrotreated Vegetable Oil and Oxymethylene Ether
86	Aleksandras Chlebnikovas, Benas Rimša, Gyorgyi Kale-Halaszi and Artúras Kilikevičius	Development and Investigation of Catalytic Emission Reduction Technologies for Improved Air Quality
105	Miklós Diósy and Máté Zöldy	Analysis of Short-Term Voltage and Current History on Dynamic Multilayer Perceptron Model for High-Voltage Battery Behaviour Prediction