

Plenary lecture, chairman Károly Jármai

9.00-9.30 László Fűkő Factory director, Robert Bosch Power Tool Ltd.

Session Alternative Powertrains / Autonomous vehicles, chairman: Ferenc Sarka

9.45-10.00 Márton Pataki Development of an advanced durable test target for Autonomous Emergency Brake testing
10.00-10.15 Zakariás Erődsdi Trajectory tracking control of an autonomous car
10.15-10.30 Zakariás Erődsdi Trajectory Tracking Controller Testing in Software in the Loop Environment
10.30-10.45 Dávid Matusz-Kalász Range-reducing Effect of Contaminants in Case of Solar Vehicles
10.45-11.00 István Lakatos Alternative propulsion buses in the metropolitan public transport
11.00-11.15 Mehmet Murat Topaç Structural Analysis of a Multi-Axle Steering Linkage for an 8x8 Special Purpose Vehicle

Session Materials & Manufacturing, chairman: Zoltán Szamosi

9.45-10.00 Miklós Tisza Three Generations of Advanced High Strength Steels in the Automotive Industry
10.00-10.15 Boris Pătoprștý Development of cutting edge radius size of solid carbide mills when drag finishing
10.15-10.30 Saad Alsarayefi Micromechanical Analysis of Glass Fiber/Epoxy Lamina
10.30-10.45 Peter Szobota Non destructive test for control of the surface quality of semi product at the automotive industry
10.45-11.00 Bela Kondas Investigation into applicability of automotive quality regulations in the steel industry

Session Sustainability / Logistics, chairman: György Kovács

11.15-11.30 András Lajos Nagy Artificial aging of ultra-low viscosity lubricant samples on a programmable oil aging rig
11.30-11.45 Olivér Hornyák Smart Contracts in the Automotive Industry
11.45-12.00 Péter Nagy A Review on the Differences between Particle Emission; Filtration and Regeneration of Particulate Filters of Diesel and Gasoline Engines
12.00-12.15 Dániel Erdősy Electromagnetic emission rates between 2-phase and 3-phase motors
12.15-12.30 Rafael Ruben Boros Life Cycle Assessment of Traditional and Electric Vehicles
12.30-12.45 György Kovács Special Optimization Process for Warehouse Layout Design
12.45-13.00 Yakoumis Iakovos Towards Ammonia Free Retrofitting of Heavy-Duty Vehicles to meet Euro VI Standards
13.00-13.15 Mohammad Zaher Akkad Applying Sustainable Logistics in Industry 4.0 Era

Session Design / Noise, chairman: Gábor Szepesi

11.15-11.30 Balázs Rácz Experimental investigation of vibroacoustic behaviour of an automotive turbocharger with semi-floating bearing
11.30-11.45 WALLYSON THOMAS ALVES DA SILVA Passive Damping Techniques For Vibration Suppression In Boring Operation With Long Overhangs
11.45-12.00 Ferenc Sarka Test Method for Investigation of Reactive Loads on Gear Drives with Supporting Function
12.00-12.15 Ferenc Szabó J. Analysis of wear curves as sigmoid functions
12.15-12.30 László Soltész Utilization of lessons learned in product development
12.30-12.45 Attila Widner Comparison of center of gravity height estimation methods
12.45-13.00 Gabriella Vadászné Dr. Bognár Numerical Solutions of the Kardar-Parisi-Zhang Interface Growing Equation with Different Noise Terms
13.00-13.15 Viktor Gál Effect of cooling channels to the press hardening tools temperature

Plenary lecture, chairman Károly Jármai

14.00-14.30 Barna Szabo Formulation of a mathematical model for the prediction of fatigue life in the high cycle regime

Session Design / Noise, chairwoman: Betti Bolló

14.45-15.00 Máté Tóth Design and testing of a water injection system of a turbocharged Otto-engine in testbench environment
15.00-15.15 Gergely Szűcs Method of validating the importance of aerodynamic (drag) parameters for electric racing environments
15.15-15.30 Gergely Szűcs Simulation environment developed for advanced suspension design methods
15.30-15.45 Gergely Szűcs Validation of Formula Student Race Car simulation environment and parameter sensitivity to race results
15.45-16.00 Betti Bolló CFD analyzes of an axial fan
16.00-16.15 László Dudás Robotic Production Oriented Engine Design and Manufacturing
16.15-16.30 Máté Petrik Experimental investigation of the air-side heat transfer coefficient on louver finned tube automotive radiator

Session Optimization, chairman: Zoltán Virág

ALAA
14.45-15.00 ABDULZAHRA DELI Al-Fatlawi Optimum Design of Solar Sandwich Panels for Satellites Applications
15.00-15.15 Rabab Benotsmane Survey on new trends of robotic tools in the automotive industry
15.15-15.30 Rabab Benotsmane Trial - and - Error Optimization Method of Pick and Place Task for RV-2AJ Robot Arm
15.30-15.45 Hazim Ghafil Optimization algorithms for inverse kinematics of robots with MATLAB source code
15.45-16.00 Károly Jármai Newer manufacturing technologies and their costs in automotive structures; a review
16.15-16.30 Zoltán Virág Cutting and Hauling Mining Adapter for Dimension Stone

Session Welding, chairman: Marcell Gáspár

14.45-15.00 Mikihito Hirohata Application of Laser-arc Hybrid Welding to Thick Steel Plates for Bridge Structures
15.00-15.15 Erika Hodulova Research of Laser Beam Welding of Nickel
15.15-15.30 Abdallah Kafi Arc sensor parameter optimisation for robot welding

15.30-15.45	Erika	Hodulova	Experimental Study of Electron Beam Welding of Inconel Alloy
15.45-16.00	László	Gyura	Investigation of thermal effects of flame straightening on high-strength steels
16.00-16.15	János	Lukács	High Cycle Fatigue Resistance of 700 MPa and 960 MPa Strength Categories High Strength Steels and their Gas Metal Arc Welded Joints