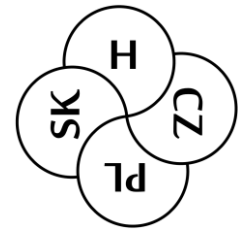


38<sup>th</sup> International Colloquium on  
**Advanced Manufacturing and Repair Technologies  
in Vehicle Industry**



Visegrád, 24-26 May 2023.

## Program

### 24<sup>th</sup> May, Wednesday:

14.00 – Registration  
15.45 – 16.00 Opening ceremony  
16.00 – 17.20 1<sup>st</sup> Session (chair: Tatiana Liptaková, Tamás Markovits) – *Materials science*

1. **MIKLÓS BERCZELI**, FERENC TAJTI, GERGŐ JUHÁSZ, PÉTER KOVÁCS, ZSOLT KÖNYVES, ANDREA CAPÁR ISTVÁN KUTI, BENJÁMIN KÖRÖMI, ZOLTÁN WELTSCH: Wettability Measurement Possibilities on Adhesives
2. **ZUZANA SURDOVA**, LUCIA PASTIEROVIČOVÁ, EVA TILLOVÁ, LENKA KUCHARIKOVÁ, MILAN UHRÍČIK, JURAJ BELAN: Application of Foundry Secondary Aluminium Alloys in the Automotive Industry
3. MIKLÓS BERCZELI, PÉTER KOVÁCS, ZSOLT KÖNYVES, ANDREA CAPÁR, **FERENC TAJTI**: Options for Modifying the Wettability of Powder-coated Aluminium
4. **PETRA DRÍMALOVÁ**, FRANTIŠEK NOVÝ, DENISA MEDVECKÁ, PETRA VÁŇOVÁ, KATEŘINA KONEČNÁ: Effect of potassium thiocyanate on hydrogen embrittlement of advanced high-strength steel S960MC

17.20 – 17.45 Coffee Break  
17.45 – 19.00 2<sup>nd</sup> Session (chair: Otakar Bokuvka, Miklós Berczeli) – *Materials science*

1. **ALEXANDRA BERCZKI**, PÉTER KOVÁCS, MIKLÓS BERCZELI, FERENC TAJTI: The Impact of Environmental Conditions on Adhesive Technology
2. MILAN UHRÍČIK, PETER PALČEK, JURAJ BELAN, LUCIA PASTIEROVIČOVÁ, ZUZANA ŠURDOVÁ, **MARTIN MIKOLAJČÍK**, PETRA DRÍMALOVÁ, MARTIN SLEZÁK: The Effect of Heat Treatment on The Nitriding Layer on Austenitic Steel AISI304
3. **ZOLTAN WELTSCH**, FERENC TAJTI, MIKLÓS BERCZELI: Modification of the Interface Properties of HighStrength Automotive Steels by Laser Beam Surface Treatment
4. **JURAJ BELAN**, MILAN UHRÍČIK, LUCIA PASTIEROVIČOVÁ, EVA TILLOVÁ: Quantification of Structural Components of Alloy 718 and Their Effect on Static and Dynamic Mechanical Properties

19.00 – Welcome Reception (Restaurant Kovács-Kert)  
21.00 – Meeting of Scientific Committee

## 25<sup>th</sup> May, Thursday:

7.30 – 8.30 Breakfast

8.45 – 10.15 3<sup>rd</sup> Session (chair: Juraj Belan, Zoltán Weltsch) – *Manufacturing technologies*

1. **KRISZTIÁN KUN:** Investigation of Microstructural Properties of Recycled CNT-reinforced PP Composites Using Confocal Microscopy
2. **RICHÁRD BORBÉLY, MARTIN LÁSZLÓ KÖLÜS, BÁLINT DOLGOS, GÁBOR JÓZSEF BÉRES:** The Effect of Model Parameters on Thinning Simulation of Sheet Metals
3. **TAMÁS SÁRKÁNY:** Wear Testing of Composite Material Combinations in Agricultural Utility Vehicles
4. **JAROSLAV BRABEC, LIBOR BENEŠ, ANTONÍN KŘÍŽ:** Welding of Fine Grain Steel in Mobile Crane Industry
5. **GYÖRGY LEDNICZKY, ZOLTÁN WELTSCH:** Molding Simulation of Metal Injection Moulded Automotive Parts
6. **GÁBOR KÓNYA, JÁNOS TAKÁCS, ZSOLT F. KOVÁCS:** Investigation of the Effects of Machining Parameters on Cutting Forces During Turning of Austenite Stainless Steel

10.15 – 10.45 Coffee Break

10.45 – 12.15 4<sup>th</sup> Session (chair: Magdalena Mazur, Balázs Vehovszky) – *Modeling and manufacturing*

1. **KEITH RACMAN:** Advanced Material Characterization Methods
2. **ADRIÁN BOGNÁR, KRISZTIÁN KUN:** Design of a Heating Unit for Photopolymerization-based 3D Printing Technology
3. **FILIP KLEJCH, EVA SCHMIDOVÁ:** Localized Thinning of Stamped Parts Made of Bake Hardened Interstitial – Free Steel
4. **VALENTIN ENDRE SZABÓ, KRISZTIÁN KUN:** Experimental Study of Recommended Bolt Jointing for Glass-Reinforced Plastic Profiles
5. **TAMÁS MARKOVITS, LÁSZLÓ DÁNIEL ERŐSS, ÁRMIN FENDRIK:** Investigating the Topology Optimization of a Ti6Al4V Part for Additive Manufacturing
6. **MARTIN L. KÖLÜS, RICHÁRD BORBÉLY, GÁBOR J. BÉRES:** Friction Coefficient Validation by Finite Element Method for Disc Compression Test

12.30 – 14.00 Lunch (Restaurant Kovács-Kert)

14.30 – 19.00 Professional program (Meeting point in front of the hotel, travel by bus)

19.00 – 20.00 Leisure program

20.00 – Conference Banquet (Restaurant Kovács-Kert)

**26<sup>th</sup> May, Friday:**

7.30 – 8.30 Breakfast

9.00 – 10.15 5<sup>th</sup> Session (chair: Libor Benes, Robert Ulewicz) – *Automotive Technologies and Quality systems*

1. **BÁLINT TÓTH, ZSOLT SZALAY:** The Role of the Virtual Environment Fidelity in Proving Ground Related Vehicle Simulations
2. **JAKUB CIEŚLA, ROBERT ULEWICZ:** Cloud-based Quality Reporting: Enhancing Outsourced Quality Control in the Automotive Industry
3. **JACEK WOŁOWCZYK, DOROTA KLIMECKA-TATAR:** Managing the Level of End-user Safety Through the Level of Product Quality in the Automotive Industry
4. **MAREK KRYNKE, MAGDALENA MAZUR:** Managing the Work Schedule in a Car Repair Shop Using Computer Simulation and Optimization Models

10.15 – 10.45 Coffee Break

10.45 – 12.15 6<sup>th</sup> Session (chair: János Takács, József Hlinka) – *Automotive Technologies*

1. **TAMÁS MARKOVITS, LÁSZLÓ FERENC VARGA, GÁBOR SZEBÉNYI, ÁRMIN FENDRIK:** Examination of Bond Strength in the Case of Polymer Composites and 3D Printed Metal Inserts
2. **KRISZTIÁN BÁN, DAVIS KIBOI KIPKANIA:** Fatigue Behavior of Additive-manufactured Ti6Al4V Samples
3. **MIKLOS DIOSY:** A Safe and Modern Approach to HV Battery Training: Design and Development of a Novel HV Battery Simulator for Automotive Training Programmes
4. **BALÁZS VEHOVSZKY, MARTIN KASZAB, ZOLTÁN GAZDAGH:** A Dynamic Method for Measuring Torsional Stiffness of a Vehicle Chassis

12.15 – 12.30 Closing of the Colloquium

12.30 – Lunch (Restaurant Kovács-Kert)

Restaurant Kovács-Kert can be found at Rév street 4<sup>th</sup> (marked with number 10 on the attached map).

Conference Sponsors:



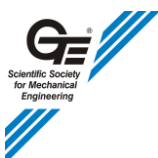
BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS  
Faculty of Transportation Engineering and Vehicle Engineering



**KNORR-BREMSE**

- Visegrad Fund

The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe.



- supported by
- Visegrad Fund