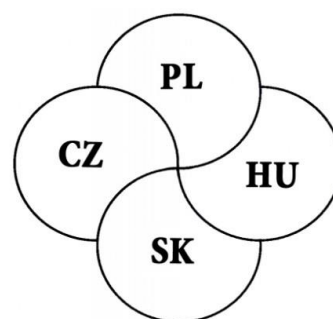




39th International Colloquium

Advanced Manufacturing and Repair
Technologies in Vehicle Industry
Poland, 2024



• Visegrad Fund

Visegrad Grant No. 22410332

CONFERENCE TIMETABLE

**3. – 5. June 2024
Osjaków-WIELUŃ, POLAND**

MONDAY 3.06.2024

12:00 - 14:00 REGISTRATION FOR GUEST

14:00 - 14:15 OPENING CEREMONY FOR PARTICIPANTS: (on-line Teams and Osjaków/Poland)

**14:15 - 15:45 PLENARY SESSION - CHAIRMAN: ROBERT ULEWICZ
MANUELA INGALDI**

JOSÉ CARLOS VIEIRA DE SÁ
THE IMPACT OF OPERATIONAL EXCELLENCE ON SAFETY AND SUSTAINABILITY

RUŽICA NIKOLIĆ
THE FAILURE ANALYSIS, SOME THEORY AND CASE STUDIES

JUHANI ANTTILA
QUALITY OF SOCIETY AS A CHALLENGE TO QUALITY PROFESSIONALS AND ORGANIZATIONS

15:45 - 16:15 COFFEE BREAK

16:15 - 17:45 SESSION I *Conference room No. 1*
**CHAIRMAN: DOROTA KLIMECKA-TATAR
RUŽICA NIKOLIĆ**

LÁSZLÓ DÁNIEL ERŐSS – Validation study of generative design process for selective laser melted Ti6Al4V part

EMIL NAGY – The importance of simulation methods in determining vehicle energy consumption

ROLAND NAGY – Different modulation effects from network physical layer on Cooperative Adaptive Cruise Control

ADRIAN BOGNAR – The influence of the process parameters on the mechanical properties of metal specimens produced by Fused Filament Fabrication

JOANNA ROSAK-SZYROCKA – The role of artificial intelligence in digital education

RENATA STASIAK-BETLEJEWSKA – Intellectual property management in the product quality improvement of contemporary enterprises

16:15 - 17:45 SESSION II *Conference room No. 2*
**CHAIRMAN: MAGDALENA MAZUR
JACEK SELEJDAK**

PATRIK TÓTH – Control of intelligent street lighting system based on digital image processing algorithms

BENDEGÚZ SZABÓ – Establishing a Test Environment for Intelligent Public Lighting Solutions at the ZalaZONE Proving Ground

ZOLTAN WELTSCH – Enhancing Adhesion Technologies for Composite Materials in Lightweight Vehicle Manufacturing

BERNADETT RÁDLI-BURJÁN – Crop cultivation in agro-photovoltaic systems

LUKÁŠ ŠIKYŇA – Hydrogen embrittlement of ferritic steel 1.4104

DÁVID ČUČHOR – Experimental analyses of tribological properties of AISI 316Ti and AISI 430 stainless steel

17:45 - 18:15 COFFEE BREAK

18:15 - 19:15 VIRTUAL SESSION

Conference room No. 1

CHAIRMAN: **ADAM IDZIKOWSKI**
RENATA STASIAK-BETLEJEWSKA

ROAA MOHAMMED MUNEER – Self healing materials: manufacturing and applications

NABEEL AL.-MUTAIRI – Mechanical and thermal properties of polypropylene blended with a novel hyperbranched polyester polymer

PATRYCJA WALICHNOWSKA – Possibilities of development of wind energy in the light of regulations applicable in Poland

TOMASZ CIERLICKI – Management the efficiency of a photovoltaic installation.

AREND JANSSEN – Impact on accessibility, heat distortion and process reliability of planned process interruptions in laser beam brazing processes

GÖZDE YANGINLAR – The Mediating Role of Logistics 4.0 Capability on the Relationship Between E-Commerce Marketing and Company Performance

REMIGIUSZ ROMANKIEWICZ – Changes in the structure of the AK7 alloy in terms of modification.

ANDRZEJ PACANA, DOMINIKA SIWIEC – Model of products improvement considering quality, environmental and social criteria.

19:30 - CONFERENCE GALA DINNER

TUESDAY 4.06.2024

7:30 - 8:30 BREAKFAST

8:30 - 9:45 **TECHNICAL PRESENTATION SESSION** - **SŁAWOMIR ZEMBSKI**

DEVELOPMENT COMPETENCES PRODUCTION EMPLOYEES' TO THE REQUIREMENTS OF INDUSTRY 4.0. USING TRAINING PLATFORMS

The presentation will present two training methods based on Problem Based Learning combined with training games. Proprietary solutions will enable significant optimization of the training process by reduction training time and better matching employee skills to the requirements of Industry 4.0.

10.00 **START** WITH CULTURAL AND INDUSTRIAL TRIP (WIELTON – RESEARCH CENTER)

13:00 - 14:30 LUNCH

15.30 CULTURAL AND INDUSTRIAL TRIP (BEŁCHATÓW)

19:20 SUPPER – GRILL (SYMPHONIA HOTEL)



WEDNESDAY 5.06.2024

7:30 - 9:30 BREAKFAST

8:45 - 10:00 SESSION III

Conference room No. 1

CHAIRMAN: MAREK KRYNKE
JACEK PIETRASZEK

ARMAN DADKHAH – Evaluation of Hadfield Layer Welding on Transportation Materials Using the Plasma Method

LIBOR BENEŠ – Degradation of steels applied in the energy industry.

VERONIKA OBERTOVA – Investigation of Corrosion Behavior of Magnesium Alloy ZK60 Treated with PEO and PLA Polymer

PAWEŁ SMOLNIK – The use of telematics in road transport companies

MICHAELA ROSTEK – Impact of new technologies on total factor productivity

8:45 - 10:00 SESSION IV

Conference room No. 2

CHAIRMAN: BALÁZS VEHOVSZKY
KRZYSZTOF KNOP

MIKÓS BERCZELI – Effect of microtopography on surface wetting and joining

FERENC TAJTI – Electrical resistance measurement of Li-ION cell joints

BENJÁMIN KÖRÖMI – A Review of Microwetting Phenomena: Recent Advances, Applications and Characterization Techniques

PÉTER KOVÁCS – Investigation possibilities of surface treatments

GYÖRGY LEDNICZKY – Adhesion improvement by laser surface treatment for high metal powder content wire extrusion

10:00 - 10:15 INVITATION FOR THE COLLOQUIUM 2025

10:15 - 10:25 CLOSING CEREMONY

10:25 - 12:55 COFFE BREAK

11:30 LUNCH