

VABI NA
DRUGO KONFERENCO
PROGRAMSKIH SKUPIN Z NASLOVOM

**INŽENIRSKI MATERIALI IN
PROCESNE TEHNOLOGIJE**

KDAJ 29.9.2025

KJE Dvorana Vladimirja Bračiča, Univerza v Mariboru, Slomškov trg 15

PRIJAVA s QR kodo do 12.9.2025

ZAKAJ

Spoznali boste raziskovalno delo programskih skupin, ki ga usmerjajo smernice najnovejših svetovnih trendov in zahtev na področju razvoja naprednih in inteligentnih inženirskih materialov ter procesnih tehnologij. Pridružite se nam, da bomo skupaj delili in razpravljali o teoretičnih ter praktičnih spoznanjih v znanstvenem in tehnološkem okviru.



PROGRAM

08:00 - 09:00 **Registracija**

09:00 - 09:30 **Uvodni nagovor**

09:00-09:10 Prof. Dr. Dean Korošak

Prorektor za znanstvenoraziskovalno dejavnost Univerze v Mariboru

09:10-09:20 Prof. Dr. Matej Vesenjak

Dekan Fakultete za strojništvo v Mariboru

09:20-09:30 Nagovor vodij programskih skupin

09:30- 11:00 **Vabljen predavanja**

09:30-10:00 From a Simple APM Sphere Thermal Acquisition to the AI
Approach to Atrain Evaluation by IR Thermography

Lovre Krstulović-Opara

University of Split, Faculty of Electrical Engineering, Mechanical Engineering
and Naval Architecture, Split, Croatia

10:00-10:30 Development of Hot Work Tool Steel with High Thermal
Conductivity

Peter Kirbiš

SIJ Metal Ravne

10:30-11:00 Sustainability in the Aluminium Industry

Matej Steinacher

Impol Aluminium Industry, Slovenska Bistrica, Slovenia

11:00-11:30 **Odmor za kavo in poster sekcija**



PROGRAM

11:30 - 13:10 Predavanja 1

- 11:30-11:50 Development and Characterisation of Modern Metamaterials
[Nejc Novak](#)
University of Maribor, Faculty of Mechanical Engineering, Maribor, Slovenia
- 11:50-12:10 Effects of Helium Ion Irradiation on the Microstructure and Properties of Aluminium Alloys
[Lara Hočurščak](#)
University of Maribor, Faculty of Mechanical Engineering, Chair of Materials and Forming, Maribor, Slovenia
- 12:10-12:30 Beyond Traditional Lyophilization: Predictive Process Control with Digital Twins
[Matej Zadravec](#)
University of Maribor, Faculty of Mechanical Engineering, Chair for Power, Process and Environmental Engineering, Maribor, Slovenia
- 12:30-12:50 Water Hammer Risk Assessment and Mitigation in Industrial Pipelines: 1D and 3D Numerical Approaches
[Nejc Vovk](#)
University of Maribor, Faculty of Mechanical Engineering, Chair for Power, Process and Environmental Engineering, Maribor, Slovenia
- 12:50-13:10 Contamination Release From the Packaging Area to the Outside:
Numerical Simulation with Particles
[Matjaž Ramšak](#)
University of Maribor, Faculty of Mechanical Engineering, Maribor, Slovenia

13:10-14:40 Kosilo



PROGRAM

14:40 - 16:20 Predavanja 2

- 14:40-15:00 **Rheology in Polymer and Polymer Composite Processing**
Tilen Švarc
University of Maribor, Faculty of Mechanical Engineering, Chair of Materials and Forming, Maribor, Slovenia
- 15:00-15:20 **Polysaccharides in Biomedical Applications**
Matej Bračič
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Laboratory for Characterization and Processing of Polymers, Maribor, Slovenia
- 15:20-15:40 **Biopolymer-Based Membranes for Fuel Cell Applications**
Maša Hren
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Maribor, Slovenia
- 15:40-16:00 **Green Colloidal Coatings Based on Pullulan and Bio-Extracts from Chestnut Wood for Active Food Packaging**
Athira John
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Laboratory for Characterization and Processing of Polymers, Maribor, Slovenia
- 16:00-16:20 **Thermal and Catalytic Pyrolysis of Waste for the Recovery of Secondary Materials and Energy Source Production**
Luka Lešnik
University of Maribor, Faculty of Mechanical Engineering, Department Chair for Power, Process and Environmental Engineering, Maribor, Slovenia

16:20 - 16:50 Odmor za kavo in poster sekcija



PROGRAM

16:50-18:30 Predavanja 3

- 16:50-17:10 Personalised Intelligent Wearable System for Freezing of Gait Detection and Active Stimulation for Patients with Parkinson's Disease
Jelka Geršak
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Maribor, Slovenia
- 17:10-17:30 Thermally Conductive Cellulose-Based Substrates for Flexible Electronics
Vanja Kokol
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Maribor, Slovenia
- 17:30-17:50 Gold Nanoparticle Dispersions for Plasma Jet Printing of Printed Circuit Boards: Characterisation of Stability, Printability and High Frequency Signal Performance
Lan Kresnik
University of Maribor, Faculty of Mechanical Engineering, Chair of Materials and Forming, Maribor, Slovenia
- 17:50-18:10 Preserving the Cultural Heritage of Clothing: Sleeping Beauties
Andreja Rudolf
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Maribor, Slovenia
- 18:10-18:30 Assessment of Microplastic Fiber Emissions during Tumble Drying of Fabrics
Branko Neral
University of Maribor, Faculty of Mechanical Engineering, Chair of Textile Materials and Design, Laboratory for Textile Printing and Textile Care, Maribor, Slovenia

18:30-18:50 Nagrada za najboljši poster in sklepni nagovor

