



Faculty of Engineering
Department of Mechanical Engineering

**10th INTERNATIONAL SCIENTIFIC CONFERENCE ON
ADVANCES IN MECHANICAL ENGINEERING
(ISCAME 2024)**

7-9 November, 2024 Debrecen, Hungary

CONFERENCE PROGRAMME

organized by

**Department of Mechanical Engineering
Faculty of Engineering, University of Debrecen**

and

**Working Commission in Mechanical Engineering
Specialized Committee in Engineering
Regional Committee in Debrecen, Hungarian Academy of Sciences**

and

Scientific Association of Mechanical Engineers

Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.



**PROGRAM
FINANCED FROM
THE NRDI FUND**



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

Chair of ISCAME 2024

Tamás MANKOVITS, University of Debrecen, Hungary

Scientific Program Committee of ISCAME 2024

István BARABÁS, Technical University of Cluj-Napoca, Romania

Sándor BODZÁS, University of Debrecen, Hungary

Gábor BOHÁCS, Budapest University of Technology and Economics, Hungary

István BUDAI, University of Debrecen, Hungary

Levente CZÉGÉ, University of Debrecen, Hungary

Branislav DJORDEVIC, University of Belgrade, Serbia

Igor DRSTVENSEK, University of Maribor, Slovenia

János Péter ERDÉLYI, University of Miskolc, Hungary

Lajos FAZEKAS, University of Debrecen, Hungary

Előd GYENGE, University of British Columbia, Canada

Mohammed HADJ MELIANI, University of Chlef, Algeria

Sándor HAJDU, University of Debrecen, Hungary

Dávid HURI, University of Debrecen, Hungary

Lazar JEREMIC, University of Belgrade, Serbia

Gábor KALÁCSKA, Hungarian University of Agricultural and Life Sciences, Hungary

Ferenc KALMÁR, University of Debrecen, Hungary

Imre KOCSIS, University of Debrecen, Hungary

László KÖNÖZSY, Cranfield University, United Kingdom

Ákos LAKATOS, University of Debrecen, Hungary

Daniel LATES, Petru Maior University of Targu Mures, Romania

Tatjana LAZOVIC-KAPOR, University of Belgrade, Serbia

Stanislav LEGUTKO, Poznan University of Technology, Poland

János LÍSKA, John von Neumann University, Hungary

Zoltán MAJOR, Johannes Kepler University Linz, Austria

Sándor MANÓ, University of Debrecen, Hungary

József MENYHÁRT, University of Debrecen, Hungary

Ljubica MILOVIC, University of Belgrade, Serbia

Imre Norbert ORBULOV, Budapest University of Technology and Economics, Hungary

Sándor PÁLINKÁS, University of Debrecen, Hungary

Ana PETROVIC, University of Belgrade, Serbia

Tibor POÓS, Budapest University of Technology and Economics, Hungary

Milan RACKOV, University of Novi Sad, Serbia

Istvánné RÁTHY, Óbuda University, Hungary

Tamás SZABÓ, University of Miskolc, Hungary

Gábor SZAKÁCS, Helmholtz-Zentrum, Germany

Ferenc SZODRAI, University of Debrecen, Hungary

György THALMAIER, Technical University of Cluj-Napoca, Romania

Domonkos TOLNAI, Helmholtz-Zentrum, Germany

László S. TÓTH, University of Lorraine, France

László TÓTH, University of Debrecen, Hungary

Natasa TRISOVIC, University of Belgrade, Serbia

Matej VESENJAK, University of Maribor, Slovenia

Zoltán WELTSCH, John von Neumann University, Hungary

László ZSIDAI, Hungarian University of Agricultural and Life Sciences, Hungary

Technical Assistance of ISCAME 2024

Szandra KALMÁRNÉ SITKU, University of Debrecen, Hungary

Lilla CSOKNÁKÉ DÓRÓ, University of Debrecen, Hungary

Mihály CSÜLLÖG, University of Debrecen, Hungary



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

WELCOME MESSAGE

On behalf of the ISCAME Scientific and Organizing Committee I am pleased to welcome you to Debrecen for the 10th International Scientific Conference on Advances in Mechanical Engineering organized by the Department of Mechanical Engineering, Faculty of Engineering of the University of Debrecen, the Working Commission of Mechanical Engineering (Specialized Committee in Engineering, Regional Committee in Debrecen, Hungarian Academy of Sciences) and the Scientific Association for Mechanical Engineering. The ISCAME is part of the 10th Mechanical Engineering Days.

The main goal of ISCAME is to yearly bring together engineers working on research, development and practical application in the field of mechanical engineering. Furthermore, the purpose of this Conference is to provide opportunities for scientists and engineers to meet and to discuss current research, new concepts and ideas and establish possibilities for future collaborations in all aspects of mechanical engineering.

I am pleased to inform you that **249 experts** from higher education have registered for this year's conference from altogether **16 countries**. In the framework of ISCAME **138 presentations** will be given and **40 posters** will be exhibited.

This year, we invited three successful Hungarian researchers who work at foreign universities and institutes to give plenary lectures to present their latest research results. The plenary speakers come from Cranfield University (United Kingdom), Johannes Kepler University Linz (Austria) and Helmholtz-Zentrum Hereon (Germany) on fluid mechanics, polymer engineering, and material science topics, respectively. Accompanying programs of ISCAME are the Exhibition - (H)őskorunk, a Gépészmérnöki Tanszék múltja képekben, two cultural programs and an excursion.

We invite you to be an active participant in this Conference and to contribute to any topic of your scientific interest. We hope that the 10th International Scientific Conference on Advances in Mechanical Engineering will have an important impact on the research in all topics included in its program.

It is also an honour for us to have a privilege to invite you to the 10th Mechanical Engineering Industrial Exhibition and Job Fair. The Department of Mechanical Engineering of the University of Debrecen will host – parallel to ISCAME – the event, called “Mechanical Engineering Industrial Exhibition and Job Fair” where **34 companies** will exhibit. The list of our exhibiting partners can be found at the end of the program booklet. This professional program will surely benefit the visitors who want to get up-to-date knowledge with the latest technology.

We want to express our appreciation to all members of the committees involved in the preparation of this Conference and to all the staff who are managing the different aspects of the Conference and to all the contributing authors and participants who will create the real Conference. **Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.**

Yours Sincerely,

Tamás Mankovits
Chair of ISCAME, Head of Department
Department of Mechanical Engineering
Faculty of Engineering, University of Debrecen



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

TECHNICAL PROGRAMME

(10th ISCAME and 10th Mechanical Engineering Exhibition and Job Fair)

Thursday, 7th of November 2024 (2-4 Ótmető, Debrecen)

- 09:00 – 15:00 **Mechanical Engineering Exhibiton and Job Fair** (Aula of the Faculty of Engineering)
list of the exhibiting companies: [Mechanical Exhibition and Job Fair](#)
- 09:00 – 16:00 **ISCAME registration** (Aula of the Faculty of Engineering)
- 11:00 – 11:15 **Opening of the Mechanical Engineering Professional Days** (Aula of the Faculty of Engineering)
Zoltán SZILVÁSSY rector, University of Debrecen
Sándor CZOMBA state secretary, Ministry of Economic Development
Géza HUSI dean, University of Debrecen
Tamás MANKOVITS head of department, University of Debrecen
Welcoming words
- 11:00 – 18:00 **ISCAME poster exhibition** (1st floor, Gallery of the Faculty of Engineering)
- 11:30 – 12:00 **Opening of the (H)őskorunk, a Gépészmérnöki Tanszék múltja képekben Exhibition** (Library, Fac. of Eng.)
- 11:30 – 14:00 **lunch** (Restaurant, Faculty of Engineering)
- 13:00 – 14:15 **ISCAME opening and plenary lectures** (4th floor, Lecture Hall 413)
- 14:30 – 18:00 **ISCAME sessions**
ENGINEERING OPTIMIZATION
INDUSTRIAL PROCESSES
MACHINE AND PRODUCT DESIGN
MATERIALS SCIENCE AND TECHNOLOGY I.
MATERIALS SCIENCE AND TECHNOLOGY II.
- 18:30 – 19:45 **ISCAME cultural program** - Csonka Church and organ concert – (2 Széchenyi street, Debrecen)
- 20:00 – 23:00 **ISCAME banquet** - Restaurant Borterasz (19 Piac street, Debrecen) – entrance only with invitation card

Friday, 8th of November 2024 (2-4 Ótmető, Debrecen)

- 08:30 – 13:00 **ISCAME registration** (Aula of the Faculty of Engineering)
- 09:00 – 14:00 **ISCAME poster exhibition** (1st floor, Gallery of the Faculty of Engineering)
- 09:30 – 12:00 **ISCAME sessions**
APPLIED AND THEORETICAL MECHANICS
FLUID MECHANICS
ARTIFICIAL INTELLIGENCE IN ENGINEERING PROBLEMS
POLYMER ENGINEERING
MATERIALS SCIENCE AND TECHNOLOGY III.
- 11:00 – 11:30 **ISCAME poster session** (1st floor, Gallery of the Faculty of Engineering)
- 11:30 – 14:00 **lunch** (Restaurant, Faculty of Engineering)
- 12:45 – 12:55 **ISCAME group photo** (meeting at the Aula of the Faculty of Engineering)
- 13:00 – 13:30 **ISCAME poster session** (1st floor, Gallery of the Faculty of Engineering)
- 13:00 – 16:45 **ISCAME sessions**
BIOMECHANICS
ENERGY INDUSTRY
MANUFACTURING SCIENCE
MATERIAL HANDLING AND LOGISTICS
MATERIALS SCIENCE AND TECHNOLOGY IV.
- 18:00 – 19:30 **ISCAME cultural program** – Sightseeing with private tram
(meeting at the Main Building of the University of Debrecen, 1 Egyetem square, Debrecen)
- 19:30 – 23:00 **ISCAME dinner** - Restaurant Reskontó (34 Péterfia street, Debrecen) – entrance only with invitation card

Saturday, 9th of November 2024 (Debrecen – Hortobágy - Debrecen)

- 09:00 – 15:00 **ISCAME excursion with lunch** – Hortobágy National Park Visitor Centre, Fishpond, Herdsmen Museum
(meeting at the Dormitory of the Faculty of Engineering, 2-4 Ótmető street, Debrecen)



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

DETAILED PROGRAMME OF ISCAMÉ 2024

Thursday, 7th of November 2024 (2-4 Ótmető, Debrecen)

09:00 – 16:00	ISCAMÉ registration (Aula of the Faculty of Engineering)
11:00 – 18:00	ISCAMÉ poster exhibition (1 st floor, Gallery of the Faculty of Engineering)
11:30 – 12:00	Opening of the (H)őskorunk, a Gépészmérnöki Tanszék múltja képekben Exhibition (Library, Fac of Eng)
13:00 – 14:15	ISCAMÉ opening and plenary lectures (Lecture Hall 413, 4 th floor)
13:00 – 13:15	Tamás MANKOVITS , University of Debrecen, Hungary Krisztina BÁRDOSI , Scientific Association of Mechanical Engineers, Hungary <i>Welcoming words</i>
13:15 – 13:35	Zoltán MAJOR , Michael LACKNER, Anna HÖSSINGER-KALTEIS Johannes Kepler University Linz, Austria <i>Some examples of engineering with polymers</i>
13:35 – 13:55	László KÖNÖZSY Cranfield University, United Kingdom <i>Computational engineering methods and their academic research and industrial applications for wide range of problems</i>
13:55 – 14:15	Gábor SZAKÁCS , Domonkos TOLNAI, Björn WIESSE, Norbert HORT Helmholtz-Zentrum Hereon, Germany <i>Utilizing synchrotron radiation XRD during the solidification of Mg alloys</i>



Plenary speakers of the ISCAMÉ 2023

Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.



PROGRAM
FINANCED FROM
THE NRDI FUND



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

14:30 – 17:45	Session ENGINEERING OPTIMIZATION (Emerson Pneumatic Laboratory, ground floor, room E.0.21.)
Chairman:	Dávid HURI , University of Debrecen, Hungary
Secretary:	Máté BERECSKI , University of Debrecen, Hungary
14:30 – 14:45	Nikola MOMČILOVIĆ, Nemanja ILIĆ, Ana PETROVIĆ, Ivana ČEKOVIĆ <i>Evaluating the limit states: a case study of a hull girder</i>
14:45 – 15:00	Yassine CHAHBOUB <i>A comparative analysis of the direct and backpropagation methods for determining GTN parameters</i>
15:00 – 15:15	Omar AL AQRABAWI, Dávid HURI <i>Surrogate model-based parameter tuning of genetic algorithm for the shape optimization of automotive rubber bumpers</i>
15:15 – 15:30	Attila SZÁNTÓ, Gusztáv Áron SZÍKI, Éva ÁDÁMKÓ <i>Filtering procedure to optimize the technical data of a prototype race car</i>
15:30 – 15:45	Masar ALSIGAR, Alhafadhi MAHMOOD <i>Complex optimization of automatic radial and axial feed</i>
15:45 – 16:00	Syed Musa Hassan GILLANI, Gábor BALOGH <i>Effects of infills on the mechanical properties of a sample</i>
16:00 – 16:15	coffee break
16:15 – 16:30	Ahmad AL-AWAMLEH, Ferenc HEGEDŰS <i>Investigation of theoretical energy intensity of sono-hydrogen</i>
16:30 – 16:45	Andi ZAIN, Krisztián HRICZÓ, Imre Ferenc BARNA <i>Review on characteristics of some thermal insulation materials for multi-layered wall</i>
16:45 – 17:00	Luboslav STRAKA, Andrii ZALYVCHYI <i>Optimizing the mechanical properties of sintered carbides</i>
17:00 – 17:15	Olivér HORNYÁK, <i>Predicting remaining useful life using adaboost algorithm</i>
17:15 – 17:30	Fadia AHMED NAJI <i>Investigations on ball end magneto-rheological finishing of Ti64 alloy for enhancement surface quality</i>
17:30 – 17:45	Attila KÁLMÁN, Katalin BENE <i>Optimizing interbasin water transfer for sustainable energy management and multipurpose water utilization</i>
14:30 – 16:45	Session INDUSTRIAL PROCESSES (Robert Bosch AS Laboratory, ground floor, room E.0.22.)
Chairman:	Lajos GULYÁS , University of Debrecen, Hungary
Secretary:	Tibor PÁLFI , University of Debrecen, Hungary
14:30 – 14:45	Sahab ALKHOLI, Miklós DARÓCZI, Ebrahim Mirzaiee ASRAMI <i>Implementing lean tools to improve a production line in a given company</i>
14:45 – 15:00	István DÉNES, Sándor SEMPERGER <i>Improvement of physical security through continuous authentication for SCADA and DCS systems in industrial automation and control</i>
15:00 – 15:15	Levente TUGYI <i>Analysis of the explosion risk of dried sewage sludge</i>
15:15 – 15:30	Bendegúz KIS, Péter LÁNG, László HÉGELY <i>Design of a semi-batch dividing wall column</i>
15:30 – 15:45	Tibor POÓS, Levente SOR <i>Determination of adsorber breakthrough point by temperature measurement</i>
15:45 – 16:00	Tibor POÓS, Kristóf KATONA <i>Fluidization curve of a granulate in a closed loop airflow</i>
16:00 – 16:15	Evelin VARJU, Milán CSÁNYI <i>Investigation of the heat transfer and power consumption of a mixing tank</i>
16:15 – 16:30	Tibor POÓS, Nikolett SZÁVICS, Evelin VARJU <i>Investigation of water evaporation rate at different liquid levels</i>
16:30 – 16:45	Tibor POÓS, Ábel BALLA, Richárd Gyula KISS <i>Performance testing of a PCM-based thermal energy storage device</i>



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

- 14:30 – 17:00 **Session MACHINE AND PRODUCT DESIGN**
(Machine Elements Laboratory, 1st floor, room E.121.)
- Chairman: **Levente CZÉGÉ**, University of Debrecen, Hungary
Secretary: **István DOMOKOS**, University of Debrecen, Hungary
- 14:30 – 14:45 **Bálint SIKTÁR**, György HEGEDŰS, József KAKUK
Relation between the cutting force and the current consumption of the bldc motor in a hedge cutter
- 14:45 – 15:00 **Péter BOZZAY**, Dávid BODNÁR, **Károly JÁRMAI**
Motion enlargement at structures, literature review, application
- 15:00 – 15:15 **Krisztián DEÁK**
Analysis of ECG signals with wavelet transform
- 15:15 – 15:30 **Attila KÁRI-HORVÁTH**, Patrik PERCZE
Steps for the implementation of equipment operating on the principle of thermal drying for the disposal of waste water and bio-w
- 15:30 – 15:45 **Dániel FEKETE-SZÜCS**
Designing and building a working model of a drive for elevators or cranes
- 15:45 – 16:00 **Sándor APÁTI**, Sándor HAJDU
Dynamic modelling possibilities of jigsaws
- 16:00 – 16:15 coffee break
- 16:15 – 16:30 **István DOMOKOS**, Sándor PÁLINKÁS
Development of a specialised wear testing machine for hot metal coated cultivator tines
- 16:30 – 16:45 **Pálma KAPITÁNY**, Tamás SZABÓ, László RÓNAI
Electronic design of a measuring system suitable for electromagnets
- 16:45 – 17:00 **Pálma KAPITÁNY**, Tamás SZABÓ, László RÓNAI
Mechanical design of a testbench for analysing electromagnets
- 16:45 – 17:00 **Levente Béla ZUDOR**, Péter Tamás ZWIERCZYK
Upgrading an Amsler twin-disc measurement device to analyze railway rail head-check cracks



A group of ISCAME Participants in 2023

Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

-
- 14:30 – 16:30 **Session MATERIALS SCIENCE AND TECHNOLOGY I.**
(Metallographic Laboratory, 1st floor, room E.120.)
Chairman: **Lars Christian HERZBACH**, BMW Manufacturing Hungary Kft., Hungary
Secretary: **Gábor BALOGH**, University of Debrecen, Hungary
- 14:30 – 14:45 **Lars Christian HERZBACH**
BMW Manufacturing Hungary Kft. - examples of laboratory work
- 14:45 – 15:00 **Dorottya VARGA, Attila SZLANCSIK**
Investigation of miniaturized tensile test specimens manufactured by casting
- 15:00 – 15:15 **Laura MÁDI, Dániel MOLNÁR**
Conditions forming blow-hole defects in castings
- 15:15 – 15:30 **Benedek SZIKLAI, Máté SEPSI, Máté SZŰCS, László S. TÓTH, Valéria MERTINGER**
Development of a shear strength measuring tool and method for layered structures
- 15:30 – 15:45 **Ali AMININEJAD, László S TÓTH, Valeria MERTINGER, Máté SZŰCS, Máté SEPSI**
On the role of crystallographic texture in grain fragmentation during severe plastic deformation
- 15:45 – 16:00 **Sulaiman AL-TIMMIMI, Szabolcs SZÁVAI**
Effect of reinforcement on mechanical properties of iron metal matrix composites
- 16:00 – 16:15 **Alexandra KIRI, Zoltán WELTSCH**
Determination of natural frequencies with acoustic methods and their relation to residual stress
- 16:15 – 16:30 **Winnie Atieno ONYANGO, György CZEL, Györgyné CZEL**
Effect of zeolite on mechanical and rheological properties of HDPE
-
- 16:00 – 18:00 **Session MATERIALS SCIENCE AND TECHNOLOGY II.**
(SMARTMAT Material Technology Laboratory, 4th floor, room E.414.)
Chairman: **István BUDAI**, University of Debrecen, Hungary
Secretary: **Sándor ANDRÁSKÓ**, University of Debrecen, Hungary
- 16:00 – 16:15 **Ayman ELEMAM**
Effect of compacting pressure and sintering temperature on properties of powder metallurgy 316L stainless steel
- 16:15 – 16:30 **Viktor NYESTE**
Physical metallurgy aspects of the effect of squeezing during high pressure die casting
- 16:30 – 16:45 **György THALMAIER, Mircea NASUI, Niculina A. SECHEL, Ioan VIDA-SIMITI**
On the resistivity of cold sintered Zn foams
- 16:45 – 17:00 **Gabriel BATIN,**
Characterization of alumina filament used for thermoplastic extrusion
- 17:00 – 17:15 **Zoltán BRATU, János ERDÉLYI, Dániel MOLNÁR**
High pressure die casting thermal solutions
- 17:15 – 17:30 **János SZALAI, Dániel MOLNÁR**
The technology of abrasion resistant cast iron castings
- 17:30 – 17:45 **Gábor GYARMATI, János ERDÉLYI**
On the interactions of intermetallic compounds and oxide phases in liquid aluminum alloys
- 17:45 – 18:00 **Cheikh Anta DIOP**
Carbone 14
-
- 18:30 – 19:45 **ISCAME cultural program** - Csonka Church and organ concert – (2 Széchenyi street, Debrecen)
20:00 – 23:00 **ISCAME banquet** - Restaurant Borterasz (19 Piac street, Debrecen) – entrance only with invitation card



City Centre of Debrecen and the Main Building of the University of Debrecen



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

Friday, 8th of November 2024 (2-4 Ótemető, Debrecen)

08:30 – 13:00 **ISCAME registration** (Aula of the Faculty of Engineering)
09:00 – 14:00 **ISCAME poster exhibition** (1st floor, Gallery of the Faculty of Engineering)
11:00 – 11:30 **ISCAME poster session** (1st floor, Gallery of the Faculty of Engineering)

09:30 – 11:45 **Session APPLIED AND THEORETICAL MECHANICS**

(Technical Mechanics Laboratory, 1st floor, room U.1.08.)

Chairman: **Natasa TRISOVIC**, University of Belgrade, Serbia

Secretary: **Gábor RUZICKA**, University of Debrecen, Hungary

09:30 - 09:45 **Csaba GÁSPÁR**

The localized method of fundamental solutions for the stokes equations

09:45 - 10:00 **Jozef LEJA, Jan RYBÁŘ, Stanislav ĎURIŠ, Peter ONDERČO, Andrej SMETÁNKA**

Teaching mechanics and metrology through laboratory exercises - shear modulus measurement using a torsional pendulum

10:00 – 10:15 **Baksa ATTILA, István ECSEDI**

Determination of von Mises stresses in elliptical cross sections

10:15 – 10:30 **Emőke IMRE, Delphin Kabey MWINKEN, Daniel BARRETO, James LEAK, Maria DATCHEVA, Vijay P. SING**

Some notes on the use of an unsaturated constitutive law for sands

10:30 – 10:45 **Bence MOLNÁR, Krisztián KUN**

Understanding terrain characteristics in autonomous systems from the perspective of vehicle dynamics and agriculture

10:45 – 11:00 **Sinisa KRALJEVIC, Miodrag ZUKOVIC, Livija CVETICANIN**

Oscillatory systems with two degrees of freedom and van der Pol coupling: Analytical approach

11:00 – 11:15 **Márton SZABÓ, Ákos MIKLÓS, Giuseppe HABIB**

Driving torque difference and stability of operation for self-synchronizing vibrating screens

11:15 – 11:30 **Donát M. TAKÁCS, Tamás FÜLÖP**

Improving discrete numerical methods for dynamics using continuous mathematical tools

11:30 – 11:45 **Sotehi FAYCAL, Djebbara BENZERGA**

Numerical analysis of cracking at the nozzle junction in a distillation column

09:30 – 11:00 **Session FLUID MECHANICS**

(Machine Elements Laboratory, 1st floor, room E.121.)

Chairman: **László KÖNÖZSY**, Cranfield University, United Kingdom

Secretary: **Máté BERECSKI**, University of Debrecen, Hungary

09:30 - 09:45 **Krisztián HRICZÓ**

Numerical study of entropy generation in ferrofluid flow with heat and mass transfer

09:45 - 10:00 **Aimen TANOUGAST**

Comparison of turbulence models in the simulation of fluid flow in corrugated channel

10:00 – 10:15 **Ferenc SZODRAI**

Loss coefficient calculations for pipe systems with numerical method

10:15 – 10:30 **Ferenc KUBICSEK, Áron KOZÁK, Sára MOLNÁR, Ferenc HEGEDŰS**

Evaporation models in sonochemistry

10:30 – 10:45 **Kinga Andrea KOVÁCS, Eszter BALLA**

Comparison of vortex identification methods through applications

10:45 – 11:00 **Zakarya Albadwi QASEM, Ayaan FAEIZ, Masuk ABDULLAH**

Enhancing winglet aerodynamics for sustainable aviation through computational analysis

Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

09:30 – 12:00 **Session ARTIFICIAL INTELLIGENCE IN ENGINEERING PROBLEMS**

(Emerson Pneumatic Laboratory, ground floor, room E.0.21.)

Chairman: **Béla SZEKERES**, Eötvös Loránd University Budapest, Hungary

Secretary: **Dániel NEMES**, University of Debrecen, Hungary

09:30 - 09:45 **Goga ALEXANDRU-SILVIU**

AI-driven workflow optimization: revolutionizing mechanical engineering project management

09:45 - 10:00 **Nataša SOKOLOV MILOVANČEVIĆ, Ivan KOSTIĆ, Nikola MILOVANČEVIĆ**

Neuro-fuzzy assessment of circular economy focusing on waste creation, recycling, renewable energy, biomass, and soil pollution

10:00 – 10:15 **Miloš MILOVANČEVIĆ, Dragana TRNAVAC, Vladislav KRATIĆ**

Daily reference evapotranspiration monitoring system by soft computing and object-oriented approach

10:15 – 10:30 **Miloš MILOVANČEVIĆ, Dragana TRNAVAC, Vladislav KRATIĆ**

Examining gdp deflated real values using adaptive neuro fuzzy inference system (ANFIS)

10:30 – 10:45 **Ákos Koppány KISS,**

AI with MATLAB in academic and industrial applications

10:45 – 11:00 coffee break

11:00 – 11:15 **Dániel NEMES, Sándor HAJDU**

Possibilities of using ROM modeling in engineering problems

11:15 – 11:30 **Attila Károly VARGA**

AI based digital image processing

11:30 – 11:45 **Attila ARADI, Attila Károly VARGA**

AI (machine learning) - driven approaches for enhancing underwater acoustic noise analysis for electrical boat propulsions

11:45 – 12:00 **KM Euphe HASSAN, Dávid HURI**

Surrogate model-based parameter tuning of tabu search algorithm for the shape optimization of automotive rubber bumpers

09:30 – 11:45 **Session POLYMER ENGINEERING**

(SMARTMAT Material Technology Laboratory, 4th floor, room E.414.)

Chairman: **István BUDAI**, University of Debrecen, Hungary

Secretary: **Gábor BALOGH**, University of Debrecen, Hungary

09:30 - 09:45 **Dániel GERE**

Effects of HDPE-g-MAH on mechanical properties of recycled PET/HDPE blends

09:45 - 10:00 **Attila BATA**

Investigation of the recyclability of automotive plastic nanocomposites

10:00 – 10:15 **Florian KIEHAS, Zoltán MAJOR**

Polymer toughness predictions via machine learning

10:15 – 10:30 **Mundher ABD UL ZAHRA DOOKHI, Hussein M. JEBUR**

Fatigue properties of composite pipes with cracks

10:30 – 10:45 **Andreas KAPSHAMMER, Michael LACKNER, Zoltán MAJOR**

Experimental and numerical analysis of hail impact on sheet molding compounds

10:45 – 11:00 **Kardo Khalid ABDULLAH, Kolos MOLNÁR**

A novel air-flow electrospinning setup for controlling fiber distribution and morphology

11:00 – 11:15 **Gergő Zsolt MARTON, Gábor SZEÉNYI**

The effect of polycaprolactone interlayer material on the behaviour of carbon-fibre/epoxy composites

11:15 – 11:30 **Ákos GÖRBE, Tamás BÁRÁNY**

The effect of trans-polyoctenamer compatibilizer on polyethylene and ground tire rubber blends

11:30 – 11:45 **Adrián BOGNÁR, Krisztian KUN, Laszlo ZSIDAI**

Viscoelastic properties of UV-curable resins for photopolymerization-based additive manufacturing



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

09:30 – 11:45 **Session MATERIALS SCIENCE AND TECHNOLOGY III.**

(Metallographic Laboratory, 1st floor, room E.120.)

Chairman: **Sándor PÁLINKÁS**, University of Debrecen, Hungary

Secretary: **Tibor PÁLFI**, University of Debrecen, Hungary

09:30 - 09:45 **Jessica DIAS, György BARKÓ**

Agricultural aspects of moon/mars soil simulants for machinery tests

09:45 - 10:00 **Judit PÁZMÁN, Zsuzsa OLESNYOVICSNÉ SZABADI**

Examination of reactor steel after thermal aging process

10:00 – 10:15 **Aymen AOUTI, George KAPTAY, Péter BAUMIL**

Influence of layer thickness on the melting behavior of NiTi nano-multilayers

10:15 – 10:30 **Haniyeh AZIMI, László S. TÓTH, Péter BARKÓCZY**

New deformation route for nanostructuring magnesium alloys

10:30 – 10:45 **Gergely VASKÓ, Zoltán GÁCSI, Erzsébet NAGY**

Simulation of the production of sintered steel gears

10:45 – 11:00 **Péter Marcell KISS, Gábor KALÁCSKA**

Manufacturing and assembling the components of a mechanical seal testing bench

11:00 – 11:15 **Emőke IMRE, Delphin Kabey MWINKEN, Daniel BARRETO, James LEAK, Maria**

DATCHEVA, Vijay P. SING

Some notes on the use of an unsaturated constitutive law for sands

11:15 – 11:30 **Bahram TURAPOV, Gábor KALÁCSKA**

Establishing the tribo-system to study the fraction effects of lunar regoliths

11:30 – 11:45 **Omamoke ENAROSEHA, Obed OYIBO**

First principle calculation on molybdenum properties

11:45 – 12:00 **Ahnaf TAHMID, Gabor BALOGH, Gillani Syed Musa HASSAN**

Production parameter optimization of additive manufactured TPU part

11:00 – 11:30 **ISCAME poster session** (1st floor, Gallery of the Faculty of Engineering)

11:30 – 14:00 **lunch** (Restaurant, Faculty of Engineering)

12:45 – 12:55 **ISCAME group photo** (meeting at the Aula of the Faculty of Engineering)

13:00 – 13:30 **ISCAME poster session** (1st floor, Gallery of the Faculty of Engineering)



Exhibition of Creative Mechanical Engineers in 2023

Project no. MEC_SZ_149279 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the Mecenatúra funding scheme.



PROGRAM
FINANCED FROM
THE NRDI FUND



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

-
- 13:00 – 14:45 **Session BIOMECHANICS**
(Technical Mechanics Laboratory, 1st floor, room U.1.08.)
Chairman: **Sándor MANÓ**, University of Debrecen, Hungary
Secretary: **Rashwan ALKENTAR**, University of Debrecen, Hungary
- 13:00 – 13:15 **Katreen EBRAHEM**, Szabolcs SZÁVAI
Applying of 3D numerical techniques in the medical field (intervertebral lumbar disc prostheses)
- 13:15 – 13:30 **Sándor MANÓ**, Lóránd CSÁMER, Tímea VÁRADI, Yongming YU, Guodong LI, Shixin PAN, Jinhai WU, Lei ZHANG
Investigation of the stability of two different spondylolysis surgical technique utilising finite element simulation
- 13:30 – 13:45 **Luca MOLNÁR**
Innovative spinal implant development through additive manufacturing
- 13:45 – 14:00 **Rashwan ALKENTAR**, Tamás MANKOVITS
Patient specific hip implant topology optimization with lattice structures
- 14:00 – 14:15 **Olawunmi Oluwafikayomi OKUNRINBOYE**, Emmanuel Andrew Reuben GAIMA, Dávid HURI
Insights from biodegradable orthopedic screws with sponge matrix
- 14:15 – 14:30 **Maliha Binte HASAN**, Rashwan ALKENTAR, Sándor MANÓ, Zoltán MAJOR, Tamás MANKOVITS
Determination of the compressive behavior of Ti6Al4V lattice structures using FEA
- 14:30 – 14:45 **Ugonna UMEH**, Dávid HURI, Dániel NEMES, Zoltán MAJOR, Tamás MANKOVITS
Determination of the compressive behavior of lattice structures produced by SLA technology
-
- 13:00 – 14:30 **Session ENERGY INDUSTRY**
(Robert Bosch AS Laboratory, ground floor, room E.0.22.)
Chairman: **József MENYHÁRT**, University of Debrecen, Hungary
Secretary: **Zoltán Gergő GÉRESI**, University of Debrecen, Hungary
- 13:00 – 13:15 **Attila KOVÁCS**, Judit SOMOGYINÉ MOLNÁR, **Károly JÁRMAI**
Creating a model to simulate harmonic injections within an industrial facility
- 13:15 – 13:30 **József MENYHÁRT**, József KERTÉSZ, Péter T. SZEMES
Investigating the feasibility of integrating electric vehicles into vehicle-to-grid systems in Hungary
- 13:30 – 13:45 **János KELEMEN**
Development basics of a digital twin for a fuel cell
- 13:45 – 14:00 **Gábor HASULYÓ**, Marianna VADÁSZI
Safety challenges of hydrogen wells
- 14:00 – 14:15 **Ayodeji Usman AKERELE**, Csaba PÓLISKA
Thermal properties of ceramic foam glass sintered from industrial waste incinerator slags using SiC as foaming
- 14:15 – 14:30 **William COR**, **Abdulmumin Lekan YEMITAN**
Impact of robotic technology in human life
-



Laboratories supported by partner companies, Department of Mechanical Engineering, Faculty of Engineering



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

13:00 – 16:30	Session MANUFACTURING SCIENCE (Machine Elements Laboratory, 1st floor, room E.121.)
Chairman:	Sándor BODZÁS , University of Debrecen, Hungary
Secretary:	Attila DEBRECENI , University of Debrecen, Hungary
13:00 – 13:15	<u>Euboslav STRAKA</u> , Juraj HAJDUK <i>Influence of tool electrode on quality and productivity in electrical discharge machining</i>
13:15 – 13:30	<u>Marwen HABBACHI</u> , Attila BAKSA ; Péter Zoltán KOVÁCS <i>Evaluation of the thickness distribution during the single point incremental forming of pure Al alloy AA 1050</i>
13:30 – 13:45	<u>Sándor BODZÁS</u> , <i>Analysis of grinding technology of spiroid worm on a classical grinding machine</i>
13:45 – 14:00	<u>Nour El Imane DJIMAOUL</u> , Valéria MERTINGER , Yoni ADONYI <i>Additive manufacturing to rebuild worn FSW tools</i>
14:00 – 14:15	<u>Ibtissam ENNAMOUSS</u> , Sándor BODZÁS <i>CAD modeling and surface roughness measurement of the gear pair in the wire bending machine</i>
14:15 – 14:30	<u>Ian MOKAYA</u> , Sándor BODZÁS <i>CAD modelling and 3D scanning of the elements of the wire bending mechanical machine</i>
14:30 – 14:45	<u>Szabolcs KRIZSMA</u> , András SUPLICZ <i>Coupled simulation approach to model the operational behaviour of prototype injection moulds</i>
14:45 – 15:00	coffee break
15:00 – 15:15	<u>Anas ABU AL-HIAJA'A</u> , <i>Enhancing control strategies for mini high bay warehouse: evaluating methods for voltage conversion and encoder pulse detection</i>
15:15 – 15:30	<u>Dániel LEDENYÁK</u> , Tamás ROSTA <i>Improve practical usability of Ballbar machine tool verification</i>
15:30 – 15:45	<u>Áron LÓRÁND</u> , <i>The effect of surface quality on dimensional measurement with CT</i>
15:45 – 16:00	<u>Attila DEBRECENI</u> , Sándor BODZÁS <i>Integration of machine learning in additive manufacturing for material extrusion and powder bed fusion</i>
16:00 – 16:15	<u>Omar LKADI</u> , Mohammed NASSRAOUI , Otmane BOUKSOUR <i>Influence of generative design and topology optimization on the design and manufacturing processes in AM</i>
16:15 – 16:30	<u>Géza HAIDEGGER</u> , József VÁNCZA <i>Harmonized international processes presently needed for the sustainable digitization of the manufacturing industry</i>
13:00 – 15:00	Session MATERIAL HANDLING AND LOGISTICS (Emerson Pneumatic Laboratory, ground floor, room E.0.21.)
Chairman:	Gábor BOHÁCS , Budapest University of Technology and Economics
Secretary:	Gábor RUZICKA , University of Debrecen, Hungary
13:00 – 13:15	<u>János JUHÁSZ</u> <i>General Modelling of electromobility and logistics in finished product distribution</i>
13:15 – 13:30	<u>Erika BAKSÁNE VARGA</u> , Attila BAKSA <i>Integrating robotics, logistics, and programming in stem education: preparing students for industry 4.0</i>
13:30 – 13:45	<u>Nataša SOKOLOV MILOVANČEVIĆ</u> , Ivan KOSTIĆ , Nikola MILOVANČEVIĆ <i>Sustainable development within the framework of a circular economy</i>
13:45 – 14:00	<u>Gábor BOHÁCS</u> , Hizba Muhammad SADIDA <i>Integrating material handling machines into an AI-focused framework</i>
14:00 – 14:15	<u>Péter FICZERE</u> <i>Industry 5.0 or industry 4.2</i>
14:15 – 14:30	<u>Gábor RUZICKA</u> <i>Simulation of the value stream in the field of robotic cable manufacturing using Visual Components</i>
14:30 – 14:45	<u>Máté KÁTAI</u> , István BUDAI <i>Design and development of a production line for the bicycle industry to switch to eco-friendly packaging material</i>
14:45 – 15:00	<u>Dávid BODNÁR</u> , Károly JÁRMAI <i>Frequency response optimization of an industrial robot arm</i>



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

- 13:00 – 16:45 **Session MATERIALS SCIENCE AND TECHNOLOGY IV.**
(Metallographic Laboratory, 1st floor, room E.120.)
- Chairman: **Zoltán WELTSCH**, Széchenyi István University, Hungary
Secretary: **Márton LÉVAI**, University of Debrecen, Hungary
- 13:00 – 13:15 **Rabea Hussein Mohammed QASEM**
Investigation of solid state dewetting of silver nanofilms
- 13:15 – 13:30 **Gábor József BÉRES, Richárd BORBÉLY, Martin Laszlo KOLUS**
Welded blanks and forming limit diagrams
- 13:30 – 13:45 **Ferenc HAREANCZ, Gergely JUHÁSZ**
The effect of gap width on laser metal deposition welding of stainless steel sheets
- 13:45 – 14:00 **Ildiko PETROVICKIJNE ANGERER**,
Changes in concentration of groundwater pollutants in a recultivated non-hazardous landfill with a temporary top cover layer
- 14:00 – 14:15 **Miklós BERCZELI, Ferenc TAJTI, Péter PÉCZI-KOVÁCS, Benjamin KÖRÖMI, Zoltán WELTSCH**
Adhesive technology research and industry development trends 2025
- 14:15 – 14:30 **Zoltán WELTSCH, Péter KOVÁCS, Miklós BERCZELI**
Development of automotive adhesive joints with surface treatment technologies
- 14:30 – 14:45 coffee break
- 14:45 – 15:00 **Ferenc TAJTI, Miklós BERCZELI, Zoltán WELTSCH**
Contact resistance testing of bonded conductive joints for use in electric vehicles
- 15:00 – 15:15 **Benjámín Márk KÖRÖMI, Zoltán WELTSCH, Miklós BERCZELI**
Relationship between developed interfacial area ratio and adhesion of the bonded joint
- 15:15 – 15:30 **Zsolt KÖNYVES, Valéria MERTINGER, Máté SEPSI**
The application of ultrashort pulse laser beams for pattern formation on the surfaces of tool steels
- 15:30 – 15:45 **Gergely JUHÁSZ, Ferenc HAREANCZ**
Fabrication of multi-material tube using laser metal deposition
- 15:45 – 16:00 **Péter PÉCZI-KOVÁCS, Miklós BERCZELI, Zoltán WELTSCH**
Effect of high energy density surface treatment atmosphere on surface energy change
- 16:15 – 16:30 **Comfort DEON NKALANGA, Sándor PÁLINKÁS**
Comparative analysis of plasma and tig welding on mild steel bars
- 16:30 – 16:45 **Béla KONDÁS, Valéria MERTINGER**
Effect of sampling method on the result of the tensile test

11:00 – 11:30 **ISCAME poster session**
13:00 – 13:30

(1st floor, Gallery of the Faculty of Engineering)
Chairman: **Andrea KECZÁNNÉ ÜVEGES**, University of Debrecen, Hungary

Ayodeji Usman AKERELE, Csaba PÓLISKA

Implications of temperature holding time and slag quantity on the mechanical properties of ceramics foam glass

Aws AL-TAYAWI, Hajnalka CSOTT, József Richárd LENNERT, Zsuzsanna Horváth HOVORKA, Zsuzsanna LÁSZLÓ, Cecilia HODÚR, Szabolcs KERTÉSZ

Optimization of ultrafiltration parameters in a laboratory-scale unit using dairy model for membrane fouling mitigation

Tamás ANTAL, Zoltán KOVÁCS

Spray drying of plum jam - ways to enhance a product yield

Maja ČAVIĆ

Clock tower of Petrovaradin Fortress - mechanism restoration

Ivana CEKOVIC, Ljiljana TRUMBULOVIC, Snežana AKSENTIJEVIC, Mihailo MILANOVIC

Optimizing energy efficiency and structural integrity in biomass gasification for CHP systems: environmental and material challenges

Ljiljana TRUMBULOVIC, Ivana CEKOVIC, Snežana AKSENTIJEVIC, Branko DRNDAREVIC

Optimizing energy efficiency and structural integrity in biomass gasification for CHP systems: environmental and material challenges

Mouna CHEGAAR

Mathematical analysis of a frictional contact problem



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

Mahmood H. DAKHIL, Mahmood ALHAFADHI, Alsigar MASAR, Saleh Suliman Saleh ELFALLAH
Numerical simulation of welding process

Lates DANIEL, Paul TRIPON, Eugen MARIN, Dragoş MANEA
Optimization of the design of an additional working piece of the ripper type

János DOBRÁNSZKY
Achievements in the field of materials for medical devices in Hungary

Viktor GOTTHARD
Design for modularity (DFM) theory and practice: modular design of giant 3D-printer and 3D-printed products

Alexandra HAMZA, István KOCSERHA
The effect of natural additives with high SiO₂ content on the properties of fired clay ceramics

Krisztián HORVÁTH
Using machine learning models to predict and reduce noise levels in gear systems

Michael LACKNER
Material and component testing of additively manufactured robot elements

Milan STOJANOVIĆ, Zoran STAMENIĆ, Tatjana LAZOVIĆ
Mathematical modelling of the repair of worn cardan needle roller bearings

Andrea KECZÁNNÉ ÜVEGES, Attila CSÍK, Máté FILE, Tamás MANKOVITS, Csaba HEGEDŰS
The importance of precision manufacturing in the production of scaffolds promoting bone regeneration

Emese KUROVICS, Alexandra HAMZA
Effect of clay mineral content on plasticity

Blaoui MOHAMED MOSSAAB, Ait Ferhat YAZID
Study of the effectiveness of acids as a quenching agent for metals

Gábor NAGY, Csenge Emese TÓTH
Hydrogen production via waste tire pyrolysis

Mustafa OZCANLI, Berkay KARACOR, Belkis ZERVENT UNAL, Ahmet CALIK
Innovative use of textile waste for automotive applications

Annamária POLYÁKNÉ KOVÁCS, Tamás József SZABÓ
Analysis of the effect of mechanical recycling in the case of aliphatic polyketone

Annamária POLYÁKNÉ KOVÁCS
Investigation of aliphatic polyketone degradation under the influence of UV

Annamária POLYÁKNÉ KOVÁCS, Tamás József SZABÓ
Investigation of the degradation of composites filled with aliphatic polyketone glass fibers during mechanical recycling

Calin-Virgiliu PRICA
Characterization of invar36 alloy obtained by sintering of the mechanically alloyed powders

Milan RACKOV, Siniša KUZMANOVIĆ
An overview of the development process of universal gear reducers with external helical gears

Md Tanweer RAZA, Rajesh REDDY, Sumit TIWARI, András SZEKERES
Development of nanofluid based on evacuated tube solar collector for efficient solar heating applications

Ognjen RISTIĆ, Nataša TRIŠOVIĆ, Miloš SEDAK
Bio-inspired optimization algorithms in piping design

Jan RYBÁŘ, Jozef LEJA, Štefan DUNAJ, Andrej SMETÁNKA, Peter ONDERČO
New design solution of reference device with model eye

Argentina Niculina SECHEL
Sintering behavior of Ti/B₄C/(±Al) powder mixtures

Hadid SUKMANA, Adrienn FEJÓS, Anikó BIRKÁSNÉ NAGYPÁL, Dorottya CSENKI, József CSANÁDI, Cecilia HODÚR, Zsuzsanna LÁSZLÓ, Gábor VERÉB, Szabolcs KERTÉSZ
Investigation of the ultrafiltration performance of different whey solutions in a dead-end membrane separation system



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

Benedek SZOVÁK, Alexandra KEMÉNY, Imre Norbert ORBULOV

Numerical study of the adhesion force between syntactic metal foam and reinforcing fibres

Kinga TAMÁSI, Szilvia KÓRA, Annamária POLYÁKNÉ KOVÁCS

New era of sustainable fashion - upcycling and 3D printing

Csenge Emese TÓTH, Tamás József SZABÓ, Zoltán Dávid GYÖKÉR, Helga KOVÁCS, Gábor NAGY

Behavior of photodegraded waste tire during thermal decomposition

Marcell János TÓTH, Annamária POLYÁKNÉ KOVÁCS

Degradation of bioplastic TPS composite with natural fillers

Nataša TRIŠOVIĆ

Numerical simulations in applied mechanics for enhanced safety in engineering structures

Zaga TRIŠOVIĆ

Enhanced biogas yield using co-digestion of food and agricultural waste

Ait Ferhat YAZID

Analysis of crack behavior in functionally graded materials: a mixed-mode stress intensity factor approach

Ait Ferhat YAZID, Blaoui MOHAMED MOSSAAB

Friction Stir Welding (FSW): analyzing crack behavior in metallic materials using a mixed-mode stress intensity factor approach

Fanhua YE, Chang LIU

Refined age and gender prediction with DNNs on utkface dataset

Teng Yue ZHANG, Chang LIU

Yoga posture recognition using mediapipe framework

INFORMATION TO CHAIRMEN, TO PRESENTERS AND TO VISITORS

Chairmen, Presenters and on-line registered Visitors are invited for lunch and coffee, but it is connected to registration at the registration desk at the Aula in the building of the Faculty of Engineering on the Conference days.

To Presenters:

- The official language of ISCAME is English;
- Show up to the session 10 minutes before the session begins;
- Each oral presentation will take 15 minutes including discussion;
- The files required for the presentation (PowerPoint or PDF) must be uploaded and tested in the computer placed in the room before the respective presentation session.

To Poster Presenters:

- The official language of ISCAME is English;
- The Poster Exhibition will be opened on Thursday 7 November, 11:00 and can be visited until 8 November, 14:00. It means from Thursday 11:00 onwards posters can be put on display (Location: Faculty of Engineering, 1st floor, Gallery).
- Poster sessions are scheduled on 8 November, from 11:00-11:30 and 13:00-13:30. At these times anyone interested should be received in front of the posters;
- Posters will be displayed on vertical boards with maximum dimensions of 1000mm (width) x 2000mm (height), the recommended poster size is standard A0 with page orientation portrait.

To Chairmen:

- During the presentations enforce time limits strictly so that no author monopolizes someone else's time;
- One presentation is complete the remainder of the time can be used for informal discussion with the audience and session participants. It is your job to field questions from the audience.

In any case please contact:

ISCAME Secretary

Szandra KALMÁRNÉ SITKU, administrator

Phone: +3652415155/77860

Mobile: +36704098909

E-mail: iscame@eng.unideb.hu

Department of Mechanical Engineering

Faculty of Engineering

University of Debrecen

2-4 Ótmető, Debrecen, H-4028, Hungary

Website: www.mecheng.unideb.hu



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

7-9 November 2024, Debrecen, Hungary

LIST OF THE EXHIBITING COMPANIES

10th Mechanical Engineering Industrial Exhibition and Job Fair, Debrecen

<u>Accell Hunland Kft.</u> Tószeg		<u>LEGO Manufacturing Kft.</u> Nyíregyháza	
<u>AD Plastik Tisza Kft.</u> Tiszaújváros		<u>MICHELIN Hungária Kft.</u> Nyíregyháza	
<u>BMW Manufacturing Hungary Kft.</u> Debrecen		<u>Oerlikon Eldim (HU) Kft.</u> Debrecen	
<u>BorsodChem Zrt.</u> Bereente		<u>Robert Bosch Automotive Steering Kft.</u> Maklár	
<u>CATL Debrecen</u> Debrecen		<u>Schaeffler Debrecen Kft.</u> Debrecen	
<u>CLAAS Hungária Kft.</u> Törökszentmiklós		<u>SciEngineering Kft.</u> Budapest	
<u>Coloplast Hungary Kft.</u> Nyírbátor		<u>SEMCORP Hungary Kft.</u> Debrecen	
<u>Diehl Aviation Hungary Kft.</u> Debrecen, Nyírbátor		<u>SPECTRONICS Kft.</u> Szeged	
<u>ENGEL-Hungária Kft.</u> Budapest		<u>Plastic-Form Kft.</u> Debrecen	
<u>Enterprise Communications Hungary Kft.</u> Budapest		<u>SPM Budapest Kft.</u> Budapest	
<u>Gyémánt-Pirazol Kft.</u> Debrecen		<u>Tecnica Ungheria Kft.</u> Nagykálló	
<u>Harro Höfliger Hungary Kft.</u> Debrecen		<u>Termometal Kft.</u> Ada	
<u>HOYA Szemüveglencse Gvártó Magyarország Zrt.</u> Mátészalka		<u>Unilever Hungary Kft.</u> Nyírbátor	
<u>KALL Ingredients Kft.</u> Tiszapüspöki		<u>VIRESOL Kft.</u> Visonta	
<u>KITE Zrt.</u> Nádudvar		<u>VR Solutions Hungary Kft.</u> Debrecen	
<u>Kontron Hungary Kft.</u> Budaörs		<u>ZF Chassis Modules Hungary Kft.</u> Debrecen	
<u>Krones Hungary Kft.</u> Debrecen		<u>ZF Hungária Kft.</u> Eger	