



Faculty of Engineering  
Department of Mechanical Engineering

**8<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE ON  
ADVANCES IN MECHANICAL ENGINEERING  
(ISCAME 2022)**

**10-11 November, 2022 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**





# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

10-11 November 2022, Debrecen, Hungary

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## Chair of ISCAME 2022

**Tamás MANKOVITS, University of Debrecen, Hungary**

## Scientific Program Committee of ISCAME 2022

**Piroska AILER, University of Debrecen, Hungary**

**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**

**Igor DRSTVENSEK, University of Maribor, Slovenia**

**János Péter ERDÉLYI, University of Miskolc, Hungary**

**Lajos FAZEKAS, University of Debrecen, Hungary**

**Sándor HAJDU, University of Debrecen, Hungary**

**György JUHÁSZ, University of Debrecen, Hungary**

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

**Ferenc KALMÁR, University of Debrecen, Hungary**

**Imre KOCSIS, University of Debrecen, Hungary**

**Ákos LAKATOS, University of Debrecen, Hungary**

**Daniel LATES, Petru Maior University of Targu Mures, Romania**

**Stanislav LEGUTKO, Poznan University of Technology, Poland**

**János LÍSKA, John von Neumann University, Hungary**

**Zoltán MAJOR, Johannes Kepler University Linz, Austria**

**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**

**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**

**Ferenc SZODRAI, University of Debrecen, Hungary**

**Edit SZŰCS, University of Debrecen, Hungary**

**György THALMAIER, Technical University of Cluj-Napoca, Romania**

**Zsolt TIBA, University of Debrecen, Hungary**

**László TÓTH, University of Debrecen, Hungary**

**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 2022

**Szandra SITKU, University of Debrecen, Hungary**

**Lilla CSOKÁNÉ DÓRÓ, University of Debrecen, Hungary**



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## WELCOME MESSAGE

On behalf of the ISCAME Scientific and Organizing Committee I am pleased to welcome you to Debrecen for the 8<sup>th</sup> International Scientific Conference on Advances in Mechanical Engineering organized by the Department of Mechanical Engineering, Faculty of Engineering of the University of Debrecen.

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 96 experts from higher education have registered for this year's conference from altogether 7 countries. In the framework of ISCAME 61 presentations will be given and 14 posters will be exhibited.

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 8<sup>th</sup> 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 8<sup>th</sup> 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 24 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. We hope that all of you feel awarded for your participation and contribution.

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

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## TECHNICAL PROGRAMME

(8<sup>th</sup> ISCAME and 8<sup>th</sup> Mechanical Engineering Exhibition and Job Fair)

### Thursday, 10<sup>th</sup> of November 2022 (2-4 Ótmető, Debrecen)

- 09:00 – 15:00 **Mechanical Engineering Exhibiton and Job Fair** (Aula of the Faculty of Engineering)
- 13:00 - 16:00 **ISCAME registration** (Aula of the Faculty of Engineering)
- 13:00 - 18:45 **ISCAME poster exhibition** (1<sup>st</sup> floor, Gallery of the Faculty of Engineering)
- 15:00 – 16:00 **ISCAME opening and plenary lectures** (4<sup>th</sup> floor, Lecture Hall 413)
- 16:15 – 18:45 **ISCAME sessions**  
INDUSTRIAL PROCESSES  
APPLIED AND THEORETICAL MECHANICS  
MATERIALS SCIENCE AND TECHNOLOGY I.
- 19:00 – 22:00 **ISCAME banquet** (Restaurant Reskontó, 34 Péterfia, Debrecen) –entrance only with invitation card

### Friday, 11<sup>th</sup> of November 2022 (2-4 Ótmető, Debrecen)

- 08:30 – 13:00 **ISCAME registration** (Aula of the Faculty of Engineering)
- 09:00 – 14:00 **ISCAME poster exhibition** (1<sup>st</sup> floor, Gallery of the Faculty of Engineering)
- 09:30 – 11:45 **ISCAME sessions**  
DESIGN, MANUFACTURING, MAINTENANCE  
POLYMER ENGINEERING  
MATERIALS SCIENCE AND TECHNOLOGY II.
- 11:00 – 12:00 **ISCAME poster session** (1<sup>st</sup> floor, Gallery of the Faculty of Engineering)
- 11:30 – 13:30 **lunch** (Restaurant, Faculty of Engineering)
- 12:30 – 12:45 **ISCAME group photo** (meeting at the inner court)
- 13:00 – 15:15 **ISCAME sessions**  
FLUID MECHANICS  
MATERIALS SCIENCE AND TECHNOLOGY III.



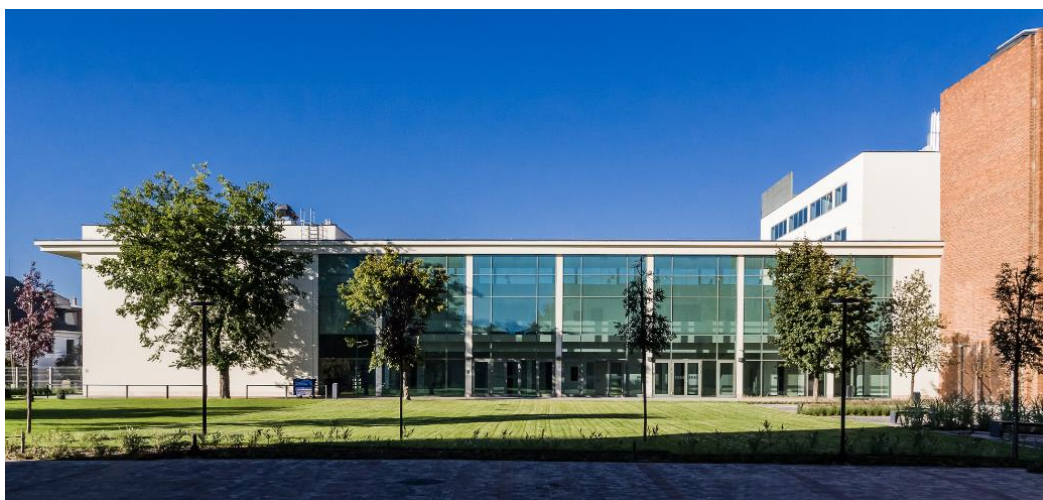
# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

10-11 November 2022, Debrecen, Hungary

## DETAILED PROGRAMME OF ISCAMÉ 2022

**Thursday, 10<sup>th</sup> of November 2022 (2-4 Ótmető, Debrecen)**

13:00 – 16:00	<b>ISCAMÉ registration</b> (Aula of the Faculty of Engineering)
13:00 – 18:45	<b>ISCAMÉ poster exhibition</b> (1 <sup>st</sup> floor, Gallery of the Faculty of Engineering)
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15:00 – 16:00	<b>ISCAMÉ opening and plenary lectures</b> (Lecture Hall 413, 4 <sup>th</sup> floor)
15:00 – 15:05	<b>Tamás MANKOVITS</b> , University of Debrecen, Hungary <i>Welcoming words</i>
15:05 – 15:20	<b>Piroska AILER</b> , University of Debrecen, Hungary <i>Automotive research projects at the University of Debrecen</i>
15:20 – 15:35	<b>László TÓTH</b> , University of Debrecen, Hungary <i>The role of natural sciences and engineering in society</i>
15:35 – 15:50	<b>Zoltán WELTSCH</b> , John von Neumann University, Hungary <i>The effect of high energy density surface treatments on automotive bonding technologies</i>
15:50 – 16:00	<b>Tamás MANKOVITS</b> , University of Debrecen, Hungary <i>Research projects and infrastructure at the Department of Mechanical Engineering</i>
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16:15 – 17:45	<b>Session INDUSTRIAL PROCESSES</b> (Emerson Pneumatic Laboratory, ground floor, room E.0.21.)
Chairman:	<b>Lajos GULYÁS</b> , University of Debrecen, Hungary
Secretary:	<b>István DOMOKOS</b> , University of Debrecen, Hungary
16:15 – 16:30	<b>László TÓTH</b> <i>What is the profit center in organizations that operate large asset systems?</i>
16:30 – 16:45	<b>Ömer Faruk KARAMAN, László HÉGELY, Péter LÁNG</b> <i>Optimisation of methanol recovery by surrogate models: Influence of prices</i>
16:45 – 17:00	<b>Dániel HORVÁTH, Tibor POÓS</b> <i>Dimensional analysis of mixing power requirement in agitated drum</i>
17:00 – 17:15	<b>Evelin VARJU, Tibor POÓS</b> <i>Evaporation cases based on different heat fluxes</i>
17:15 – 17:30	<b>Tibor POÓS, Viktor SZABÓ, Rashed A. RASHED</b> <i>Characteristic functions of a batch, convective drying</i>
17:30 – 17:45	<b>Tibor POÓS, Nikolett SZÁVICS</b> <i>Continuous concentration measurement of organic air pollutant components in gas stream</i>



Faculty of Engineering, University of Debrecen



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16:15 – 18:45	<b>Session APPLIED AND THEORETICAL MECHANICS</b> (Technical Mechanics Laboratory, 1 <sup>st</sup> floor, room U.1.08.)
Chairman:	<b>Sándor HAJDU</b> , University of Debrecen, Hungary
Secretary:	<b>Rashwan ALKENTAR</b> , University of Debrecen, Hungary
16:15 – 16:30	<b>István ECSEDI</b> , <b>Attila BAKSA</b> , <b>Ákos József LENGYEL</b> , <b>Dávid GÖNCZI</b> <i>An analytical solution for the two-layered composite beam-column with interlayer slip and constant axial load</i>
16:30 – 16:45	<b>István ECSEDI</b> , <b>Attila BAKSA</b> , <b>Ákos József LENGYEL</b> , <b>Dávid GÖNCZI</b> <i>On the torsional rigidity of orthotropic beams with rectangular cross section</i>
16:45 – 17:00	<b>Humam Kareem AL-JANABI</b> , <b>Endre KOVÁCS</b> <i>New stable explicit methods for heat conduction, convection and radiation</i>
17:00 – 17:15	<b>Csaba HAJDU</b> , <b>Ádám CSAPÓ</b> <i>Hypergraph-based modeling of kinematic structures</i>
17:15 – 17:30	<b>Marwen HABBACHI</b> , <b>Attila BAKSA</b> <i>Numerical modelling and simulation of sheet metal forming process</i>
17:30 – 17:45	<b>Tatiane DOMOKOS</b> <i>Prediction of FLD using Gurson Model for simple flat spacemen</i>
17:45 – 18:00	<b>Mortda MOHAMMED</b> , <b>György KOVÁCS</b> , <b>Szabolcs SZÁVAI</b> <i>Using artificial neural network in the design of the composite sandwich panel</i>
18:00 – 18:15	<b>Dávid HURI</b> , <b>Tamás MANKOVITS</b> <i>Artificial intelligence for simulation-based engineering optimization</i>
18:15 – 18:30	<b>Rashwan ALKENTAR</b> , <b>Tamás MANKOVITS</b> <i>Design and analysis of patient specific femoral stem using lattice structures</i>
18:30 – 18:45	<b>Dániel NEMES</b> , <b>Sándor HAJDU</b> <i>A solution for creating a submodel of an electric motor in a vehicle dynamics model by using Matlab Simulink</i>

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16:15 – 18:15	<b>Session MATERIALS SCIENCE AND TECHNOLOGY I.</b> (Metallographic Laboratory, 1 <sup>st</sup> floor, room E.120.)
Chairman:	<b>György THALMAIER</b> , Technical University of Cluj-Napoca, Romania
Secretary:	<b>András GÁBORA</b> , University of Debrecen, Hungary
16:15 – 16:30	<b>Szabolcs JÓNÁS</b> , <b>Péter Zoltán KOVÁCS</b> <i>Tube-to-Tube joining by forming</i>
16:30 – 16:45	<b>Miklós BERCZELI</b> , <b>Ferenc TAJTI</b> , <b>Gergely JUHÁSZ</b> , <b>Péter KOVÁCS</b> , <b>Zsolt KÖNYVES</b> , <b>Andrea CAPÁR</b> , <b>István KUTI</b> , <b>Zoltán WELTSCH</b> <i>Wettability measurement possibilities on adhesives</i>
16:45 – 17:00	<b>Ferenc TAJTI</b> , <b>Miklós BERCZELI</b> <i>Investigation of the adhesion properties of pottings</i>
17:00 – 17:15	<b>Eliza ANGELI</b> , <b>László KOLTAI</b> , <b>Rozália SZENTGYÖRGYVÖLGYI</b> <i>Influence of cardboard surface sizing on solvent retention</i>
17:15 – 17:30	<b>György LEDNICZKY</b> <i>Metal injection molding</i>
17:30 – 17:45	<b>György THALMAIER</b> , <b>Ioan VIDA-SIMITI</b> , <b>Niculina SECHER</b> <i>Creating porous metal parts by Fused Deposition Modeling and Sintering</i>
17:45 – 18:00	<b>Balázs ADÁM</b> <i>Investigation of non-isothermal crystallization kinetics of melamine-based flame retardant PLA</i>
18:00 – 18:15	<b>Béla KONDÁS</b> , <b>Valéria MERTINGER</b> <i>Effect of conventional and non-conventional annealing on DC01 steels</i>

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19:00 – 22:00	<b>ISCAME banquet</b> – by pre-registration only and entrance fee is charged (Restaurant Reskontó, 34 Péterfia, Debrecen)
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# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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## Friday, 11<sup>th</sup> of November 2022 (2-4 Ótomető, Debrecen)

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

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09:30 – 11:45 **Session DESIGN, MANUFACTURING, MAINTENANCE**  
(Plastic and Rubber Testing Laboratory, 3<sup>rd</sup> floor, room E.320.)

Chairman: **Levente CZÉGE**, University of Debrecen, Hungary  
Secretary: **Dániel NEMES**, University of Debrecen, Hungary

09:30 - 09:45 **Gergely HUNYADI, Dénes FODOR**

*Key questions on the combination of modular system design with driverless car based on internal combustion drivetrain*

09:45 - 10:00 **János Péter ERDÉLYI**

*Relation of power and capacity of HPDC machine*

10:00 – 10:15 **Luboslav STRAKA, Patrik KUČTA**

*Efficiency of machining curved surfaces through electrical discharge technology*

10:15 – 10:30 **Luboslav STRAKA, Patrik KUČTA**

*Machining of carbide metals by electrical discharge technology*

10:30 – 10:45 **Atosi ROY, Sándor BODZÁS**

*Geometric analysis of spline shafts by surface roughness tester and 3D scanner*

10:45 – 11:00 **Todor MITKOV, Tihomir DOVRAMADJIEV**

*Investigation of the luxury yachts condition and their maintenance*

11:00 – 11:15 **Péter TRAMPUS**

*Industry 4.0 and non-destructive evaluation in symbiosis*

11:15 – 11:30 **Attila ARADI, Attila Károly VARGA**

*Deep learning based classification of sounds recorded by hydrophone in a tank for leak detection and monitoring of pump condition*

11:30 – 11:45 **Attila Károly VARGA**

*Expert investigation of the installation and maintenance of a communication cable cut with and agricultural machine*

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09:30 – 10:45 **Session POLYMER ENGINEERING**  
(SMARTMAT Material Technology Laboratory, 4<sup>th</sup> floor, room E.414.)

Chairman: **István BUDAI**, University of Debrecen, Hungary  
Secretary: **Máté FILE**, University of Debrecen, Hungary

09:30 - 09:45 **Zoltán TAKÁCS, Imre KÁLLAI**

*Application of additive manufacturing technology for the production of injection molding tools in order to reduce the cycle time*

09:45 - 10:00 **Péter HALMAI, Imre KÁLLAI, Péter VOLASCSEK**

*Material development of an aircraft interior panel*

10:00 – 10:15 **Imre KÁLLAI, Zoltán MAJOR, Ferenc KUN**

*The future of thermoplastic polymer matrix composites in the aircraft industry*

10:15 – 10:30 **Máté FILE, Zoltán MAJOR, Gábor BALOGH, Tamás MANKOVITS, Dávid HURI**

*Multiscale modelling of a unidirectional composite material*

10:30 – 10:45 **István BUDAI, András SZOBOSZLAI**

*Development of cellular matrix drug formula*



# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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10:00 – 11:30 **Session MATERIALS SCIENCE AND TECHNOLOGY II.**

(Metallographic Laboratory, 1<sup>st</sup> floor, room E.120.)

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

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

10:00 – 10:15 **Dániel MOLNÁR**

*Casting simulation developments*

10:15 – 10:30 **Branko SKORIC, Pal TEREK, Lazar KOVACEVIC, Vladimir TEREK, Zoran BOBIC, Dragan KUKURUZOVIC**

*Influence of ion implantation on tool steel*

10:30 – 10:45 **Dávid HALÁPI, László VARGA**

*Ultrasonic powder atomisation for additive manufacturing*

10:45 – 11:00 **Márk WINDISCH, Anna MALOVECZKY, Miklós VERES, István RIGÓ, Péter FÜRJES, Zoltán DANKHÁZI, Ádám VIDA**

*Application of laser surface treatment in surface-enhanced Raman spectroscopy*

11:00 – 11:15 **Rabea Hussein Mohammed QASEM**

*Effect of surface-modified nanoparticles on oil recovery efficiency and the mechanism underlies this effect*

11:15 – 11:30 **Jemal Ebrahim DESSIE, Zsolt LUKÁCS**

*A numerical study on springback prediction with systematic process improvement*

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11:00 - 12:00 **poster session** (1<sup>st</sup> floor, Gallery of the Faculty of Engineering)

11:30 – 13:30 **lunch** (Restaurant, Faculty of Engineering)

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12:30 – 12:45 **ISCAME group photo** (meeting at the inner court)



A group of ISCAME Participants in 2018





# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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13:00 – 14:45	<b>Session FLUID MECHANICS</b> (Technical Mechanics Laboratory, 1 <sup>st</sup> floor, room U.1.08.)
Chairman:	<b>Ferenc SZODRAI</b> , University of Debrecen, Hungary
Secretary:	<b>Sándor ANDRÁSKÓ</b> , University of Debrecen, Hungary
13:00 – 13:15	<b>Kálmán KLAPCSIK</b> <i>Bubble position control by phase-controllable ultrasonic standing wave</i>
13:15 – 13:30	<b>Ferenc SZODRAI</b> <i>Assessment of pulsating flow</i>
13:30 – 13:45	<b>Issa OMLE, Ali Habeeb ASKAR</b> <i>Investigating the effect of surface roughness type on the convection and radiation heat transfer inside the enclosure</i>
13:45 – 14:00	<b>Mohsen KHALILI NAJAFABADI, Krisztián HRICZÓ, Gabriella VADÁSZNÉ BOGNÁR</b> <i>Heat transfer characteristics of water-CuO nanofluid flow inside 2D pipe</i>
14:00 – 14:15	<b>ZAINAB ALI, GABRIELLA VADÁSZNÉ BOGNÁR</b> <i>CFD study of the effect of surface roughness on the ship resistance</i>
14:15 – 14:30	<b>Mustafa HASAN, Krisztián HRICZÓ</b> <i>Prediction of energy efficiency of a solar air collector using artificial neural network technique</i>
14:30 - 14:45	<b>Levente TUGYI, Zoltán SIMÉNFALVI, Gábor L. SZEPESI</b> <i>Propane gas diffusion for propane-propylene separation columns with different outflow directions</i>

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13:00 – 15:15	<b>Session MATERIALS SCIENCE AND TECHNOLOGY III.</b> (Robert Bosch Engineering Education and Development Laboratory, ground floor, room E.0.22)
Chairman:	<b>László TÓTH</b> , University of Debrecen, Hungary
Secretary:	<b>Dávid HURI</b> , University of Debrecen, Hungary
13:00 – 13:15	<b>Ahmad Yasser DAKHEL, János LUKÁCS</b> <i>Full-scale tests of pipeline girth welds under complex cyclic internal pressure and static bending loading conditions</i>
13:15 – 13:30	<b>Gábor GYARMATI, Zoltán KÉRI, Dániel MOLNÁR</b> <i>Analysis of the quality of incoming aluminum alloy ingots</i>
13:30 – 13:45	<b>László KOROKNAI, László KUZSELLA, Gábor PÓR</b> <i>The importance of perpendicularity during the scanning ultrasound examination</i>
13:45 – 14:00	<b>Martin L. KÖLÜS, Richárd BORBÉLY, Dániel SZÓKE, Gábor BÉRES</b> <i>Effect of the flow curve determination on the thinning of drawn parts</i>
14:00 – 14:15	<b>Anas JAWABREH, Máté SEPSI, Péter BARKÓCZY</b> <i>Effects of elevated temperature on the mechanical behavior of ACSR type conductors</i>
14:15 - 14:30	<b>Bassel ALSALAMAH</b> <i>The effect of temperature on the hot compression test of AlSi7 aluminium alloy</i>
14:30 - 14:45	<b>Nóra BÍRÓ, Dániel MOLNÁR, György FEGYVERNEKI</b> <i>Thermal analysis - Theory and application</i>
14:45 - 15:00	<b>Sándor Endre KOVÁCS, László VARGA</b> <i>Mechanical testing of 3D printed stainless steel specimens</i>
15:00 - 15:15	<b>Hanna ZAKIYYA, Tamás KÉKESI</b> <i>The effect of Ni impurities on the electrodeposition of Zn from chloride media</i>

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City Centre, Debrecen



# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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**ISCAME posters** (1<sup>st</sup> floor, Gallery of the Faculty of Engineering)

**Mahmood ALHAFADHI**

*Numerical simulation and experimental comparison of refrigeration and air conditioning scroll compressors: Review*

**Tamás ANTAL, János NAGY**

*Changes in physical and mechanical properties of dried sweet potatoes during storage*

**Montassar AYARI, Zsolt DOBÓ, Attila GARAMI**

*Investigation of neat PET, PETG, ABS, PBT and their mixtures by thermogravimetry*

**Sándor BODZÁS**

*Geometric design of form tools for turning technologies*

**István DOMOKOS, Sándor PÁLINKÁS, Lajos FAZEKAS, András MOLNÁR**

*Application of laser remelting technology in case of cultivator tine*

**Ramóna LADÁNYI, Sándor BODZÁS**

*Design unique clamping device for the development of pressing technology*

**Daniel LATES, Alfianu CALIN**

*Analysis of structural strengths for the cableway group*

**Viktor NAGY, Gábor KOVÁCS**

*Experimental analysis of bus driver behavior and cognitive load*

**Annamária POLYÁKNÉ KOVÁCS, Kinga TAMÁSI**

*Examination of hydrolysis-resistant polyketone and its application possibilities in the industry*

**Muhammad QAMAR, Ghulam ABBAS, Muhammad AFZAAL, Abdul GHUFFAR**

*Gold nanorods for doxorubicin delivery: Numerical analysis of electric field enhancement, optical properties and drug delivery*

**Kristóf SZABÓ**

*Application of topological methods in the development of vehicle components*

**Kristóf SZABÓ**

*Component development using topological methods*

**Kinga TAMÁSI, Annamária POLYÁKNÉ KOVÁCS, Viktor BORDÁS, Andrea SIMON**

*Cellular ceramic and polymeric materials for defence and military applications- A review*

**Annamária CS. TÓTH, Edina PREKLET, Zoltán BÖRCSÖK, Brigitta HORVÁTH, Katalin HALÁSZ**

*Characterization of a biodegradable edible film obtained from psyllium husk flour*

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Main building of the University of Debrecen



# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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## 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 10 November, 13:00 and can be visited until 11 November, 14:00. It means from Thursday 13:00 onwards posters can be put on display (Location: Faculty of Engineering, 1<sup>st</sup> floor, Gallery).
- Poster sessions are scheduled on 11 November, from 11:00-12:00. At this time 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 presentations are 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:

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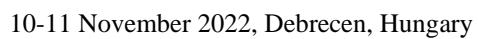
Department of Mechanical Engineering

Faculty of Engineering, University of Debrecen

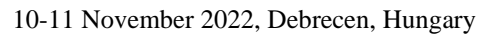
2-4 Ótemető, Debrecen, H-4028, Hungary

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Notes:

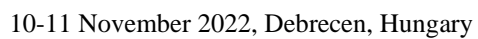


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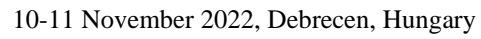


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# INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

10-11 November 2022, Debrecen, Hungary

## LIST OF THE EXHIBITING COMPANIES

8<sup>th</sup> Mechanical Engineering Industrial Exhibition, Debrecen

<b>AD Plastik Tisza Kft.</b>	<a href="http://www.adplasztik.hr/hu">www.adplasztik.hr/hu</a>	Tiszaújváros
<b>Coloplast Hungary Kft.</b>	<a href="http://www.coloplast.hu">www.coloplast.hu</a>	Nyírbátor
<b>ContiTech Magyarország Kft.</b>	<a href="http://www.continental.com">www.continental.com</a>	Nyíregyháza
<b>Diehl Aviation Hungary Kft.</b>	<a href="http://www.diehl.com/aviation-hungary">www.diehl.com/aviation-hungary</a>	Debrecen
<b>Emerson Automation FCP Kft.</b>	<a href="http://www.pneumatika.hu/">www.pneumatika.hu/</a>	Eger
<b>FAG Magyarország Ipari Kft.</b>	<a href="http://www.schaeffler.hu">www.schaeffler.hu</a>	Debrecen
<b>FreeDee Nyomdai Szolgáltató Művek Kft.</b>	<a href="http://www.freedee.hu/">www.freedee.hu/</a>	Budapest
<b>HAJDU Hajdúsági Ipari Zrt.</b>	<a href="http://www.hajdurt.hu">www.hajdurt.hu</a>	Téglás
<b>HOYA Szemüveglencse Gyártó Magyarország Zrt.</b>	<a href="http://ww.hoya.com">ww.hoya.com</a>	Mátészalka
<b>KITE Zrt.</b>	<a href="http://www.kite.hu">www.kite.hu</a>	Nádudvar
<b>Krones Hungary Kft.</b>	<a href="http://www.krones.com/hu-hu">www.krones.com/hu-hu</a>	Debrecen
<b>Magyar Suzuki Zrt.</b>	<a href="http://www.suzuki.hu">www.suzuki.hu</a>	Esztergom
<b>Manz Hungary Gépgyártó Kft.</b>	<a href="http://ww.manz.com">ww.manz.com</a>	Debrecen
<b>Michelin Hungária Abroncsgyártó Kft.</b>	<a href="http://www.michelin.hu">www.michelin.hu</a>	Nyíregyháza
<b>Oerlikon Eldim (HU) Kft.</b>	<a href="http://www.oerlikon.com">www.oerlikon.com</a>	Debrecen
<b>Robert Bosch Automotive Steering Kft.</b>	<a href="https://www.bosch.hu">https://www.bosch.hu</a>	Maklár
<b>S&amp;T Consulting Hungary Kft.</b>	<a href="http://www.snt.hu">www.snt.hu</a>	Budapest
<b>Sensirion Hungary Kft.</b>	<a href="http://www.sensirion.com">www.sensirion.com</a>	Debrecen
<b>SMR Automotive Mirror Technology Hungary Bt.</b>	<a href="http://www.smr-automotive.com/">www.smr-automotive.com/</a>	Túrkeve
<b>Sólyomsoft Kft.</b>	<a href="http://www.solyomsoft.hu">www.solyomsoft.hu</a>	Budapest
<b>SPM Budapest Kft.</b>	<a href="http://www.spminstrument.com">www.spminstrument.com</a>	Budapest
<b>Tecnica Ungheria Kft.</b>	<a href="http://www.tecnicagroup.com">www.tecnicagroup.com</a>	Nagykálló
<b>thyssenkrupp Components Technology Hungary Kft.</b>	<a href="http://www.thyssenkrupp.hu">www.thyssenkrupp.hu</a>	Debrecen
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<b>ZF Hungária Kft.</b>	<a href="http://www.zf.com/hu">www.zf.com/hu</a>	Eger