



Faculty of Engineering
Department of Mechanical Engineering

**8th 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

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 CSONKÁNÉ DÓRÓ, University of Debrecen, Hungary



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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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 8th 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 8th 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 8th 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

10-11 November 2022, Debrecen, Hungary

TECHNICAL PROGRAMME

(8th ISCAE and 8th Mechanical Engineering Exhibition and Job Fair)

Thursday, 10th of November 2022 (2-4 Ótemető, 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** (1st floor, Gallery of the Faculty of Engineering)

15:00 – 16:00 **ISCAME opening and plenary lectures** (4th 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, 11th of November 2022 (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)

09:30 – 11:45 **ISCAME sessions**

DESIGN, MANUFACTURING, MAINTENANCE

POLYMER ENGINEERING

MATERIALS SCIENCE AND TECHNOLOGY II.

11:00 – 12:00 **ISCAME poster session** (1st 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 ISCAME 2022

Thursday, 10th of November 2022 (2-4 Ótemető, Debrecen)

13:00 – 16:00 **ISCAME registration** (Aula of the Faculty of Engineering)

13:00 – 18:45 **ISCAME poster exhibition** (1st floor, Gallery of the Faculty of Engineering)

15:00 – 16:00 **ISCAME opening and plenary lectures**

(Lecture Hall 413, 4th floor)

15:00 – 15:05 **Tamás MANKOVITS**, University of Debrecen, Hungary

Welcoming words

15:05 – 15:20 **Piroska AILER**, University of Debrecen, Hungary

Automotive research projects at the University of Debrecen

15:20 - 15:35 **László TÓTH**, University of Debrecen, Hungary

The role of natural sciences and engineering in society

15:35 – 15:50 **Zoltán WELTSCH**, John von Neumann University, Hungary

The effect of high energy density surface treatments on automotive bonding technologies

15:50 - 16:00 **Tamás MANKOVITS**, University of Debrecen, Hungary

Research projects and infrastructure at the Department of Mechanical Engineering

16:15 – 17:45 **Session INDUSTRIAL PROCESSES**

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

Chairman: **Lajos GULYÁS**, University of Debrecen, Hungary

Secretary: **István DOMOKOS**, University of Debrecen, Hungary

16:15 – 16:30 **László TÓTH**

What is the profit center in organizations that operate large asset systems?

Ömer Faruk KARAMAN, László HÉGELY, Péter LÁNG

Optimisation of methanol recovery by surrogate models: Influence of prices

16:45 – 17:00 **Dániel HORVÁTH**, Tibor POÓS

Dimensional analysis of mixing power requirement in agitated drum

17:00 – 17:15 **Evelin VARJU**, Tibor POÓS

Evaporation cases based on different heat fluxes

17:15 – 17:30 **Tibor POÓS**, Viktor SZABÓ, **Rashed A. RASHED**

Characteristic functions of a batch, convective drying

17:30 - 17:45 **Tibor POÓS**, **Nikolett SZÁVICS**

Continuous concentration measurement of organic air pollutant components in gas stream



Faculty of Engineering, University of Debrecen



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

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16:15 – 18:45	Session APPLIED AND THEORETICAL MECHANICS (Technical Mechanics Laboratory, 1 st floor, room U.1.08.)
Chairman:	Sándor HAJDU , University of Debrecen, Hungary
Secretary:	Rashwan ALKENTAR , University of Debrecen, Hungary
16:15 – 16:30	István ECSEDI , Attila BAKSA, Ákos József LENGYEL, Dávid GÖNCZI <i>An analytical solution for the two-layered composite beam-column with interlayer slip and constant axial load</i>
16:30 – 16:45	István ECSEDI , <u>Attila BAKSA</u> , Ákos József LENGYEL, Dávid GÖNCZI <i>On the torsional rigidity of orthotropic beams with rectangular cross section</i>
16:45 – 17:00	Humam Kareem AL-JANABI , Endre KOVÁCS <i>New stable explicit methods for heat conduction, convection and radiation</i>
17:00 – 17:15	Csaba HAJDU , Ádám CSAPÓ <i>Hypergraph-based modeling of kinematic structures</i>
17:15 - 17:30	Marwen HABBACHI , Attila BAKSA <i>Numerical modelling and simulation of sheet metal forming process</i>
17:30 - 17:45	Tatiáne DOMOKOS <i>Prediction of FLD using Gurson Model for simple flat spacemen</i>
17:45 - 18:00	Mortda MOHAMMED , György KOVÁCS, Szabolcs SZÁVAI <i>Using artificial neural network in the design of the composite sandwich panel</i>
18:00 - 18:15	Dávid HURI , Tamás MANKOVITS <i>Artificial intelligence for simulation-based engineering optimization</i>
18:15 - 18:30	Rashwan ALKENTAR , Tamás MANKOVITS <i>Design and analysis of patient specific femoral stem using lattice structures</i>
18:30 - 18:45	Dániel NEMES , Sándor HAJDU <i>A solution for creating a submodel of an electric motor in a vehicle dynamics model by using Matlab Simulink</i>
16:15 – 18:15	Session MATERIALS SCIENCE AND TECHNOLOGY I. (Metallographic Laboratory, 1 st floor, room E.120.)
Chairman:	György THALMAIER , Technical University of Cluj-Napoca, Romania
Secretary:	András GÁBORA , University of Debrecen, Hungary
16:15 – 16:30	Szabolcs JÓNÁS , Péter Zoltán KOVÁCS <i>Tube-to-Tube joining by forming</i>
16:30 – 16:45	Miklós BERCZELI , Ferenc TAJTI, Gergely JUHÁSZ, Péter KOVÁCS, Zsolt KÖNYVES, Andrea CAPÁR, István KUTI, Zoltán WELTSCH <i>Wettability measurement possibilities on adhesives</i>
16:45 – 17:00	Ferenc TAJTI , Miklós BERCZELI <i>Investigation of the adhesion properties of pottings</i>
17:00 – 17:15	Eliza ANGELI , László KOLTAI, Rozália SZENTGYÖRGYVÖLGYI <i>Influence of cardboard surface sizing on solvent retention</i>
17:15 – 17:30	György LEDNICZKY <i>Metal injection molding</i>
17:30 - 17:45	György THALMAIER , Ioan VIDA-SIMITI, Niculina SECHEL <i>Creating porous metal parts by Fused Deposition Modeling and Sintering</i>
17:45 – 18:00	Balázs ADÁM <i>Investigation of non-isothermal crystallization kinetics of melamine-based flame retardant PLA</i>
18:00 – 18:15	Béla KONDÁS , Valéria MERTINGER <i>Effect of conventional and non-conventional annealing on DC01 steels</i>
19:00 – 22:00	ISCAME banquet – by pre-registration only and entrance fee is charged (Restaurant Reskontó, 34 Péterfia, Debrecen)



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Friday, 11th of November 2022 (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)

09:30 – 11:45 Session DESIGN, MANUFACTURING, MAINTENANCE

(Plastic and Rubber Testing Laboratory, 3rd floor, room E.320.)

Chairman: **Levente CZÉGÉ**, 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 **Cuboslav STRAKA, Patrik KUCHTA**

Efficiency of machining curved surfaces through electrical discharge technology

10:15 – 10:30 **Cuboslav STRAKA, Patrik KUCHTA**

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

09:30 – 10:45 Session POLYMER ENGINEERING

(SMARTMAT Material Technology Laboratory, 4th 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 martix drog 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, 1st 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

11:00 - 12:00 **poster session** (1st 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)



A group of ISCAME Participants in 2018



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13:00 – 14:45	Session FLUID MECHANICS (Technical Mechanics Laboratory, 1 st floor, room U.1.08.)
Chairman:	Ferenc SZODRAI , University of Debrecen, Hungary
Secretary:	Sándor ANDRÁSKÓ , University of Debrecen, Hungary
13:00 – 13:15	Kálmán KЛАPCSИK <i>Bubble position control by phase-controllable ultrasonic standing wave</i>
13:15 – 13:30	Ferenc SZODRAI <i>Assessment of pulsating flow</i>
13:30 – 13:45	Issa OMЛЕ, Ali Habeeb ASKAR <i>Investigating the effect of surface roughness type on the convection and radiation heat transfer inside the enclosure</i>
13:45 – 14:00	Mohsen KHALILI NAJAFABADI, Krisztián HRICZÓ, Gabriella VADÁSZNÉ BOGNÁR <i>Heat transfer characteristics of water-CuO nanofluid flow inside 2D pipe</i>
14:00 – 14:15	ZAINAB ALI, GABRIELLA VADÁSZNÉ BOGNÁR <i>CFD study of the effect of surface roughness on the ship resistance</i>
14:15 – 14:30	Mustafa HASAN, Krisztián HRICZÓ <i>Prediction of energy efficiency of a solar air collector using artificial neural network technique</i>
14:30 - 14:45	Levente TUGYI, Zoltán SIMÉNFALVI, Gábor L. SZEPESI <i>Propane gas diffusion for propane-propylene separation columns with different outflow directions</i>
13:00 – 15:15	Session MATERIALS SCIENCE AND TECHNOLOGY III. (Robert Bosch Engineering Education and Development Laboratory, ground floor, room E.0.22)
Chairman:	László TÓTH , University of Debrecen, Hungary
Secretary:	Dávid HURI , University of Debrecen, Hungary
13:00 – 13:15	Ahmad Yasser DAKHEL, János LUKÁCS <i>Full-scale tests of pipeline girth welds under complex cyclic internal pressure and static bending loading conditions</i>
13:15 – 13:30	Gábor GYARMATI, Zoltán KÉRI, Dániel MOLNÁR <i>Analysis of the quality of incoming aluminum alloy ingots</i>
13:30 – 13:45	László KOROKNAI, László KUZSELLA, Gábor PÓR <i>The importance of perpendicularity during the scanning ultrasound examination</i>
13:45 – 14:00	Martin L. KÖLÜS, Richárd BORBÉLY, Dániel SZÖKE, Gábor BÉRES <i>Effect of the flow curve determination on the thinning of drawn parts</i>
14:00 – 14:15	Anas JAWABREH, Máté SEPSI, Péter BARKÓCZY <i>Effects of elevated temperature on the mechanical behavior of ACSR type conductors</i>
14:15 - 14:30	Bassel ALSALAMAH <i>The effect of temperature on the hot compression test of AlSi7 aluminium alloy</i>
14:30 - 14:45	Nóra BÍRÓ, Dániel MOLNÁR, György FEGYVERNEKI <i>Thermal analysis - Theory and application</i>
14:45 - 15:00	Sándor Endre KOVÁCS, László VARGA <i>Mechanical testing of 3D printed stainless steel specimens</i>
15:00 - 15:15	Hanna ZAKIYYA, Tamás KÉKESI <i>The effect of Ni impurities on the electrodeposition of Zn from chloride media</i>



City Centre, Debrecen



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

10-11 November 2022, Debrecen, Hungary

ISCAE posters (1st 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

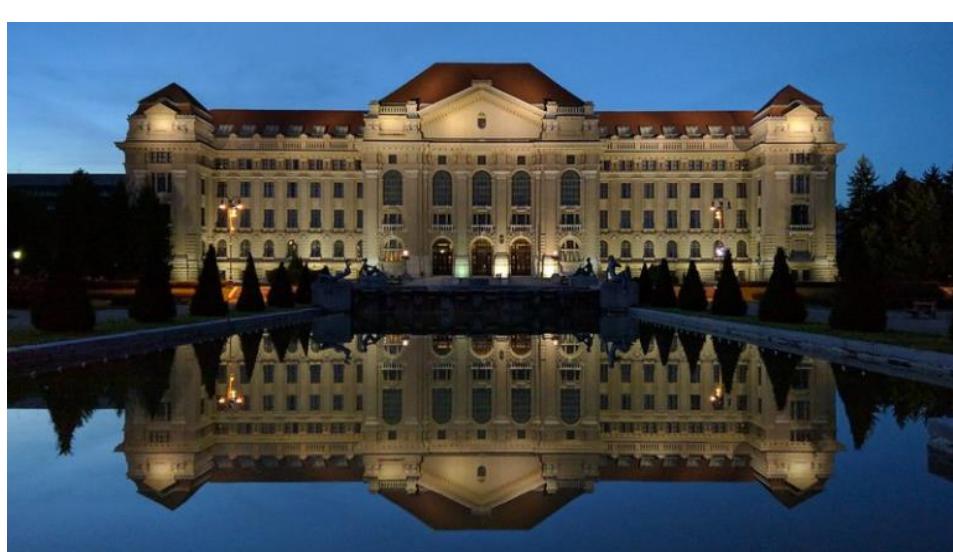
Component development using topological methods

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



Main building of the University of Debrecen



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

10-11 November 2022, Debrecen, Hungary

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, 1st 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:

ISCAME Secretary

Szandra 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 Ótemető, Debrecen, H-4028, Hungary
Website: www.mecheng.unideb.hu

Notes:



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LIST OF THE EXHIBITING COMPANIES 8th Mechanical Engineering Industrial Exhibition, Debrecen

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