

UNIVERSITY OF DEBRECEN
Faculty of Engineering
Department of Mechanical Engineering



**4th INTERNATIONAL SCIENTIFIC CONFERENCE ON
ADVANCES IN MECHANICAL ENGINEERING
(ISCAME 2016)**

13-15 October, 2016 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

13-15 October 2016, Debrecen, Hungary



Chair of ISCAME 2016

Tamás MANKOVITS, University of Debrecen, Hungary

Scientific Program Committee of ISCAME 2016

Ágnes BATTÁNE GINDERT-KELE, 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

Igor DRSTVENSEK, University of Maribor, Slovenia

Illés DUDÁS, University of Miskolc, Hungary

János Péter ERDÉLYI, University of Miskolc, Hungary

Lajos FAZEKAS, University of Debrecen, Hungary

Csaba GYENGE, Technical University of Cluj-Napoca, Romania

György JUHÁSZ, University of Debrecen, Hungary

Gábor KALÁCSKA, Szent István University, Hungary

Ferenc KALMÁR, University of Debrecen, Hungary

Imre KOCSIS, University of Debrecen, Hungary

Stanislav LEGUTKO, Poznan University of Technology, Poland

Zoltán MAJOR, Johannes Kepler University Linz, Austria

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

Istvánné RÁTHY, Óbuda University, Hungary

Tamás SZABÓ, University of Miskolc, Hungary

Edit SZÚCS, 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

László ZSIDAI, Szent István University, Hungary

Technical Assistance

Judit BAK, University of Debrecen, Hungary

Tamás Antal VARGA, University of Debrecen, Hungary



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



WELCOME MESSAGE

On behalf of the ISCAME Scientific and Organizing Committee I am pleased to welcome you to Debrecen for the 4th 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 123 experts from higher education have registered for this year's conference from altogether 11 countries. In the framework of ISCAME 73 presentations will be given and 31 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 4th International Scientific Conference on Advances in Mechanical Engineering will have an important impact on the research in all topics included in its programme.

It is also an honour for us to have a privilege to invite you to the 4th Mechanical Engineering Industrial Exhibition. The Faculty of Engineering of the University of Debrecen will host – parallel to ISCAME – the event, called “Industry Days in Debrecen” where 50 companies – 30 of which as partners of the Department of Mechanical Engineering – will exhibit. The list of our exhibiting partners can be found at the end of the programme booklet. This professional programme 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

13-15 October 2016, Debrecen, Hungary



TECHNICAL PROGRAMME

(Industry Days in Debrecen – including 4th ISCAMÉ and 4th Mechanical Engineering Exhibition)

Thursday, 13th of October 2016 (2-4 Ótmető, Debrecen)

- 08:30 – 16:00 **ISCAMÉ registration and coffee** – continuously (Main Hall)
- 09:00 – 17:00 **ISCAMÉ poster exhibition** (ground floor, room 9.)
- 10:00 – 13:45 **opening ceremony and talks of the Industry Days in Debrecen** (Aula and Lecture Hall U.0.02)
Zoltán SZILVÁSSY, Rector, University of Debrecen
László PAPP, Major, City of Debrecen
Edit SZŰCS, Dean, Faculty of Engineering
and partners of the Faculty of Engineering
- 10:00 – 17:00 **Industry Days in Debrecen** (Building of the Faculty of Engineering) - **visiting is free of charge.**
- 11:45 – 13:00 **lunch** (Canteen, Faculty of Engineering)
- 14:00 – 15:00 **ISCAMÉ poster session 1** (ground floor, room 9.)
- 15:00 – 16:30 **ISCAMÉ opening and plenary session** (Lecture Hall U.0.01.)
- 18:00 – 22:00 **banquet** (Main building of UD, 1 Egyetem tér) – **by pre-registration only and entrance fee is charged**

Friday, 14th of October 2016 (2-4 Ótmető, Debrecen)

- 08:30 – 14:00 **ISCAMÉ registration and coffee** – continuously (Main Hall)
- 09:00 – 16:00 **ISCAMÉ poster exhibition** (ground floor, room 9.)
- 09:00 – 15:00 **Industry Days in Debrecen** (Building of the Faculty of Engineering) - **visiting is free of charge**
- 09:00 – 10:00 **ISCAMÉ poster session 2** (ground floor, room 9.)
- 10:00 – 12:00 **company presentations** (Lecture Hall U.0.01) - **visiting is free of charge**
- 10:00 – 12:00 **ISCAMÉ sessions**
MANUFACTURING SCIENCE
MAINTENANCE AND CONDITION MONITORING
MACHINE PRODUCT AND DESIGN
MATERIALS SCIENCE AND TECHNOLOGY 1
- 11:30 – 14:00 **lunch** (Canteen, Faculty of Engineering)
- 12:40 – 12:50 **ISCAMÉ group photo** (meeting at the inner court)
- 13:00 – 16:15 **ISCAMÉ sessions**
APPLIED AND THEORETICAL MECHANICS
FLUID MECHANICS
INDUSTRIAL PROCESSES
ENGINEERING OPTIMIZATION
MATERIALS SCIENCE AND TECHNOLOGY 2

Saturday, 15th of October 2016 (Hortobágy)

- 08:30 – 16:00 **ISCAMÉ trip to Hortobágy National Park – the Puszta (world heritage)** - **by pre-registration only and entrance fee is charged**



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



DETAILED PROGRAMME OF ISCAME 2016

Thursday, 13th of October 2016 (2-4 Ótomető, Debrecen)

- 08:30 – 17:00 **ISCAME registration and coffee** – continuously (Main Hall)
09:00 – 17:00 **ISCAME poster exhibition** (ground floor, room 9.)
11:45 – 13:00 **lunch** (Canteen, Faculty of Engineering)
14:00 – 15:00 **ISCAME poster session 1** (ground floor, room 9.)
- 15:00 – 16:30 **ISCAME opening and plenary session**
(ground floor, Lecture Hall U.0.01)
Chairman: **Tamás MANKOVITS PhD**, University of Debrecen, Hungary
- 15:00 – 15:10 **Tamás MANKOVITS**
Welcoming words
15:10 – 15:30 **Gábor BOHÁCS, Angéla RINKÁCS**
Application of Industry 4.0 in the Material Handling
15:30 – 15:50 **György THALMAIER, Ioan VIDA-SIMITI, Niculina SECHER**
Asymmetric microfiltration membranes obtained by powder sedimentation
15:50 – 16:10 **Imre Norbert ORBULOV, Bálint KATONA, Gábor SZEBÉNYI**
Behaviour of metal matrix syntactic foams under cyclic loading
16:10 – 16:30 **Csaba GYENGE**
50 years research in the field of manufacturing engineering
- 18:00 – 22:00 **banquet** – by pre-registration only and entrance fee is charged
(Main building of University of Debrecen, 1 Egyetem tér, Debrecen)

Friday, 14th of October 2016 (2-4 Ótomető, Debrecen)

- 08:30 – 14:00 **ISCAME registration and coffee** – continuously (Main Hall)
09:00 – 16:00 **ISCAME poster exhibition** (ground floor, room 9.)
09:00 – 10:00 **ISCAME poster session 2** (ground floor, room 9.)
- 10:00 – 11:45 **Session MANUFACTURING SCIENCE**
(Metallographic Laboratory, 1st floor, room E.1.20)
Chairman: **Csaba GYENGE DSc**, Technical University of Cluj-Napoca, Romania
Co-chairman: **Sándor BODZÁS PhD**, University of Debrecen, Hungary
Secretary: **Péter BALSA**, University of Debrecen, Hungary
- 10:00 – 10:15 **Michal BACHRATY, Marian KRÁLIK, Marian TOLNAY, Zuzana TEKULOVÁ**
Equipment for monitoring of the properties of cutting fluids
10:15 – 10:30 **Márton MÁTÉ**
A possible modeling of the cutting geometry of the gear-hobs
10:30 – 10:45 **Ján ZÁKOPČAN, Lubomir JAVOREK**
Evaluation of feed force and torque moment during steel drilling
10:45 – 11:00 **Sándor BODZÁS**
Manufacturing analysis of grinding technology of conical worm shaft
11:00 – 11:15 **Annamária TAKÁCS, István Gábor GYURIKA**
Trends and developments on the surface- and edge quality of bioceramics
11:15 – 11:30 **Viktor ERDÉLYI, László JÁNOSI**
Smart livestock farming
11:30 – 11:45 **Kinga MORAUSZKI, Attila LAJOS**
Supplier selection methods in automotive industry



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



10:00 – 11:30 **Session MAINTENANCE AND CONDITION MONITORING**

(ground floor, room 8.)

Chairman: **Csaba HORVÁTH PhD**, Óbuda University, Hungary

Co-Chairman: **Imre KOCSIS PhD**, University of Debrecen, Hungary

Secretary: **Krisztián DEÁK**, University of Debrecen, Hungary

10:00 – 10:15 **Ferenc DÖMÖTÖR, János ÁCS, Norbert SZÖRÉNYI**

Application of on-line vibration monitoring in a rolling mill

10:15 – 10:30 **László POKORÁDI, Stanislaw DUER**

Investigation of maintenance process with Markov matrix

10:30 – 10:45 **Béla OLÁH**

The situation of maintenance services in agriculture

10:45 – 11:00 **Krisztián DEÁK, Imre KOCSIS**

Applied vibration measurement methods and data extraction for bearing fault diagnosis

11:00 – 11:15 **Krisztián DEÁK, Imre KOCSIS**

Selection of wavelet function for detection of bearing defects by Shannon entropy

11:15 – 11:30 **Csaba HORVÁTH**

Extended operating maintenance model for modern printing machines, new initiatives

10:00 – 12:00 **Session MACHINE AND PRODUCT DESIGN**

(Robert Bosch Automotive Laboratory, ground floor, room E.0.22)

Chairman: **János Péter ERDÉLYI PhD**, University of Miskolc, Hungary

Co-chairman: **Zsolt TIBA PhD**, University of Debrecen, Hungary

Secretary: **Zsolt BÉKÉSI**, University of Debrecen, Hungary

10:00 – 10:15 **György HEGEDŰS**

Computer aided product development of ball screw drive

10:15 – 10:30 **Zsolt TIBA, Dániel FEKETE-SZÚCS**

Recommendations for improving the precision of noise measuring of rolling-contact bearings

10:30 – 10:45 **László DUDÁS**

Generation and analysis of a new hourglass-like worm gearing

10:45 – 11:00 **János ERDÉLYI, János LUKÁCS, Tamás FEKETE**

Alternating current hydraulic (ACH) power drives

11:00 – 11:15 **Michaela HNILICOVÁ, Ivan CHROMEK, Richard HNILICA, Miroslav DADO**

Design of adapter for fire fighting of forest fires

11:15 – 11:30 **Géza NÉMETH, József PÉTER**

Design considerations of harmonic traction drives

11:30 – 11:45 **Marius CASVEAN, Daniel LATES, Flaviu CIOLOCA**

The design and realization of the MC manipulation structure for microfactories

11:45 – 12:00 **Siniša KUZMANOVIĆ, Milan RACKOV, Miroslav VEREŠ**

Analysis of requirements corresponding to development of modern products



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



- 10:00 – 12:00 **Session MATERIALS SCIENCE AND TECHNOLOGY 1**
(SMARTMAT Material Technology Laboratory, 4th floor, room E.4.14)
Chairman: **György THALMAIER PhD**, Technical University of Cluj-Napoca, Romania
Co-chairman: **István BUDAI PhD**, University of Debrecen, Hungary
Secretary: **Gábor BALOGH**, University of Debrecen, Hungary
- 10:00 – 10:15 **Imre KÁLLAI, Jürgen HOLZWEBER, Zoltán MAJOR**
Test method for brittleness temperature of PU elastomers by impact
- 10:15 – 10:30 **Krisztián ANDOR, András LENGYEL, Zsolt KARÁCSONYI, Bertalan BELLOVICS**
Mechanical research of carbon fiber reinforced timbers and their application
- 10:30 – 10:45 **Gábor BALOGH**
BHN measurement system development on Charpy impact testing machine
- 10:45 – 11:00 **Hayder AL-MALIKI, Gábor KALÁCSKA, Róbert KERESZTES, László ZSIDAI, Zoltán SZAKÁL**
Friction tests of different polymers tested by cold-plasma technology
- 11:00 – 11:15 **Michaela HNILICOVÁ, Jaroslav MATEJ**
Material and stress analysis of tanks for fire fighting
- 11:15 – 11:30 **Branislav ĐORĐEVIĆ, Uroš TATIĆ, Simon SEDMAK, Miloš MILOŠEVIĆ, Aleksandar SEDMAK**
Digital image correlation technique application on welded joint - advantages and disadvantages
- 11:30 – 11:45 **Simon SEDMAK, Ljubica MILOVIC, Radomir JOVICIC, Branislav DJORDJEVIC, Emina DZINDO, Milorad ZRILIC, Tasko MANESKI**
Non-contact monitoring of fatigue crack growth via digital image correlation method
- 11:45 – 12:00 **Euboslav STRAKA, Slavomíra HAŠOVÁ**
Influence of dielectric fluid on the surface quality of sintering steel after die-sinking EDM
- 12:40 – 12:50 **ISCAME group photo** (meeting at the inner court)
- 11:45 – 13:00 **lunch** (Canteen, Faculty of Engineering)
- 13:00 – 14:45 **Session APPLIED AND THEORETICAL MECHANICS**
(Metallographic Laboratory, 1st floor, room E.1.20)
Chairman: **István BÍRÓ PhD**, University of Szeged, Hungary
Co-chairman: **Sándor HAJDU**, University of Debrecen, Hungary
Secretary: **Dávid HURI**, University of Debrecen, Hungary
- 13:00 – 13:15 **Livia CVETICANIN, Dragan CVETICANIN**
Mechanical models of acoustic metamaterials
- 13:15 – 13:30 **Antonin SVOBODA, Josef SOUKUP**
Stimulation of nerve path for medical use
- 13:30 – 13:45 **László RÓNAI, Tamás SZABÓ**
Geometrically nonlinear modeling of a snap fitting process
- 13:45 – 14:00 **László ENYEDI**
Dividing box from 10 to 210
- 14:00 – 14:15 **Dávid HURI, Tamás MANKOVITS**
Incompressibility analysis of rubbers using FEM
- 14:15 – 14:30 **István BÍRÓ**
Kinematic investigation of cadaver human knee joints
- 14:30 – 14:45 **Melita KOMPOLŠEK**
An Improved coarse-fine searching approach for fast displacement measurement



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



15:00 – 16:15 **Session FLUID MECHANICS**

(Metallographic Laboratory, 1st floor, room E.1.20)

Chairman: **László BARANYI CSc**, University of Miskolc, Hungary

Co-chairman: **Ákos LAKATOS PhD**, University of Debrecen, Hungary

Secretary: **Tamás Antal VARGA**, University of Debrecen, Hungary

15:00 – 15:15 **Dániel DOROGI, László BARANYI**

Effect of gradual amplitude increase on flow around a cylinder oscillated in line

15:15 – 15:30 **Roland DÓCS, Anita JOBBIK**

Additional problem overview of fluid flow in porous systems

15:30 – 15:45 **Miha FINŽGAR, Primož PODRŽAJ**

An insight into non-contact assessment of human skin microcirculation

15:45 – 16:00 **Dániel BÁNKI, Anita JOBBIK**

Dynamic modeling of hydrocarbon reservoirs using finite difference methods and derivation of analytical formulae for easier forecasting

16:00 – 16:15 **Balázs BOTH, Zoltán SZÁNTHÓ, Róbert GODA**

Objective draught comfort investigations in a single office model room

13:00 – 16:00 **Session INDUSTRIAL PROCESSES**

(Mechanical Laboratory, ground floor, room E.0.20)

Chairman: **Tibor POÓS PhD**, Budapest University of Technology and Economics, Hungary

Co-chairman: **Lajos GULYÁS PhD**, University of Debrecen, Hungary

Secretary: **Dávid Gyula LOVADI**, University of Debrecen, Hungary

13:00 – 13:15 **Primož PODRŽAJ, Samo SIMONČIČ**

Arc welding as a control system

13:15 – 13:30 **Tamás RUPPERT, János ABONYI**

Cycle time optimization on stochastic assembly line

13:30 – 13:45 **Tomislav MERGL, Ljerka LUIĆ**

Information system for monitoring and protection of steam turbines

13:45 – 14:00 **László HÉGELY, Péter LÁNG**

Batch extractive distillation with off-cut and entrainer recycling

14:00 – 14:15 **Péter LÁNG, László HÉGELY**

Reduction of CO₂ emission with different absorbents

14:15 – 14:30 **coffee break**

14:30 – 14:45 **Tibor POÓS, Evelin VARJU**

Determination of volume decrease and air velocity at herbs drying with ambient air

14:45 – 15:00 **Tibor POÓS, Evelin VARJU, Viktória SEBESI, Viktor SZABÓ**

Determination of drying rate at herbs drying with ambient air

15:00 – 15:15 **Tibor POÓS, Viktor SZABÓ, Evelin VARJU, Viktória SEBESI**

Thermal modeling of a fluidized bed dryer

15:15 – 15:30 **Tibor POÓS, Viktória SEBESI, Evelin VARJU, Viktor SZABÓ**

Dimensionless evaporation rate at tubular artificial flow

15:30 – 15:45 **Miroslava ŤAVODOVÁ, Daniela KALINCOVÁ**

Comparison and evaluation advantages and disadvantages between conventional and unconventional cutting of material

15:45 – 16:00 **Erika SUJOVA, Helena ČIERNA**

Chosen processes improving at the production lines



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



- 13:00 – 15:45 **Session ENGINEERING OPTIMIZATION**
(Robert Bosch Automotive Laboratory, ground floor, room E.0.22)
Chairman: **Gusztáv Áron SZÍKI PhD**, University of Debrecen, Hungary
Secretary: **József MENYHÁRT**, University of Debrecen, Hungary
- 13:00 – 13:15 **Juraj SEBO**
Optimization of disassembly of end-of-life mobile phones
- 13:15 – 13:30 **Luboslav STRAKA, Slavomíra HAŠOVÁ**
Optimization of the preventive maintenance of technical equipments
- 13:30 – 13:45 **Tamás János KATONA, András VILIMI**
Design of severe accident management systems for Paks NPP
- 13:45 – 14:00 **Ferenc SPEISER, Krisztián ENISZ**
Optimization of mixed-flow grain dryers based on thermal analysis
- 14:00 – 14:15 **Uroš TATIĆ, Branislav ĐORĐEVIĆ, Simon SEDMAK, Filip VUČETIĆ, Mihajlo ARANĐELOVIĆ**
Technological and economic analyses of a different designs solutions of a pipeline supporting structure
- 14:15 – 14:30 **coffee break**
- 14:30 – 14:45 **Catalin Nicolae CALISTRU, Dan TIMOFTE**
Pendular systems - a nonconventional interdisciplinary variable structure system
- 14:45 – 15:00 **Tamás LENGYEL, Patrik PUSZTAI, Anita JOBBIK**
An innovative method for hydraulic fracturing optimization
- 15:00 – 15:15 **Attila NEMES, Gyula MESTER**
Energy efficient feasible autonomous multi-rotor unmanned aerial vehicles trajectories
- 15:15 – 15:30 **Gusztáv Áron SZÍKI, János KISS, Attila SZÁNTÓ, Tibor GÁL**
Measurement of the electromagnetic characteristics of a series wound DC motor
- 15:30 – 15:45 **Miroslava ŤAVODOVÁ, Veronika LUPTÁČIKOVÁ**
Ambient temperature for dimensional control of parts when repairing combustion engines
- 13:00 – 14:45 **Session MATERIALS SCIENCE AND TECHNOLOGY 2**
(SMARTMAT Material Technology Laboratory, 4th floor, room E.4.14)
Chairman: **Imre ORBULOV PhD**, Budapest University of Technology and Economics, Hungary
Co-chairman: **Sándor PÁLINKÁS PhD**, University of Debrecen, Hungary
Secretary: **András GÁBORA**, University of Debrecen, Hungary
- 13:00 – 13:15 **Balázs VARBAI, Kornél MÁJLINGER**
Effects of high concentration hydrogen during GMA welding of duplex stainless steels
- 13:15 – 13:30 **Tomas CSICSO, Pavol SVEC**
Nd. YAG. laser welding of steel joint HC660X-HX340LAD
- 13:30 – 13:45 **Melinda GODZSÁK, Gábor LÉVAI, Kálmán VAD, Attila CSÍK, József HAKL, Tibor KULCSÁR, George KAPTAY**
Hot-dip galvanizing in Zn-Mn bath
- 13:45 – 14:00 **Virgil FLORESCU, Lucian CAPITANU, Liliana-Laura BADITA**
Testing adhesion of the coating with thin layers by the inclined cyclic impact
- 14:00 – 14:15 **Branko SKORIC, Aleksandar MILETIC, Pal TEREK, Lazar KOVACEVIC, Dragan KUKURUZOVIC**
Ion beam modification of hard coatings synthesized by PVD and IBAD
- 14:15 – 14:30 **András MOLNÁR, Lajos FAZEKAS, Zsolt CSABAI, Sándor PÁLINKÁS**
Properties of cold gas dynamic sprayed coatings
- 14:30 – 14:45 **András MOLNÁR, Lajos FAZEKAS, Zsolt CSABAI, Sándor PÁLINKÁS**
Durability improving of agricultural machines parts with hard coatings



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



ISCAME poster exhibition (ground floor, room 9.)

Samo SIMONČIČ, Primož PODRŽAJ

Modified inverse compositional algorithm for applications with significant lighting variations

Tsanko KARADZHOV, Dimcho PULOV

Determining of the resonant transverse oscillations of a beam fixed at one end

Sándor HAJDU

Dynamic modeling of single-mast stacker cranes under varying loading conditions

Tamás ANTAL, László SIKOLYA

Thin-layer drying characteristics of plum during hybrid- and freeze-drying

József MENYHÁRT, Zsolt BÉKÉSI

Fuzzy logic and Support Vector Machine in industrial applications

Viktória MIKÁCSÓ, Zoltán SIMÉNFALVI, Gábor L. SZEPESI

Investigation of deflector plates in case of gas explosion

József SÁROSI

Influence of diameter and length on force developed by pneumatic muscle actuator

Róbertné KOVÁCS, Gábor KESZTHELYI-SZABÓ, Péter SZENDRŐ

Dielectric parameters of meat industry wastewater

Attila GARAMI, Pál TÓTH

Optimization of an industrial scale grate-fired biomass boiler based on machine vision

Kinga FEHÉR BOTH

Heat transfer conditions in scraped surface heat exchangers

Miriam SEFCIKOVA, Renata NOVAKOVA

Approach to development, measurement and evaluation the intellectual capital in its industrial processes

Kremena MARKOVA

The visual language of a form

Ödön János SOÓS, Noémi Rita SOÓS

Design of a CNC router that can be mounted on an EDM equipment for on board electrode machining

Anton-Gheorghe POP-SZOVÁTI, Csaba GYENGE, Marian BORZAN

Optimization methods of the drives for mechanical presses

András GÁBORA, Attila MAGYARI, Tamás Antal VARGA, Dávid BALÁZS, László LEMPERGER, Tamás IGAZ, István DIÓSI, Krisztián József VESZELSZKI, Attila SIMON, Gábor JAKABÓCZKI, Anikó Barbara, NÉMETH, Viktória Ilona KOVÁCS, Gyula Dávid LOVADI, Krisztián László ZILAHÍ

Prototype battery electric car development for Shell Eco-marathon competition

Zsolt BÉKÉSI, László JÁNOSI

Compressed air as a possible hybrid vehicle drive

Olimpia COROIAN, Csaba GYENGE

Study on operating risks in diesel engines at 060-DA locomotives

Stefan KARTUNOV, Krasimir DRUMEV, Iliyan STOEV

Information technologies management system for medium-sized companies in mechanical engineering

Alpár BELÉNYI, Csaba GYENGE, Gheorghe ACHIMAS

Specific aspects concerning of components of refrigerators



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



Kornél MÁJLINGER, Alexandra BORÓK, Russo Spena PASQUALE, Balázs VARBAI

TIG welding of advanced high strength steel sheets

Joldes Nicolae TRAIAN, Csaba GYENGE

Study of technical systems and of integrated waste management activities of processing and storing the municipal waste

Noémi Rita SOÓS, Ödön János SOÓS

Parameters and strategies that influence the quality of the mold surface in HSC process

Renáta MONOSTORI

3D measurement of acetabular

Péter CSAVAJDA

Vibration testing in the evaluation of packaging performance

Péter BÖRÖCZ

Evaluation of truck vibration levels for packaging testing purposes in Hungary

Kata VÖRÖSKŐI

Packaging practices in automotive engine supply chains

Zoltán HAGYMÁSSY, Ágnes BATTÁNE GINDERT-KELE, Sándor PÁLINKÁS

Examination of the fertilizer distributor using GPS guidance system

Abishek MODI

Merging into platoons

Sándor PÁLINKÁS, Lajos FAZEKAS, Ágnes BATTÁNE GINDERT-KELE, András MOLNÁR, Dávid KONYHÁS

Improvement of tillage elements of agricultural machinery

Tamás Antal VARGA

Digital image analysis of metal foam specimens

Jana BOHOVICOVA, Lucia BONOVA, Juraj HALANDA, Marcel MESKO

Fundamental plasma processes in the next generation of combined PIII-HiPIMS implantation and deposition technique



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



Saturday, 15th of October 2016 (Hortobágy)

08:30-16:00 **ISCAME trip to Hortobágy National Park – the Puszta (world heritage)**
by pre-registration only and entrance fee is charged

08:30 **Gathering** (at the dormitory of the Faculty of Engineering, 2-4 Ótemető, Debrecen)

08:45 **Departure** (by rented bus)

09:30-12:30 **Visiting of the Puszta Animal Park and the Hortobágy Wild Animal Park**

Puszta Animal Park: traditional Hungarian breeds, Puszta exhibition (“nyúlütés, bográcsverés, pányvadobás, patkódobás, lápon-járás, gólyalábak”)

Hortobágy Wild Animal Park – by safari-car: ancient wildlife of Hungarian Puszta (wolves, jackals, wild horses, vultures, wildcats, foxes, white-tailed eagles, cranes, great white egrets and more)

12:30-14:00 **Hortobágy gastronomy with the Chef's recommendations** (Hortobágy Inn)

cold appetizers: Hortobágy biosalami, Mangalica sausage and bacon

soup: Fish soup (with catfish and carp from the Hortobágy Great Fishponds)

hot appetizer: Hortobágy pancake

main course: Grey cattle stew with toasted egg barley

dessert: apple strudel

Hungarian palinka and refreshments

(vegetarians can pick from the menu)

14:00-15:00 **Museums visiting** (Inn museum, Pásztor museum, Craftman exhibiton)

16:00 **Arrival** (Faculty of Engineering, Debrecen)





INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



INFORMATION TO CHAIRMEN, TO PRESENTERS AND TO VISITORS

Chairmen, Presenters and on-line registered Visitors are invited for lunches and coffees, but it is connected to registration at the registration desk at the Main Hall 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 Exhibiton will be opened on Thursday 13 October, 9:00 and can be visited until the end of the ISCAME (14 October, 16:00). It means from 9:00 onwards posters can be put on display (Location: Faculty of Engineering, ground floor, room 9.).
- Poster sessions are scheduled on 13 October, from 14:00-15:00 and 14 October, from 9:00-10:00. 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

Judit BAK, administrator

Phone: +3652415155/77776

E-mail: iscame@eng.unideb.hu

Department of Mechanical Engineering

Faculty of Engineering, University of Debrecen

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

Website: <http://eng.unideb.hu/userdir/gepesz/iscame/>



INTERNATIONAL SCIENTIFIC CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING

13-15 October 2016, Debrecen, Hungary



COMPANIES LIST

4th Mechanical Engineering Industrial Exhibition, Debrecen

Company name	Website	Location
Aventics Hungary Kft.	www.aventics.hu	Eger
Coloplast Hungary Kft.	www.coloplast.hu	Nyírbátor
Diehl Aircabin Hungary Kft.	www.diehl.com	Nyírbátor
Eagle Ottawa Hungary Kft.	www.eagleottawa.com	Szolnok
eCon Engineering Kft.	www.econengineering.com	Budapest
Electrolux Lehel Kft.	www.electrolux.hu	Nyíregyháza
Enterprise Communications Kft.	www.enterprise-group.hu	Budapest
EuroSolid Kft.	www.eurosolid.hu	Budapest
FAG Magyarország Ipari Kft.	www.schaeffler.hu	Debrecen
FlexiForce Hungary Kft.	www.flexiforce.com/hu	Debrecen
FlexLink Systems Kft.	www.flexlink.com	Budapest
Grimas Kft.	www.grimas.hu	Budapest
HAJDU Autotechnika Ipari Zrt.	www.hajduautort.hu	Téglás
HAJDU Hajdúsági Ipari Zrt.	www.hajdurt.hu	Téglás
Hoya Magyarország Zrt.	www.hoya.hu	Mátészalka
Lego Manufacturing Kft.	www.lego.com	Nyíregyháza
MSK Hungary Gépgyártó Bt.	www.msk.hu	Nyírbátor
Nyomda-Technika Kft.	www.nyt.hu	Debrecen
Robert Bosch Automotive Steering Kft.	www.bosch-automotive-steering.com	Eger
Seco-Tools Kft.	www.secotools.com	Budapest
SPM Instrument Budapest Kft.	www.spminstrument.com	Budapest
Szimikron Ipari Kft.	www.szimikron.com	Kecskemét
TAKATA Safety Systems Hungary Kft.	www.takata-miskolc.hu	Miskolc
Teva Gyógyszergyár Zrt.	www.teva.hu	Debrecen
Tranzit-Food Kft.	www.goldenfood.info	Debrecen
TRUMPF Hungary Kft.	www.hu.trumpf.com	Budapest
T-Drill Oy	www.t-drill.fi	Laihia (FI)
Unilever Magyarország Kft.	www.unilever.hu	Nyírbátor
Ventifilt Légttechnikai Zrt.	www.ventifilt.hu	Hajdúnánás
ZF Hungária Kft.	www.zf.com	Eger