



University of Miskolc,
Hungary



**MultiScience - XXXIII. microCAD
International Multidisciplinary
Scientific Conference
23-24 May 2019**

PROGRAMME

WELCOME ADDRESS FROM THE RECTOR

The University of Miskolc, which is the legal successor of the Academy of Mining and Metallurgy (Bergschule) founded in 1735 in Selmechánya (Banska Stiavnica), extends its greetings to the Reader on the occasion of organising the *MultiScience - XXXIIIrd microCAD International Multidisciplinary Scientific Conference*.

Over the 32 years of the annual series, this international conference has become a significant meeting of professionals at the University of Miskolc.

The scope of this conference is exceptionally wide. Recognised experts, young researchers, doctoral candidates in engineering, natural, economic, legal and health sciences, as well as in arts and humanities present and discuss their fresh research results. Having completed profound scientific investigations, all the active participants should be proud of their achievements. The topics have been organised in different symposia corresponding to the established centres of excellence at the University of Miskolc.

The written form of the contributions will enrich the archives of the conference available at the web-site and on the CD proceedings, but selected articles will be published also in our internationally indexed thematic journals. It is also our hope that the professional and personal relations can be further developed during the sessions and the social events, resulting in stronger relations of the participants and their institutions.

More than 8000 presentations from about 15 different countries, more than 40 thousand pages of publications and many agreements signed between universities and numerous academic and research proposals witness the achievements of the last 32 years.

I recommend you the program of the *MultiScience - XXXIIIrd microCAD International Multidisciplinary Scientific Conference* in the hope that the presentations, discussions and social events will give you a golden opportunity to cherish and widen your professional relations. I truly believe that your presence, either as a proud speaker or as an interested participant, will contribute to the success of this great scientific event.

Prof. András TORMA
Rector of the
University of Miskolc

SCIENTIFIC COMMITTEE OF THE CONFERENCE

Chairman:	Tamás KÉKESI	Vice-Rector for International Relations and Scientific Affairs
Members:	Péter SZŰCS	Dean of the Faculty of Earth Science and Engineering
	Árpád Bence PALOTÁS	Dean of the Faculty of Materials and Metallurgical Engineering
	Zoltán SIMÉNFALVI	Dean of the Faculty of Mechanical Engineering and Informatics
	Csilla CSÁK	Dean of the Faculty of Law
	Mariann SOMOSI VERES	Dean of the Faculty of Economics
	Mária KOVÁCS ILLÉS	Dean of the Faculty of Humanities
	Emőke KISS-TÓTH	Dean of the Faculty of Health Sciences

DETAILED PROGRAMME

of the MultiScience - XXXIII. microCAD International Multidisciplinary Scientific Conference

University of Miskolc, 23-24 May, 2019

23 May (Thursday) 2019

10³⁰ – 10⁴⁰

Opening address and remarks

Tamás KÉKESI professor, Vice-Rector of the University of Miskolc

Venue: Lecture hall XXXVII. between Bld. A/3-A/4 (1st floor)

PLENARY SESSION

Venue: Lecture hall XXXVII. between Bld. A/3-A/4 (1st floor, accessible from the bridge)

10⁴⁵ – 11¹⁵

Stanislav KMET' professor, Rector of the Technical University of Kosice, Slovakia

Analyses of Cable Domes with Action Members

11¹⁵ – 11⁴⁵

László MONOSTORI academician, Director of the Institute for Computer Science and Control, Hungarian Academy of Sciences, Hungary

Industrial Digitalisation and Beyond

11⁴⁵ – 12⁰⁰

Break

12⁰⁰ – 13³⁰

Reception

Venue: Foyer of Lecture Hall No. XXXVII.

13³⁰ – 14⁰⁰

Break

14⁰⁰ – 18⁰⁰

Presentations in the parallel sessions

Venue: as listed in the section table

19⁰⁰ – 22⁰⁰

Gala Dinner, Awards Ceremony and Social Networking

Venue: University Dining Hall (*Entry: with invitation cards*)

24 May (Friday) 2019

9⁰⁰ - 12⁰⁰

Presentations in the parallel sessions

Venue: as listed in the section table

REGISTRATION FOR THE CONFERENCE

Venue: The Registration Desk is opposite to the entrance of the Main Building (A/4.)

Registration is open:

22 May (Wednesday) 2019	---	13 ⁰⁰ - 17 ⁰⁰
23 May (Thursday) 2019	8 ⁰⁰ - 12 ³⁰	13 ³⁰ - 16 ⁰⁰
24 May (Friday) 2019	8 ⁰⁰ - 11 ⁰⁰	---

ORGANISATIONAL COMMITTEE OF THE CONFERENCE

The organiser of the Conference is the *UNIVERSITY OF MISKOLC*

Address of the Scientific and Organisational Committee:
University of Miskolc, Rector's Office, International Affairs Team
H-3515 Miskolc-Egyetemváros
Phone: (36-46) 565-111/ ext. 1016
e-mail: microcad@uni-miskolc.hu
http://multiscience.uni-miskolc.hu

SESSIONS AND VENUES OF THE CONFERENCE

Sign	Name	Venue	
Plenary	Plenary session	Lecture hall XXXVII.	Bld. A/3-A/4
	Honorary Session	FINTELLIGENCE Centre	Bld. A/4. 3 rd floor
A	Environment- and Energy Management, Earth Science	Lecture hall VI.	Bld. A/1. 1 st floor, 101.
B	Applied Materials Science and Nanotechnologies	Room 312.	Bld. B/1. 3 rd floor
C1	Natural Sciences	Room 301.	Bld. A/1 3 rd floor
C2	Informatics and automation	Room 114.	Institute of Information Sciences, 1 st floor
D1	Innovative Mechanical Engineering Technologies	Room 1.	Bld. C/1. ground floor
D2	Innovative Machine and Product Design	Room 439.	Bld. A/4. 4 th floor
D3	Energy and Chemical Engineering	Room 206.	Bld. A/3. 2 nd floor
E	Legal Sciences	Faculty of Law	Bld. A/6. ground floor, 31.
G	Humanities and Social Sciences	FINTELLIGENCE Centre	Bld. A/4. 3 rd floor
I	Eötvös Symposium	Hungarian Academy of Sciences, Miskolc Academic Committee	3 Erzsébet Square, Miskolc, 3530

70th ANNIVERSARY OF PROFESSOR DR. MIKLÓS TISZA

HONORARY SESSION

VENUE: FINTELLIGENCE Centre, Bld. A/4. 3rd floor

Chairman: János LUKÁCS *professor*

Secretary: Péter Zoltán KOVÁCS *assoc.professor*

Date: May 23, 2019

- 14.00 János Lukács University of Miskolc, Hungary
Laudation for Professor Miklós Tisza
- 14.10 Imre Czinege Széchenyi István University, Hungary
Evaluation of Local Forming Inhomogenities by Digital Optical Investigations
- 14.30 György Krállics University of Miskolc, Hungary
Modelling of Forming Processes
- 14.50 Zsolt Lukács University of Miskolc, Hungary
Overview of Status of Autoform in Hungarian Automotive Industry
- 15.10 Zoltán Gácsi, Ádám Radányi University of Miskolc, Hungary
Formation of Tin Whiskers in Lead-Free Soldering Alloys
- 15.30 József Danyi John von Neumann University, Hungary
Welcome and greetings
- 15.45 József Sárvári University of Miskolc, Hungary
Stories on the Occasion of 70th Anniversary of Professor Miklós Tisza
- 16.00 *Summary*

SUSTAINABLE NATURAL RESOURCES MANAGEMENT SYMPOSIUM

Chairman: Norbert Péter SZABÓ *assoc.professor*

A: ENVIRONMENT- AND ENERGY MANAGEMENT, EARTH SCIENCE

VENUE: Lecture hall VI., Bld. A/1. 1st floor, 101.

Chairman: Norbert Péter SZABÓ *assoc. professor*

Secretary: Gabriella FEDERER KOVÁCS *univ. lecturer*

Date: May 23, 2019

- 14.00 **Iosif Andras, Iosif Dumitrescu, Marin Silviu Nan, Cosmin Vitan** University of Petrosani, Romania
Study on the Technical Condition of the Sheave Wheels in the Hoist Tower of Slanic Prahova Salt Mine
- 14.20 **Ádám Erdős** University of Miskolc, Hungary
Effect of the Starch Addition on the Settling of Tisza River Mud
- 14.40 **Daniel Kibirige¹, Endre Dobos¹, Károly Kovács¹, Lajos Gál-Szabó¹, András Dobos¹, Bálint Pinezits¹, Drew Hemment²** University of Miskolc, Hungary¹, University of Dundee, United Kingdom²
Temporal Soil Moisture Data Estimation Using Citizen Observatory Data
- 15.00 **Iosif Kovacs, Marin Silviu Nan, Daniel Cosmin Vitan, Aurelian Nicola** University of Petrosani, Romania
Study of Mechanical Rock Excavation for Settling a Main Gasoduct Along a Mountain Trail Segment
- 15.20 **Nóra Papné Halyag, Gábor Mucsi** University of Miskolc, Hungary
Geopolymer Composites
- 15.40 **Péter Pecsmány¹, Endre Dobos¹, János Vágó¹, Peter Blištan², Martina Zelenáková²** University of Miskolc, Hungary¹, Technical University of Košice, Slovakia²
Flood- and Logistical Modeling in the Hernád Watershed
- 16.00 *Break*
- 16.10 **Péter Pecsmány, András Hegedűs, János Vágó** University of Miskolc, Hungary
Landslide Susceptibility Mapping Using GIS-Based Methods in the Bükkalja (Hungary)
- 16.30 **Buta Singh** University of Miskolc, Hungary
CFD Simulation of Mixing by Maxblend Impeller in a Lab-Scale Anaerobic Digester
- 16.50 **Ion Dosa** University of Petrosani, Romania
Optimization of Underground Compressed Air Network
- 17.10 **Quyen Van Trinh, Sándor Nagy, Gábor Mucsi** University of Miskolc, Hungary
Preliminary Geopolymerization Experiments of Vietnamese Fly Ash and Slag
- 17.30 **Ágnes Horváth** University of Miskolc, Hungary
Electronic Waste Resource Estimation and Recycling
- 17.50 *Summary*

APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY SYMPOSIUM

Chairman: Tamás TÖRÖK *professor*

B: APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY

VENUE: Room 312, Bld. B/1. 3rd floor

Chairman: Tamás TÖRÖK *professor*

Secretary: Balázs HEGEDŰS *student*

Date: May 24, 2019

9.00 **Hamid Lahmaidi, Péter Baumli, George Kaptay** University of Miskolc, Hungary
Wettability of Carbon surfaces by CsNO₃-NaNO₃ Molten salt

9.20 **Hanna Zakiyya, Tamás Kékesi** University of Miskolc, Hungary
Potentiodynamic Characteristics of Zinc Elektrodeposition from Chloride Solutions

9.40 **István Illés, Balázs Hegedűs, Tamás Kékesi** University of Miskolc, Hungary
The Effect of Mg-Content on the Efficiency of Metal Recovery by the Thermo-Mechanical Treatment of Aluminium Melting Dross

10.00 **Ákos Kiss, Viktor Csókai** Borsod-Bos 2004 Ltd., Hungary
Development of Innovative, Lighting Pavings by Researching Luminescent Additives and Developing Their Unique Manufacturing Technology

10.20 **István Illés, Meriem Sassi, Hanna Zakiyya, Tamás Kékesi** University of Miskolc, Hungary
The Fundamental Kinetic Characteristics of Aqueous Dissolution of Chloride and Fluoride Salts from Secondary Aluminium Dross

10.40 *Break*

APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY SYMPOSIUM

Chairman: Tamás TÖRÖK *professor*

B: APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY

VENUE: Room 312, Bld. B/1. 3rd floor

Chairman: Tamás TÖRÖK *professor*

Secretary: Balázs HEGEDŰS *student*

Date: May 24, 2019

- 11.00 László Gyura¹, Gergely Nacsá² Linde Gáz Magyarország Zrt¹, Kapos Atlas Gépgyár Kft², Hungary
Effect of Flame Straightening on Material Properties of Q+T High Strength Steels
- 11.20 Gábor Szabó, Tamás Mikó, Sándor Kovács University of Miskolc, Hungary
Comparison of Different Plating Technology of Bonding Properties of Multilayer Aluminium Sheets
- 11.40 Alsalamah Bassel, Laszlo Kuzsella, Zsolt Lukacs University of Miskolc, Hungary
Testing for Susceptibility to Hot Cracking on Gleeble™ 3500 Physical Simulator
- 12.00 Sándor Kovács, Gábor Szabó University of Miskolc, Hungary
Characterization of Complex Optimization of Multistep Wire Drawing Based on a Specific Industrial Technology
- 12.20 Yassine Chahboub¹, Szabolcs Szávai^{1,2}, Zoltán Bézi² University of Miskolc¹, Bay Zoltan Nonprofit Ltd for Applied Research², Hungary
Determination of GTN Parameters of Sent Specimen During Ductile Fracture
- 12.40 Szabolcs Szávai^{1,2}, Zoltán Bézi², Sándor Kovács² University of Miskolc¹, Bay Zoltan Nonprofit Ltd for Applied Research², Hungary
Numerical Determination of Carburized Rolling Cycle Fatigue Test Specimen's Subsurface Metallographical and Mechanical Properties
- 13.00 Amer Karnoub University of Miskolc, Hungary
Buckling Resistance of Cylinders Made of Textile Composite Material
- 13.20 *Summary*

LOGISTICS, INFORMATICS AND MECHATRONICS SYMPOSIUM

Chairman: Béla ILLÉS *professor*

C1: NATURAL SCIENCES

VENUE: Room 301., Bld. A/1. 3rd floor, 301

Chairman: Béla PARIPÁS *professor*

Secretary: Miklós BÉRES *lecturer*

Date: May 23, 2019

- 14.00 József Turi University of Miskolc, Hungary
Almost Sure Functional Limit Theorems for Random Fields
- 14.20 György Vikor, Nikolett Hegedüs Guardian Orosháza Kft., Hungary
Guardian ClarityTM: Anti Reflective Physical Vapor Deposition Coating on Large Area Glass Surface
- 14.40 László Ujfaludi¹, Erzsébet Csonka² Eszterházy Károly University¹, Harlequin Puppet Theatre Eger², Hungary
Optical Illusions in 3D - On the Trace of Palladio
- 15.00 József Vida Eszterházy Károly University, Hungary
Report on the 10 Years of a National Science Contest "Magic Tower of Eger"
- 15.20 *Break*
- 15.40 Izabella Julia Benczik¹, Judit Busi², Tamás Attila Palkó³ Eszterházy Károly University Eger¹, Tiszaföldvári Kossuth Lajos Általános Iskola², László Gyula Gimnázium és Általános Iskola³, Hungary
Best Practices in Computer Aided Physics Education in Hungary
- 16.00 Nóra Kucska, Zsolt Gulácsi University of Debrecen, Hungary
Many-Body Spin-Orbit Coupling in Two Dimensional Correlated Itinerant Systems in the Presence of External In-Plane Magnetic Fields
- 16.20 Béla Paripás, Béla Palásthy, János Majár, Miklós Béres University of Miskolc, Hungary
Measurement of Building Vibrations by Laser Interferometric Methods
- 16.40 Miklós Béres, János Majár, Endre Kovács University of Miskolc, Hungary
Effect of Different Supports on the Systematic Errors in Laser Doppler Measurements
- 17.00 Beata Borodavko, Béla Illés, Ágota Bányai University of Miskolc, Hungary
Logistics Networks in Cluster Organisation
- 17.20 *Summary*

LOGISTICS, INFORMATICS AND MECHATRONICS SYMPOSIUM

Chairman: Béla ILLÉS *professor*

C2: INFORMATICS AND AUTOMATION

VENUE: Room 114, Institute of Information Sciences, 1st floor

Chairman: László KOVÁCS *assoc. professor*

Co-chairman: Zsolt TÓTH *senior lecturer*

Secretary: Anita AGÁRDI *research fellow*

Date: May 24, 2019

- 9.00 László Árvai Bay Zoltán Nonprofit Ltd. for Applied Research, Hungary
Fingerprint Data Collection Using Autonomous Robot Vehicle for Indoor Localization System
- 9.15 Szabina Zékány Bay Zoltán Nonprofit Ltd. for Applied Research, Hungary
Step-Detection Algorithm for Indoor Localization System Using Mobile Phone Sensors
- 9.30 Dávid Bozó Bay Zoltán Nonprofit Ltd. for Applied Research, Hungary
Data Collector Application for Indoor Navigation System
- 9.45 Dániel Szöllösi Bay Zoltán Nonprofit Ltd. for Applied Research, Hungary
Telemedicine Systems
- 10.00 Máté Ternay Bay Zoltán Nonprofit Ltd. for Applied Research, Hungary
Welding Point Optimization
- 10.15 Sándor Bácsi, Gergely Mezei Budapest University of Technology and Economics, Hungary
Validated Visual Modeling of Multilayers in DMLA
- 10.30 *Break*
- 11.00 Elke Glistau, Norge Isaias Coello Machado Otto von Guericke University Magdeburg, Germany¹,
Central University "Marta Abreu" of Las Villas, Cuba²
Logistics 4.0 - Basics, Ideas and Useful Methods
- 11.15 Szilvia Erdős, Bence Kóvári Budapest University of Technology and Economics, Hungary
Genetic Algorithm Based Solution for Final Exam Scheduling
- 11.30 Benedek Pintér, Bence Kóvári Budapest University of Technology and Economics, Hungary
A Progressive Approach to the Employee Scheduling Problem
- 11.45 Mohammad Saleem, Bence Kóvári Budapest University of Technology and Economics, Hungary
Survey of Signature Verification Databases
- 12.00 Cintia Lia Szücs, Bence Kóvári Budapest University of Technology and Economics, Hungary
The Effect of Feature Selection on DTW Based Online Signature Verification
- 12.15 *Summary*

INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

Chairman: Károly JÁRMAI *professor*

D1: INNOVATIVE MECHANICAL ENGINEERING TECHNOLOGIES

VENUE: Room 1, Bld. C/1, ground floor 1.

Chairman: Zsolt MAROS *assoc. professor*

Secretary: Viktória FERENCSEK *PhD student*

Date: May 23, 2019

- 14.00 **Mohammad Zaher Akkad, Csaba Felhő** University of Miskolc, Hungary
Effect of Depth of Cut and Feed Rate on the Forces in Face Milling
- 14.20 **Viktoria Ferencsik, Gyula Varga** University of Miskolc, Hungary
Examination of the Change in Surface Micro-Hardness of Burnished Aluminium Alloy Components
- 14.40 **Tamás Makkai** University of Miskolc, Hungary
Effect of Cutting Parameters in Face Milling
- 15.00 **Antal Nagy, János Kundrák** University of Miskolc, Hungary
Effect of Cutting Speed on Surface Roughness: Face Milling of Steel with a Parallelogram Insert
- 15.20 *Break*
- 15.40 **Ksenia Rumian, Wojciech Zębala** Cracow University of Technology, Poland
Optimization of Processing of Inconel 718 Sintered Alloy
- 16.00 **Raghawendra Sisodia, Marcell Gáspár** University of Miskolc, Hungary
Investigation of Electron Beam Welding of AHSS by Physical and Numerical Simulation
- 16.20 **István Sztankovics** University of Miskolc, Hungary
FEM Analysis on the Impact Conditions of the Insert in Face Milling
- 16.40 **Haidar Faisal Helal Mobark, János Lukács** University of Miskolc, Hungary
Connection Among the Parameters of the Manson-Coffin, the Basquin and the Paris-Erdogan Equations
- 17.00 *Summary*

INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

Chairman: Károly JÁRMAI *professor*

D2: INNOVATIVE MACHINE AND PRODUCT DESIGN

VENUE: Room 439, Bld. A/4. 4th floor, 439.

Chairman: Attila BAKSA *assoc. professor*

Co-Chairman: Zoltán VIRÁG *assoc. professor*

Secretary: József Ákos LENGYEL *lecturer*

Date: May 23, 2019

- 14.00 Károly Jármai¹, Stanislav Kmet'² University of Miskolc, Hungary¹, Technical University of Kosice, Slovakia²
The Effect of Optimization on the Design of Steel Structures
- 14.20 Alaa Abdulzahra Deli Al-Fatlawi, Károly Jármai, György Kovács University of Miskolc, Hungary
Structural Optimization of a Sandwich Panels Design for Minimum Weight Shipping and Airplane Containers
- 14.40 Saad Alsarayefi, Hazim Ghafil, Károly Jálícs, Bognár Gabriella Vadászné University of Miskolc, Hungary
Optimum Fiber Size of a Glass Fiber - Epoxy Composite
- 15.00 Hazim Ghafil, Károly Jármai University of Miskolc, Hungary
On Performance of ED7500 and Lab-Volt 5150 5DOF Manipulators: Calibration and Analysis
- 15.20 Ákos József Lengyel, István Ecsedi, Attila Baksa University of Miskolc, Hungary
Torsion of Cylindrically Orthotropic Composite Bar with Cross Section of a Sector of Solid Circle
- 15.40 *Break*
- 16.00 Ákos József Lengyel, István Ecsedi, Attila Baksa University of Miskolc, Hungary
Determination of the Prandtl's Stress Function for Non-Warping Anisotropic Cross Section
- 16.20 Barhm Mohamad¹, Karoly Jalics¹, Andrei Zelentsov² University of Miskolc, Hungary¹, Bauman Moscow State Technical University, Russia²
Investigation and Optimization of the Acoustic Performance of Formula Student Race Car Intake System Using Coupled Modeling Techniques
- 16.40 Szilárd Nagy, Károly Jármai University of Miskolc, Hungary
Massively Parallel Flower Pollination Algorithm
- 17.00 Zoltán Virág, Sándor Szirbik University of Miskolc, Hungary
Natural Frequencies and Mode Shapes of Optimized Stiffened Plates
- 17.20 Márton L. Kiss University of Miskolc, Hungary
Hand-Drawn Characters Sensing with Accelerometer
- 17.40 *Summary*

INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

Chairman: Károly JÁRMAI *professor*

D3: ENERGY AND CHEMICAL ENGINEERING

VENUE: Room 206, Bld. A/3. 2nd floor, 206
Chairman: Gábor L. SZEPESEI *assoc. professor*
Co-Chairman: László KÖNÖZSY *senior lecturer*
Secretary: Máté PETRIK *PhD Student*

Date: May 23, 2019

- 14.00 **Noureddine Guellouh, Zoltán Szamosi, Zoltán Simenfalvi** University of Miskolc, Hungary
Trapped Vortex Combustor for Modern Gas Turbine Engines
- 14.20 **Viktória Kállai, Gábor L. Szepesi, Péter Mizsey** University of Miskolc, Hungary
Propylene-Propane Rectification Column's Examination
- 14.40 **Mohamad Klazly, Gabriella Bognár** University of Miskolc, Hungary
Computational Fluid Dynamic Simulation of Laminar Flow Over a Flat Plate
- 15.00 **Viktória Mikáczó, Gábor L. Szepesi** University of Miskolc, Hungary
Phenomenological Modeling of Gas Explosion in Closed Vessel
- 15.20 **Máté Petrik** University of Miskolc, Hungary
A Review Article About the Thermal Runaway Mechanism of Lithium Based Batteries
- 15.40 *Break*
- 16.00 **Tamás Pusztai, Zoltán Szamosi** University of Miskolc, Hungary
Recycling of Lithium Batteries
- 16.20 **Tamás Pusztai** University of Miskolc, Hungary
Study of Backpressure Values of Direct Spring Loaded Safety Valves
- 16.40 **Bernadett Spisák¹, Szabolcs Szávai²** University of Miskolc¹, Bay Zoltán Nonprofit Ltd. for Applied Research², Hungary
Mechanisms of Stress Corrosion Cracking
- 17.00 **Jamie F. Townsend, László Könözsy, Karl W. Jenkins** Cranfield University, Great Britain
High-Order Numerical Methods for Relativistic Hydrodynamics: Part I. Theory and Methodology
- 17.20 **Jamie F. Townsend, László Könözsy, Karl W. Jenkins** Cranfield University, Great Britain
High-Order Numerical Methods for Relativistic Hydrodynamics: Part II. The Relativistic Richtmyer-Meshkov Instability
- 17.40 *Summary*

LEGAL SCIENCES SYMPOSIUM

Chairman: Zoltán VARGA *assoc. professor*

E: LEGAL SCIENCES

VENUE: Faculty of Law, Bld. A/6. ground floor 31.

Chairman: Zoltán VARGA *assoc. professor*

Secretary: Judit JACSÓ *assoc. professor*

Date: May 23, 2019

- 14.00 **Ágnes Váradi** Hungarian Academy of Sciences Centre for Social Sciences, Hungary
Access to Justice in Constitutional Court Proceedings: Germany
- 14.15 **Magdolna Vallasek** Sapientia Hungarian University of Transylvania, Romania
Turning and Returning – the Recent Legislative Changes of the Romanian Labour and Social Security Law
- 14.30 **Tivadar Dezse** University of Miskolc, Hungary
Rules of Calculating Old Age Pension on the Hungarian Pension System
- 14.45 **Éva Erdős, Lilla Nóra Kiss** University of Miskolc, Hungary
Double Taxation and Double Non-Taxation as the New Tendencies of EU e-Tax Law
- 15.00 **István Olajos** University of Miskolc, Hungary
New Tendencies Practice of Courts About Transfer and Use of Agricultural and Forestry Act
- 15.15 **Hilda Tóth** University of Miskolc, Hungary
Information on the Conditions of Employment in Non-Traditional Forms of Work
- 15.30 **Zoltán Rác** University of Miskolc, Hungary
He for She or Equal Pay for Equal Work
- 15.45 *Break*
- 16.00 **Gábor Mélypataki** University of Miskolc, Hungary
Collision of Interests and Values in the Economic Sphere - Basic Idea of the Whistleblowers' Labour Protection in the USA and Certain European Countries
- 16.15 **Edit Sápi** University of Miskolc, Hungary
Certain Issues of Invlidity of Copyright Licence Agreements
- 16.30 **Zsolt Czékmann, Balázs Szabó, Gergely Cseh, Evelin Ritó** University of Miskolc, Hungary
Digital Visibility of Micro-Municipalities in a Convergence Region - Case Study
- 16.45 **Zsolt Czékmann, Evelin Ritó, Gergely Cseh, Balázs Szabó** University of Miskolc, Hungary
Does the Municipality Have a Digital Footprint?
- 17.00 **Ágnes Juhász** University of Miskolc, Hungary
The Legal Framework of Autonomous Driving in Germany
- 17.15 *Summary*

LEGAL SCIENCES SYMPOSIUM

Chairman: Zoltán VARGA *assoc. professor*

E: LEGAL SCIENCES

VENUE: Faculty of Law, Bld. A/6. ground floor 31.

Chairman: Zoltán VARGA *assoc. professor*

Secretary: Judit JACSÓ *assoc. professor*

Date: May 24, 2019

- 9.00 **Jacsó Judit** University of Miskolc, Hungary
New Development of the Fight Against Money Laundering in the EU
- 9.15 **Andrea Jánosi** University of Miskolc, Hungary
New Perspectives of Criminal Data Exchange in the European Union
- 9.30 **Erika Varadi-Csema** University of Miskolc, Hungary
Disability and Information Society - Legal Aspects
- 9.45 **Réka Pusztahelyi** University of Miskolc, Hungary
Recent EU Legislation Relating to Drones in the Light of Right to Privacy
- 10.00 **Réka Pusztahelyi** University of Miskolc, Hungary
Issues on Validity of Clauses Excluding or Limiting Liability in the Viewpoint of Contractual Freedom
- 10.15 **Barbara Tóth** University of Miskolc, Hungary
ADR in Cross-Border Matters of Parental Responsibility
- 10.30 *Break*
- 10.45 **Bernadett Szekeres** University of Miskolc, Hungary
Reflections on the Employee-Like Persons and on Their (Non-)Regulation in Hungary
- 11.00 **Edit Kriston** University of Miskolc, Hungary
Problematic Point of Harmonisation: The Council Regulation (EU) 2016/1103 of Matrimonial Property Regimes
- 11.15 **Flóra Orosz** University of Miskolc, Hungary
Agricultural Integration and Social Innovation
- 11.30 **Csenge Halász** Miskolci Egyetem, Hungary
Civil Law Assessment of Human Personality
- 11.45 **Zoltán Varga** University of Miskolc, Hungary
The Impact of the Digitalization to the Taxation
- 12.00 *Summary*

HUMANITIES AND SOCIAL SCIENCES SYMPOSIUM

Chairman: Emőke HORVÁTH *assoc. professor*

G: HUMANITIES AND SOCIAL SCIENCES

VENUE: FINTELLIGENCE Centre, Bld. A/4. 3rd floor

Chairman: Emőke HORVÁTH *assoc. professor*

Sándor BOZSIK *assoc. professor*

Secretary: János RADA *lecturer*

Date: May 24, 2019

- 10.30 **Aku-Sika Buah, Andrea Sáfrány Gubik** University of Miskolc, Hungary
The Role of Entrepreneurship in Economic Growth: The Picture According to Literature
- 10.45 **Sándor Bozsik, Zoltán Musinszki, Judit Szemán** University of Miskolc, Hungary
How Can We Adapt the Balance Scorecard to the Needs of Social Enterprises?
- 11.00 **Kitti Fodor¹, Andrea Sáfrány Gubik¹, Andrea Kovács²** University of Miskolc¹, OTP Bank Nyrt.², Hungary
Financial Literacy and Indebtedness
- 11.15 **Mirjana Hladika, Danimir Gulin, Ivana Valenta** University of Zagreb, Faculty of Economics and Business, Croatia
Assessment of Fair Value - Is it Reliable and Useful for Investors?
- 11.30 **Hrvoje Perčević, Marina Ercegović** Faculty of Economics and Business, University of Zagreb, Croatia
The Comparison of Fair Value Concept and Historical Cost Concept Application in Financial Reporting – How Much Does These Two Concepts Actually Differ?
- 11.45 **Gábor Béla Süveges** University of Miskolc, Hungary
Porter's Five Forces Analysis of the District Heat Sector
- 12.00 **Mazen Bustanji** University of Miskolc, Hungary
Testing Semi-Strong-Form Efficiency in Amman Stock Exchange
- 12.15 **Klaudia Murányi** University of Miskolc, Hungary
Framework of Basel IV.
- 12.30 *Break*
- 12.45 **Judit Szabóné Papp** University of Miskolc, Hungary
Contextualisation of Grammar in a Task Bank Developed for Dyslexic Learners in the ENGaGE Project
- 13.00 **Emőke Horváth** University of Miskolc, Hungary
Donald Trump's Cuba Policy
- 13.15 *Summary*

EÖTVÖS SYMPOSIUM

VENUE: Hungarian Academy of Sciences, Miskolc Academic Committee
3 Erzsébet Square, Miskolc, 3530

Date: **May 23, 2019**

10.00 **András ROÓSZ, Ján DUSZA**
Greetings

10.10 **Árpád Bence PALOTÁS**
The Brighter Side of Publishing

Session 1

Chair: Valéria MERTINGER

10.30 **Kinga TAMÁSI**
Development of TPS-based Biopolymers at the Department of Polymer Engineering

10.50 **Ivan SHEPA**
Development of Precursor and Ceramic Fibers by Electrospinning Technology

11.10 **Armand ABORDÁN**
Particle Swarm Optimization Based Interval Inversion of Direct Push Logging Data

11.30 **Matej BALÁŽ**
Mechanochemistry as a Universal Strategy Applicable in Various Research Fields

11.50 *Coffee break*

Session 2

Chair: Endre TURAI

12.10 **Gábor GYARMATI**
The Effect of Melt Treatments on the Melt Quality of Aluminum Casting Alloys

12.30 **Tibor SOPČAK**
Composite Cements Based on Bioactive Glasses and Calcium Phosphates

12.50 **Rachid HADJADJ**
Uncatalyzed Molecular Network for CO₂ Hydrogenation to Methanol and Methane

13.10 **Mária KOVÁČOVÁ**
*Bio-Mechanochemical Synthesis of Silver Nanoparticles Using *Thymus Vulgaris* L. Plant*

13.30 *Lunch break*

EÖTVÖS SYMPOSIUM

VENUE: Hungarian Academy of Sciences, Miskolc Academic Committee
3 Erzsébet Square, Miskolc, 3530

Date: May 23, 2019

Session 3

Chair: *Ján DUSZA*

- 14.10 **Tamás CSANÁDI**
Nanomechanical Testing: A Path to Discovering Hard-Yet-Ductile Ceramics
- 14.30 **Ágota KAZUP**
High Purity Primary Aluminium Casting by INDUTHERM CC3000 Semi-Continuous Casting Equipment
- 14.50 **Martin FABIÁN**
Structural, Electrical and Physical Properties of Complex Oxides Prepared via Ball Milling for Green Energy Production and Storage Devices
- 15.10 **Arjun Kumar TALGOTRA**
Investigation of Portevin-Le Chatelier Effect in Austenitic Fe-18wt%Mn-Cr Twip Steels by Thermomechanical
- 15.30 **Michal RAJNAK**
Experimental Study of Magnetic Fluids in Electric Fields
- 15.50 *Coffee break*

Session 4

Chair: *Márton BENKE*

- 16.10 **Anett KISS**
Description of the Pressure Dependent Porosity
- 16.30 **Ali AL-AZZAWI**
Modification of Cast Iron Surface by Laser Melt Injection Method with Mechanically Alloyed Powder
- 16.50 **Luca HEGYI**
Development of Eco-Friendly PLA-Based Packagings with Natural Fillers
- 17.10 **Mate SEPSI**
Potential Application of a Novel Non-Destructive Anisotropy Investigation Method
- 17.30 **Mahitha UDAYAKUMAR**
Preparation and Investigation of Glassy Carbon Foams from Waste Polyurethanes
- 17.50 *Summary*

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Date: May 24, 2019

Session 5

Chair: George KAPTAY

- 9.00 **Mahmood HASAN ALHAFADHI**
The Effect of Heat Input Parameters on Residual Stress Distribution by FEM
- 9.20 **Mohamed ABDELFAHATTAH**
Effect of Firing on Mineral Phases and Properties of Lightweight Expanded Clay Aggregates
- 9.40 **Bence Ádám BRAUN**
Seismic Forward Modeling of Sub-Volcanic Zones
- 10.00 **Tamás BUBONYI**
Evaluation of Eutectic Structure in Aluminum Alloys
- 10.20 **Mahmoud Ibrahim ABDELAZIZ**
Application of Magnetic and Geoelectrical Resistivity Sounding Methods in Groundwater Exploration in a Part of Central Sinai, Egypt
- 10.40 **Kassab HUSSEIN AL-OMARI**
New Method to Measure Interlamellar Spacing in Irregular Eutectic
- 11.00 *Coffee break*

Session 6

Chair: Péter BAUMLI

- 11.20 **Edina REIZER**
A DFT Application for Benzo(a)pyrene Formation
- 11.40 **Jamal Eldin FADOUL MOHAMMED IBRAHIM**
Synthesis, Characterization and Rheological Properties of Alumina-Zeolite Mixtures
- 12.00 **Dheeraj VARANASI**
On the Joint Microstructure and Grain Boundary Penetration by Copper in Low Alloyed Steels
- 12.20 **Zsófia Borbála RÓZSA**
Molecular Understanding of Structural Changes of 1,3-Butadiene from Vapor-Liquid Equilibrium to Supercritical Conditions
- 12.40 **Tibor HEGYES**
Optimization of Aluminium Rolling Technology and Possibilities of the Hot Workability of Different Aluminium Alloys
- 13.00 *Summary*

OPTIONAL PROGRAMME

The Organisational Committee of the Conference would like to make your stay more pleasant by organising the

Gala Dinner

19.00, 23 May 2019

Venue: University Dining Hall (*Entry: with invitation cards*)

Programme

- | | |
|-------------------------------------|--|
| 19 ⁰⁰ - 19 ¹⁰ | Opening address |
| 19 ¹⁰ - 19 ²⁰ | Inauguration of the new honorary citizen of the conference |
| 19 ³⁰ - 21 ⁰⁰ | Dinner |
| 21 ¹⁰ - | Networking |

The pleasant atmosphere will be assisted by a mild live musical background.