



University of Miskolc,  
Hungary



**MultiScience - XXXII. microCAD  
International Multidisciplinary  
Scientific Conference  
5-6 September 2018**

**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 - XXXIInd microCAD International Multidisciplinary Scientific Conference*.

Over the 31 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 31 years.

I recommend you the program of the *MultiScience - XXXIInd 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

---

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

## DETAILED PROGRAMME

of the MultiScience - XXXII. microCAD International Multidisciplinary Scientific Conference  
University of Miskolc, 5-6 September, 2018

### 5 September (Wednesday) 2018

10<sup>30</sup> – 10<sup>40</sup>      **Opening address and remarks**  
*András TORMA* professor, Rector of the University of Miskolc  
Venue: Lecture hall XXI. Bld. A/6 groundfloor 32.

### PLENARY SESSION

Venue: Lecture hall XXI. Bld. A/6 groundfloor 32.

10<sup>45</sup> – 11<sup>15</sup>      **Tamás KÉKESI** professor, pro-rector of University of Miskolc, Hungary  
*The use of aqueous solutions and electrons to obtain pure Sn, Cu and Fe from waste materials*

11<sup>15</sup> – 11<sup>45</sup>      **Endre DOBOS** assoc. professor, University of Miskolc, Hungary  
*Citizen observatory – a new approach of environmental monitoring*

11<sup>45</sup> – 12<sup>00</sup>      *Break*

12<sup>00</sup> – 13<sup>30</sup>      **Reception**  
Venue: Senate Room, Main Building A/4. 1<sup>st</sup> floor

13<sup>30</sup> – 14<sup>00</sup>      *Break*

14<sup>00</sup> – 18<sup>00</sup>      **Presentations in the parallel sessions**  
Venue: as listed in the section table

19<sup>00</sup> – 22<sup>00</sup>      **Gala Dinner, Awards Ceremony and Social Networking**  
Venue: University Dining Hall (*Entry: only with invitation cards*)

### 6 September (Thursday) 2018

9<sup>00</sup> - 12<sup>00</sup>      **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:*

<b>4 September (Tuesday) 2018</b>	---	13 <sup>00</sup> - 17 <sup>00</sup>
<b>5 September (Wednesday) 2018</b>	8 <sup>00</sup> - 12 <sup>30</sup>	13 <sup>30</sup> - 16 <sup>00</sup>
<b>6 September (Thursday) 2017</b>	8 <sup>00</sup> - 10 <sup>00</sup>	---

## 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](mailto:microcad@uni-miskolc.hu)*  
*<http://multiscience.uni-miskolc.hu>*

## SESSIONS AND VENUES OF THE CONFERENCE

---

Sign	Name	Venue	
<b>Plenary</b>	Plenary session	Lecture hall XXI.	Bld. A/6 ground floor 32
<b>A</b>	Environment- and Energy Management, Earth Science	Lecture hall VII.	Bld. A/1 1 <sup>st</sup> floor, 102.
<b>B</b>	Applied Materials Science and Nanotechnologies	Káldor Mihály Lecture hall	Bld. B/1 ground floor 8.
<b>C1</b>	Physics	Room 106.	Bld. A/5 1 <sup>st</sup> floor
<b>C2</b>	Mechatronics and logistics	Room 106.	Bld. A/5 1 <sup>st</sup> floor
<b>D1</b>	Innovative automotive, mechanical and energetic design	Room 439.	Bld. A/4. 4 <sup>th</sup> floor
<b>D2</b>	Material Processing Technologies	Room 44.	Bld. A/4 ground floor
<b>D3</b>	Tribology	Lecture hall XXXV.	Bld. C/2 ground floor
<b>E</b>	Legal Sciences	Faculty of Law	Bld. A/6 ground floor 31.
<b>F-G</b>	Humanities and Social Sciences	Lecture hall XXVIII.	Bld. B/2. ground floor 10/A.
<b>H</b>	Health and Medical Sciences	Bosch Room	Bld. B3-B4 2 <sup>nd</sup> floor, 207.

# SUSTAINABLE NATURAL RESOURCES MANAGEMENT SYMPOSIUM

**Chairman:** Gábor MUCSI *assoc. professor*

## A: ENVIRONMENT- AND ENERGY MANAGEMENT, EARTH SCIENCE

---

**VENUE:** Lecture hall VII., Bld. A/1. 1<sup>st</sup> floor, 102-103.

**Chairman:** Gábor MUCSI *assoc. professor*

**Secretary:** Norbert Péter SZABÓ *assoc. professor*

**Date:** September 5, 2018

- 14.00 **Zoltán Eperjesi** Wekerle Sándor Business School, Hungary  
*Sustainable natural gas supply as a factor of competitiveness in the Hungarian economy*
- 14.20 **Eszter Bucher** University of Pécs, Hungary  
*Community life and non-governmental organizations through the example of a village in Ormánság, Drávafok*
- 14.40 **Ion Dosa, Bogdan Tomuş** University of Petrosani, Romania  
*Efficiency of steam generator economizer at different loads*
- 15.00 **Anna Kowalska<sup>1</sup>, Wiktoria Sobczyk<sup>2</sup>** State Higher Vocational School in Tarnów<sup>1</sup>, AGH University of Science and Technology<sup>2</sup>, Poland  
*Influence of geodynamic processes on the shape of anthropogenic lakes*
- 15.20 **Roland Róbert Romenda, Zsófia Burinda** University of Miskolc, Hungary  
*Investigation of settling of regular-shape single particles in quiescent air*
- 15.40 *Break*
- 16.00 **Mária Ambrus, Sándor Nagy, Gábor Mucsi** University of Miskolc, Hungary  
*The comminution of PCB and LED in order to improve metal recovery*
- 16.20 **Armand Abordán** University of Miskolc, Hungary  
*Invasive weed optimization driven factor analysis for lithological characterization of aquifers*
- 16.40 **Buta Singh, Zoltán Szamosi, Zoltán Siménfalvi** University of Miskolc, Hungary  
*Hydrodynamic factors in an anaerobic digester*
- 17.00 **Medet Junussov** University of Miskolc, Hungary  
*“Looking for “invisible gold” and its concentrations in Arsenic-containing sulfide minerals of Bakyrchik gold deposits”*
- 17.20 **Roland Róbert Romenda** University of Miskolc, Hungary  
*Process engineering design of air flow separators for municipal solid waste preparation*
- 17.40 *Summary*

# APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY SYMPOSIUM

**Chairman:** Tamás TÖRÖK *professor*

## B: APPLIED MATERIALS SCIENCE AND NANOTECHNOLOGY

---

**VENUE:** Káldor Mihály Lecture Hall, Bld. B/1. ground floor, 8.

**Chairman:** Tamás TÖRÖK *professor*

**Secretary:** Gábor SZABÓ *senior lecturer*

**Date:** September 5, 2018

- 14.00 **Gábor Szabó, Tamás Mikó, Máté Szűcs** University of Miskolc, Hungary  
*Technological investigation of rolled product of multilayer aluminium sheets*
- 14.20 **Tamás Bubonyi, Péter Barkóczy** University of Miskolc, Hungary  
*Detection and evaluation of surface decolorization on rolled aluminum-magnesium sheets*
- 14.40 **Dávid Halápi, Sándor Endre Kovács, Zsolt Bodnár, Árpád Bence Palotás, László Varga**  
University of Miskolc, Philament Ltd. Miskolc, Hungary  
*Tensile analysis of 3D printer filaments*
- 15.00 **Shaymaa Abbas Abdulsada, Tamás I. Török** University of Miskolc, Hungary  
*Measurements and studying corrosion potential of reinforced concrete samples prepared with and without a green inhibitor and immersed in 3.5%NaCl solution*
- 15.20 **Krisztina Román, Bence Szemán, Zita Szabó, Kálmán Marossy** University of Miskolc, Hungary  
*Mechanical properties and structural changes of PVC-wood composites*
- 15.40 **Emese Kurovics, Sergei Kulkov, László Gömze** University of Miskolc, Hungary  
*Short overview of mullite based ceramic composites reinforced with silicon-carbides*
- 16.00 *Break*
- 16.20 **Gustav Hanke** Montanuniversität Leoben, Austria  
*Characterization and possible multi metal recycling of precipitation residues from Zinc industry*
- 16.40 **Jürgen Antrekowitsch** Montanuniversität Leoben, Austria  
*Metal bearing by-products from metallurgical industry - an important resource for the future*
- 17.00 **Balázs Hegedűs, Tamás Kékesi** University of Miskolc, Hungary  
*Leaching behaviour of the residue from the thermo-mechanical treatment of Aluminium melting dross*
- 17.20 **Ali I.Al-Mosawi, Kálmán Marossy** University of Miskolc, Hungary  
*L.O.I and DSC analyses of antimony trioxide containing plasticised PVC as a function of processing method*
- 17.40 **Henrietta Hudák, László Varga** University of Miskolc, Hungary  
*The strength properties of chemically bonded sand mixtures*
- 18.00 **Mahmood Alhafadhi, György Krallics** University of Miskolc, Hungary  
*Analysis of residual stress during welding oil and gas pipe*
- 18.20 *Summary*



# LOGISTICS, INFORMATICS AND MECHATRONICS SYMPOSIUM

**Chairman:** Béla ILLÉS *professor*

## C1: PHYSICS

---

**VENUE:** Room 106., Bld. A/5. 1<sup>st</sup> floor, 106

**Chairman:** Béla PARIPÁS *professor*

**Secretary:** Endre KOVÁCS *assoc. professor*

**Date:** September 5, 2018

14.00 **Endre Kovács, János Majár** University of Miskolc, Hungary  
*On some analogous transient phenomena*

14.20 **László Ujfaludi** Eszterházy Károly University, Hungary  
*Role of the ice cover in climate changes*

14.40 **József Vida** Eszterházy Károly University, Hungary  
*Magic tower – over one decade of activity*

15.00 **Nóra Kucska, Zsolt Gulácsi** University of Debrecen, Hungary  
*Effects of spin-orbit interactions on surfaces and interfaces*

15.20 **Béla Paripás, Miklós Béres** University of Miskolc, Hungary  
*Optical methods for micrometer resolution distance measurements*

15.40 *Break*

## C2: MECHATRONICS AND LOGISTICS

---

**Chairman:** Béla ILLÉS *professor*

**Secretary:** Péter TELEK *assoc. professor*

16.00 **Elke Glistau<sup>1</sup>, Norge Isaias Coello Machado<sup>2</sup>** Otto-von-Guericke University, Germany<sup>1</sup>, Central University „Marta Abreu“ of Las Villas, Santa Clara, Cuba<sup>2</sup>  
*Logistics 4.0 and the revalidation of logistics concepts and strategies*

16.20 **Florin-Dumitru Popescu, József Kovács, Sorin Mihai Radu, Andrei Andraş, Ildikó Kertész (Brînaş)** University of Petroşani, Romania  
*A method of continuous tilt control of the bucket wheel excavators using inclinometers*

16.40 **Rabab Benotsmane, László Dudás, György Kovács** University of Miskolc, Hungary  
*Collaborating robots in industry 4.0 conception*

17.00 **Martin Szabó, Károly Nehéz** University of Miskolc, Hungary  
*Grading Java code submissions in MeMOOC*

17.20 **József Túri** University of Miskolc, Hungary  
*A note on almost sure convergence*

17.40 *Summary*

# INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

**Chairman:** Károly JÁRMAI *professor*

## **D1: INNOVATÍV AUTOMOTIVE, MECHANICAL AND ENERGETIC DESIGN**

---

**VENUE:** Room 439, Bld. A/4. 4<sup>th</sup> floor, 439.

**Chairman:** József Ákos LENGYEL *assist. lecturer*

**Secretary:** Betti BOLLÓ *assoc. professor*

**Date:** September 5, 2018

- 14.00 **Ahmed Bouzid, József Vásárhelyi** University of Miskolc, Hungary  
*Vehicular acoustic doppler velocimetry based on reconfigurable analog and digital design -  
Theoretical approach and review*
- 14.20 **Stela Dinescu, Ildiko Kertész (Brînaş), Marioara Vesa (Benea)** University of Petroşani, Romania  
*Study on the stress and strain of the drill bits using the finite element method*
- 14.40 **Hazim Nasir Ghafil, Károly Jármai** University of Miskolc, Hungary  
*Comparative study of particle swarm optimization and artificial bee colony algorithms*
- 15.00 **Ildikó Kertész (Brînaş), Sorin-Mihai Radu, Florin-Dumitru Popescu, Iosif Andras, Andrei  
Andras** University of Petroşani, Romania  
*A numerical method for the calculus of the operation power of the rotor of a bucket wheel excavator*
- 15.20 *Break*
- 15.40 **Ákos József Lengyel, István Ecsedi** University of Miskolc, Hungary  
*Second-order analysis of composite beam-columns with interlayer slip*
- 16.00 **Ákos József Lengyel, István Ecsedi** University of Miskolc, Hungary  
*Torsional deformation of compound circular bars*
- 16.20 **Nan Marin-Silviu, Dănuţ Grecea, Aurelian Nicola, Alin Sultan, Gabriel Țuțuiianu** University of  
Petroşani, Romania  
*Theoretical study concerning the establishment of optimum dimensions of force pipes for  
hydrotechnical constructions*
- 16.40 *Summary*

# INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

**Chairman:** Károly JÁRMAI *professor*

## D2: MATERIAL PROCESSING TECHNOLOGIES

---

**VENUE:** Room 44, Bld. A/4. ground floor, 44

**Chairman:** Marcell GÁSPÁR *assist. profesor*

**Secretary:** Raghawendra P. S. Sisodia *PhD Student*

**Date:** September 6, 2018

- 9.00        **Noureddine Guellouh, Zoltán Szamosi** University of Miskolc, Hungary  
*The weldability of high strenght steels*
- 9.20        **Szabolcs Jónás, Miklós Tisza** Knorr-Bremse Rail Systems Budapest, University of Miskolc, Hungary  
*Influencers of clinched joints*
- 9.40        **Viktória Kállai, L. Gábor Szepesi** University of Miskolc, Hungary  
*Propane/Propylen separation's examination with simulation*
- 10.00      **Yassine Mehdi, Miklós Tisza** University of Miskolc, Hungary  
*Formability investigations of advanced high strength steels*
- 10.20      *Break*
- 10.40      **Antal Nagy, János Kundrák** University of Miskolc, Hungary  
*Analysis on the influence of the feed rate on 2D and 3D roughness parameters of the face-milled surface*
- 11.00      **Raghawendra Sisodia, Marcell Gáspár, Walid Gacem** University of Miskolc, Hungary  
*Investigation of HAZ softening of AA6082-T6 automotive aluminium alloy by physical simulation*
- 11.20      **Bálint Varga, Balázs Mikó** Óbuda University, Hungary  
*Investigation of geometric accuracy of free-form surface profile*
- 11.40      *Summary*

# INNOVATIVE AUTOMOTIVE, MECHANICAL DESIGN AND TECHNOLOGY SYMPOSIUM

**Chairman:** Károly JÁRMAI *professor*

## D3: TRIBOLOGY

---

**VENUE:** Lecture Hall XXXV, Bld. C/2, ground floor

**Chairman:** Mária MAROS BERKES *assoc. professor*

**Co-Chair:** Prof. Dr. Michel Fillon *invited speaker, CNRS Director of Research at the Pprime Institute*

**Secretary:** Andrea BÍRÓ SZILÁGYI *assist. professor*

**Date:** September 6, 2018

- 9.00 Michel Fillon Pprime Institute, University of Poitiers, France  
*Analysis of textured surface influence in hydrodynamic lubrication - Application to slider and thrust bearings*
- 9.25 Michel Fillon Pprime Institute, University of Poitiers, France  
*Analysis of heavily loaded bearings operating under mixed lubrication regime*
- 9.50 Maria B. Maros, Alexandra Németh University of Miskolc, Hungary  
*Friction and wear of self-mated and unlike paired tribosystems of Si<sub>3</sub>N<sub>4</sub> nanocomposites with multilayer graphene additives*
- 10.10 Andrea Biró Szilágyi University of Miskolc, Hungary  
*Ball-on-disc wear test of plasmanitrided layers*
- 10.30 Géza Németh University of Miskolc, Hungary  
*Friction torque of lubricated deep groove ball bearings*
- 10.50 Break
- 11.00 Szabolcs SZÁVAI University of Miskolc, Hungary  
*High cycle rolling fatigue test of carburized surface - first results*
- 11.20 Alexandra Kitti Németh, Mária Maros Berkes, Noémi László University of Miskolc, Hungary  
*Wear maps of SPS sintered Si<sub>3</sub>N<sub>4</sub>/MLG nanocomposites*
- 11.40 Viktoria Ferencsik, Gyula Varga University of Miskolc, Hungary  
*Examination of the effect of technological parameters on cylindricity deviation and residual stresses when burnishing cylindrical aluminium components*
- 12.00 Shiraz Ahmed Siddiqui, Andrea Biro Szilagy, Maria Berkes Maros University of Miskolc, Hungary  
*Wear behaviour of duplex (PN+PVD) layers produced on X42Cr13 steel*
- 12.20 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:** Klaudia MURÁNYI *research assistant*

**Date:** September 5, 2018

- 14.00      **Anita Paulovics, András Bragyova** University of Miskolc, Hungary  
*The protection of wildlife*
- 14.15      **Ágnes Váradi** Hungarian Academy of Sciences Centre for Social Sciences, Hungary  
*Access to justice in the case-law of the European Court of Human Rights*
- 14.30      **Éva Erdős** University of Miskolc, Hungary  
*New problems of the international and European tax law - The digital tax avoidance*
- 14.45      **Tímea Barzó** University of Miskolc Faculty of Law, Hungary  
*Public figures and the right to privacy*
- 15.00      **Judit Barta** University of Miskolc, Hungary  
*The private insurances as a possibility of voluntary saving*
- 15.15      **Hilda Tóth** University of Miskolc, Hungary  
*Anomalies in the modification of the civil service relationship*
- 15.30      **Zoltán Rácz** University of Miskolc, Hungary  
*History of the Hungarian Mediaton in Public Administration*
- 15.45      *Break*
- 16.00      **Erika Csema-Váradi, Ildikó Pongrácz** University of Miskolc, Hungary  
*Digitalisation and exclusion*
- 16.15      **Klaudia Murányi** University of Miskolc, Hungary  
*Insight into the legal situation of virtual money in Hungary*
- 16.30      **Zoltán Varga** University of Miskolc, Hungary  
*Pension scheme rules for the EU officials and the transfer of pensions*
- 16.45      **Lilla Nóra Kiss** University of Miskolc, Hungary  
*The brief interpretation of article 50 TEU*
- 17.00      **Csenge Halász** University of Miskolc, Hungary  
*Privacy on the internet - Dream and reality?*
- 17.15      **Mário Certicky** University of Miskolc, Hungary  
*The nature of insurable interest*
- 17.30      **Zoltán Nyilasi** University of Miskolc, Hungary  
*Can the Hungarian state be sued?*
- 17.45      *Summary*

## HUMANITIES AND SOCIAL SCIENCES SYMPOSIUM

**Chairman:** Kinga SZABÓ-TÓTH *assoc. professor*

### F-G: HUMANITIES AND SOCIAL SCIENCES

---

**VENUE:** Lecture hall XXVIII., Bld. B/2. ground floor 10/A.

**Chairman:** Kinga SZABÓ-TÓTH *assoc. professor*

**Secretary:** Virág HAVASI *assoc. professor*

**Date:** September 6, 2018

- 9.00 **Krisztina Varga** University of Miskolc, Hungary  
*Social innovation - a way to solve social problems*
- 9.20 **Gábor Béla Süveges, Zoltán Musinszki** University of Miskolc, Hungary  
*The main technological and ecological factors of the innovative district heat supply*
- 9.40 **Levente Lengyel, Kitti Fodor** University of Miskolc, Hungary  
*Analysis of effects on life expectancy at birth*
- 10.00 **Zoltán Eperjesi** Wekerle Sándor Business School, Hungary  
*Changes in the relation system of competitiveness and social cohesion in the European Union*
- 10.20 *Break*
- 10.40 **Emőke Horváth** University of Miskolc, Hungary  
*Hungarian foreign policy toward latin american countries 1945-1959*
- 11.00 **Tünde Bajzát** University of Miskolc, Hungary  
*Foreign language teachers' motivation at secondary schools in North-Eastern Hungary – The partial results of a pilot study*
- 11.20 **Tünde Bajzát** University of Miskolc, Hungary  
*The motivation for learning foreign languages at secondary schools in North-Eastern Hungary – The partial results of a pilot study*
- 11.40 *Summary*

# HEALTH AND MEDICAL SCIENCES SYMPOSIUM

**Chairman:** Olivér RÁCZ *professor*

## H: HEALTH AND MEDICAL SCIENCES

---

**VENUE:** Room **BOSCH**, Bld. **B3-B4**. 2<sup>nd</sup> floor, 207.

**Chairman:** Olivér RÁCZ *professor*

**Secretary:** Éva DOJCSÁK KISS-TÓTH

**Date:** September 5, 2018

- 14.00 **Olivér RácZ<sup>1,2</sup>, Marcela Linková<sup>2</sup>** University of Miskolc, Hungary<sup>1</sup>, University of Safarik, Slovakia<sup>2</sup>  
*Delayed start of insulin treatment in type 2 diabetes*
- 14.20 **Andrea Lukács<sup>1</sup>, Péter Sasvári<sup>2</sup>, Beatrix Varga<sup>1</sup>, Emőke Kiss-Tóth<sup>1</sup>, Éva Dojcsák Kiss-Tóth<sup>1</sup>**  
University of Miskolc<sup>1</sup>, National University of Public Service<sup>2</sup>, Hungary  
*Measuring life orientation of university students*
- 14.40 **Mária Csóka, Veronika Rajki** Semmelweis University, Hungary  
*Methodology of innovative simulation education, and possibilities of objective knowledge level measurement*
- 15.00 **Judit Kopkáné Plachy, Barbara Guzi, Andrea Rucska, Emőke Kiss-Tóth** University of Miskolc, Hungary  
*The prevention of osteoporosis and falls by a six-months long intervention programme for women over 60 years*
- 15.20 **Annamária Mató-Juhász** University of Miskolc, Hungary  
*Importance of the healthy destination*
- 15.40 *Summary*

## OPTIONAL PROGRAMME

---

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

### **Gala Dinner**

**19.00, 5 September 2018**

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

### **Programme**

19 <sup>00</sup> - 19 <sup>10</sup>	Opening address by the Rector of the University of Miskolc
19 <sup>10</sup> - 19 <sup>25</sup>	Musical and visual block #1 <i>Thematic musical program about the life of researchers and university staff: <b>Extended Happy Metal</b> (the band and friends of the University of Miskolc)</i>
19 <sup>25</sup> - 19 <sup>35</sup>	Inauguration of the new honorary citizen of the conference
19 <sup>35</sup> - 19 <sup>45</sup>	Musical and visual block #2
19 <sup>45</sup> - 21 <sup>00</sup>	Dinner
21 <sup>00</sup> - 21 <sup>10</sup>	Musical and visual block #3
21 <sup>10</sup> -	Networking