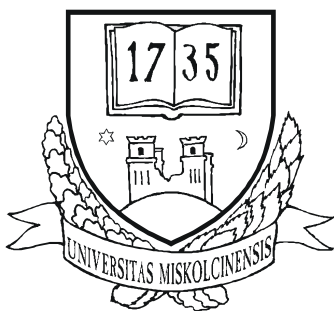


Innovation and Technology Transfer Centre  
University of Miskolc

# **XXIV. microCAD International Scientific Conference 18-20 March 2010**



# **PROGRAMME**

## WELCOME FROM THE RECTOR

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The University of Miskolc, which is the legal predecessor of the Mining and Metallurgical Academy (Bergschule) founded in 1735 in Selmechánya (Banska Stiavnica) and which – in the academic year 2009/10 - celebrates its 275<sup>th</sup> academic year on account of the continuity of mining and metallurgical education, extends its greetings to the Reader on the occasion of organising the *XXIV. microCAD International Scientific Conference*.

According to the decision of the University Senate, all of our conferences in this academic year are organised in the spirit of the 275<sup>th</sup> jubilee. In addition, the microCAD Conference also completes a special mission: it is another good opportunity for us to highlight the **50<sup>th</sup> anniversary of the contractual cooperation** between Otto-von-Guericke University in Magdeburg and the University of Miskolc.

You are holding the program booklet of the *XXIV. microCAD International Scientific Conference* in your hands. At the Conference, experts in humanities, economics, engineering and health science present and discuss their scientific results. During this event professional and personal relations between experts shall remarkably contribute to the efficient co-operation between participants and institutions as well.

Over the last 24 years the microCAD Conference has become one of the most significant multidisciplinary conferences and meetings of professionals in Central Europe.

Participants coming from 12-15 different countries return to the conference every year to present their latest scientific results.

More than 6700 presentations, 34 thousand pages of publications, 87 international agreements signed between universities and numerous academic and research proposals witness the achievements of the last 23 years.

I recommend you the program of the *XXIV. microCAD International Scientific Conference* in the hope that the presentations, professional discussions and social events of the *Conference* will give you a golden opportunity to cherish and widen your professional relations. I truly believe that your presence, either as a speaker or as a participant, will contribute to the success of the *XXIV. microCAD International Scientific Conference*.

Prof. Gyula PATKÓ  
Rector of the  
University of Miskolc

## SCIENTIFIC COMMITTEE OF THE CONFERENCE

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<b>Chairman:</b>	<b>Mihály DOBRÓKA</b>	Pro-Rector for International Relations and Scientific Affairs
<b>Secretary:</b>	<b>Péter BIKFALVI</b>	Head of Department of Research Management and International Relations
<b>Members:</b>	<b>László TIHANYI</b>	Dean of the Faculty of Earth Science and Engineering
	<b>Zoltán GÁCSI</b>	Dean of the Faculty of Materials and Metallurgical Engineering
	<b>Béla ILLÉS</b>	Dean of the Faculty of Mechanical Engineering and Information Science
	<b>György KOCZISZKY</b>	Dean of the Faculty of Economics
	<b>Mária KOVÁCS ILLÉS</b>	Dean of the Faculty of Humanities
	<b>László BARKAI</b>	Dean of the Faculty of Health Sciences

## DETAILED PROGRAMME

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of the XXIV. microCAD International Scientific Conference  
University of Miskolc, 18-20 March 2010

### 18 March (Thursday) 2010

10<sup>00</sup> – 10<sup>10</sup>      **International Scientific Conference**  
**Opening address**  
*Gyula PATKÓ* – professor, Rector of the University of Miskolc  
Venue: Lecture hall XXXVII., Bld. A/7, groundfloor

#### **PLENARY SESSION**

Venue: Lecture hall XXXVII., Bld. A/7, groundfloor

10<sup>10</sup> – 10<sup>45</sup>      **Karl-Heinrich GROTE** professor, dean, Otto-von-Guericke University of  
Magdeburg, Germany  
**Challenges in Engineering Design**

10<sup>45</sup> – 11<sup>20</sup>      **Georg LOHMANN** professor, director, Otto-von-Guericke University,  
Magdeburg, Germany  
**The Ambivalence of Technology and Types of Responsibility**

11<sup>20</sup> – 11<sup>55</sup>      **Róza ÁDÁNY** professor, dean, University of Debrecen, Hungary  
**The Situation of Public Health Care in Hungary**

11<sup>55</sup> – 12<sup>15</sup>      Break

12<sup>15</sup> – 13<sup>30</sup>      **Reception**  
Venue: Main Building A/4. Assembly Hall (Entry: only with invitation cards)

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

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

19<sup>00</sup> – 21<sup>30</sup>      **microCAD 2010 Party**  
Venue: Main Building A/4. Assembly Hall (Entry: only with invitation cards)

### 19 March (Friday) 2010

9<sup>00</sup> - 12<sup>00</sup>      **Presentations in the sections**  
Venue: as listed in the section table

12<sup>00</sup> - 14<sup>00</sup>      Lunch break

14<sup>00</sup> - 18<sup>00</sup>      **Presentations in the sections**  
Venue: as listed in the section table

## OPTIONAL PROGRAMME

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19 March 2010      13<sup>00</sup> - 20<sup>00</sup>      **Excursion to SÁROSPATAK-TOKAJ**  
20 March 2010      7<sup>30</sup> - 19<sup>00</sup>      **Excursion to SCHEMNITZ (Slovakia)**

## REGISTRATION FOR THE CONFERENCE

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*Venue:* The Registration Desk is opposite the entrance in Main Building A/4.

<b>17 March (Wednesday) 2010</b>	---	12 <sup>00</sup> - 20 <sup>00</sup>
<b>18 March (Thursday) 2010</b>	8 <sup>00</sup> - 12 <sup>30</sup>	13 <sup>30</sup> - 17 <sup>00</sup>
<b>19 March (Friday) 2010</b>	8 <sup>00</sup> - 12 <sup>00</sup>	----

## ORGANISATIONAL COMMITTEE OF THE CONFERENCE

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

**Address of the Scientific and Organisational Committee:**  
***Miskolci Egyetem Tudományos- és Nemzetközi Osztály***  
***H-3515 Miskolc Egyetemváros***  
***Phone: (36-46) 565-111/ ext. 1006***  
***Fax: (36-46) 563-423***  
***e-mail: microcad@uni-miskolc.hu***  
***www.uni-miskolc.hu/~microcad***

## SECTIONS AND VENUES OF THE CONFERENCE

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Sign	Name	Venue	
<b>Plenary</b>	Plenary session	Lecture hall XXXVII.	Bld. A/7, groundfloor
	Magdeburg-Miskolc Interuniversity Cooperation	Board Room	Bld. A/4. 1 <sup>st</sup> floor, 149
<b>A</b>	Energy Management	Room 11.	Bld. A/1. mezzanine, 11
<b>B</b>	Waste Processing and Recycling	Room 12.	Bld. A/1. mezzanine, 12
<b>D</b>	Metal Extraction, Processing and Energy Utilization	Room 203.	Bld. B/1. 2 <sup>nd</sup> floor, 203
<b>E</b>	Materials Science and Technology	Lecture hall Káldor Mihály	Bld. B/1. groundfloor, 8
<b>F</b>	Fluid and Heat Engineering	Room 227.	Bld. A/1. 2 <sup>nd</sup> floor, 227
<b>G</b>	Applied Mechanics	Room 17.	Bld. A/1. mezzanine, 17
<b>H</b>	Mathematics and Computer Science	Room 341.	Bld. A/4. 3 <sup>rd</sup> floor, 341
<b>I</b>	Physics and Physics Education	Room 13.	Bld. A/1. mezzanine, 13
<b>J</b>	Automation and Telecommunication	Institute of Information Science	2 <sup>nd</sup> floor, 202/b.
<b>K</b>	Electrotechnics and Electronics	Lecture hall VII.	Bld.A/1. 1 <sup>st</sup> floor, 102-3
<b>L</b>	Machine and Construction Design	Department of Machine Elements	Bld. A/3. 1 <sup>st</sup> floor, 15
<b>M</b>	Material Processing Technologies	Room 14.	Bld. A/1. mezzanine, 14
<b>N1</b>	Production Engineering and Manufacturing Systems	Lecture hall XV.	Bld. C/1. 1 <sup>st</sup> floor, 101
<b>N2</b>	Production Engineering and Manufacturing Systems	Room 16.	Bld. A/1. mezzanine, 16
<b>N3</b>	Production Engineering and Manufacturing Systems	Room 18.	Bld. A/1. mezzanine, 18
<b>O</b>	Applied Information Engineering	Lecture hall V.	Bld.A/1. mezzanine, 3-4
<b>P</b>	Material Flow Systems. Logistical Information Technology	Regional Adult Education Centre	Room 207.
<b>Q1</b>	Economic Challenges in the 21 <sup>st</sup> Century	Room 312.	Bld. A/3. 3 <sup>rd</sup> floor, 312
<b>Q2</b>	Economic Challenges in the 21 <sup>st</sup> Century	Room 318.	Bld. A/4. 3 <sup>rd</sup> floor, 318
<b>R</b>	Humanities	Lecture hall VI.	Bld.A/1. 1 <sup>st</sup> floor, 101
<b>S</b>	Health Science	Room 314.	Bld. A/1. 3 <sup>rd</sup> floor, 314

## MAGDEBURG-MISKOLC INTERUNIVERSITY COOPERATION

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**VENUE:** Board Room, Bld. A/4. 1<sup>st</sup> floor, 149.  
**Chairman:** **Michael SCHENK** *professor*  
**Secretary:** **Péter BIKFALVI** *Head of Department*

**Date:** **March 19, 2010**

- 9.00 **Opening address**  
*Gyula Patkó – professor, Rector of the University of Miskolc*
- 9.10 **Michael Schenk** Otto-von-Guericke University of Magdeburg, Germany  
*Digital Engineering - Stand, Anwendungsbeispiele, Forschungsbedarf*
- 9.25 **György Kocziszky** University of Miskolc, Hungary  
*Convergence vs. Divergence in the EU?*
- 9.40 **Elke Glistau<sup>1</sup>, Béla Illés<sup>2</sup>, Michael Schenk<sup>1</sup>** Otto-von-Guericke University of Magdeburg, Germany<sup>1</sup>, University of Miskolc, Hungary<sup>2</sup>  
*Cooperation between the Years 2000 and 2010 in the Field of Logistics and Materials Handling*
- 9.55 **Erika Kegyes** University of Miskolc, Hungary  
*Linguistics and Logistics*
- 10.10 **Elke Glistau<sup>1</sup>, Béla Illés<sup>2</sup>, Norge Machado Coello<sup>3</sup>** Otto-von-Guericke University of Magdeburg, Germany<sup>1</sup>, University of Miskolc, Hungary<sup>2</sup>, Universität Santa Clara, Cuba<sup>3</sup>  
*Quality Management Methods in Logistics*
- 10.25 **Szilárd Szabó<sup>1</sup>, Dominique Thévenin<sup>2</sup>** University of Miskolc, Hungary<sup>1</sup>, Otto-von-Guericke University of Magdeburg, Germany<sup>2</sup>  
*Experimental and Numerical Analysis of Flow Around a Heated Circular Cylinder*
- 10.40 **Éva Juhász** University of Miskolc, Hungary  
*Hand in Hand in German Language Teaching- Cooperation between the Language Centre in Magdeburg and its Counterpart in Miskolc*
- 10.55 *Summary*

## A: ENERGY MANAGEMENT

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**VENUE:** Room 11. Bld. A/1. mezzanine, 11.

**Chairman:** Zoltán TURZÓ *assoc. professor*

**Secretary:** Szilvia RÁTKAI *PhD Student*

**Date:** March 18, 2010

- 14.00 **Helga Kovács<sup>1</sup>, Tamásné Szemmelveisz<sup>2</sup>, Béla Tolvaj<sup>2</sup>** Bay Zoltán Foundation for Applied Research<sup>1</sup>, University of Miskolc<sup>2</sup>, Hungary  
*Energetic Utilization Analysis of Ligneous Plants Grown in a Contaminated Area*
- 14.20 **Zita Marossy** Corvinus University of Budapest, Hungary  
*Hurst Exponent of the Deseasonalized Spot Electricity Prices*
- 14.40 **Zsolt Dobó, Árpád Bence Palotás** University of Miskolc, Hungary  
*Measurement of Ion Current Kinetics in Natural Gas Flames*
- 15.00 *Break*
- 15.20 **Judit Szántó, Péter Szűcs, Tamás Madarász, Balázs Zákányi, Nóra Gonda** University of Miskolc, Hungary  
*Water Balance Assessment of the Nagymohos Floating Swamp using the Tools of Hydrodynamic Modeling and Various Site Investigation Methods*
- 15.40 **Judit Molnár, Hajnalka Szegedi, Norbert Szabó** University of Miskolc, Hungary  
*New Geophysical Data Processing Method for Reliable Determination of In-Situ Hydrocarbon Reserves*
- 16.00 **Andrea Handki, Béla Tolvaj** University of Miskolc, Hungary  
*The Examination of Alfa Type Stirling Engine with 2 Cylinders*
- 16.20 *Break*
- 16.40 **Liwen Guo<sup>1</sup>, Xiao Cangyan<sup>1</sup>, Chen Shuzhao<sup>2</sup>** Hebei Polytechnic University<sup>1</sup>, China University of Mining and Technology<sup>2</sup>, China  
*Correspondence between Coal Vitrinite and Inertinite Content of Coal Seam and Proliferation Characteristic of CO*
- 17.00 **Xiao Cangyan<sup>1</sup>, Guo Liwen<sup>1</sup>, Chen Shuzhao<sup>2</sup>** Hebei Polytechnic University<sup>1</sup>, China University of Mining and Technology<sup>2</sup>, China  
*Intrinsically Safe Coal Mine and its Evaluation Method*
- 17.20 **Shuzhao Chen<sup>1</sup>, Cai Qingxiang<sup>1</sup>, Xiao Cangyan<sup>2</sup>, Zhang Lei<sup>1</sup>** China University of Mining and Technology<sup>1</sup>, Hebei Polytechnic University<sup>2</sup>, China  
*Influence of Different Operation Patterns on Dragline Working Radius*
- 17.40 **Sándor Gergely** Károly Róbert College, Hungary  
*Regional Renewable Energy Production System*
- 18.00 *Summary*



## B: WASTE PROCESSING AND RECYCLING

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**VENUE:** Room 12. Bld. A/1. mezzanine, 12.

**Chairman:** József FAITLI *assoc. professor*

**Secretary:** Gábor MUCSI *assist. lecturer*

**Date:** March 18, 2010

- 14.00 **Renáta Tóth<sup>1</sup>, Lövgren Lars<sup>2</sup>, János Lakatos<sup>1</sup>, Tamás Madarász<sup>1</sup>** University of Miskolc, Hungary<sup>1</sup>, Umea University<sup>2</sup>  
*Chemical Analysis of the Applicability of Reactive Barriers*
- 14.20 **Branislava Ratkovic, Milorad Vidovic, Nenad Bjelic, Drazen Popovic**  
University of Belgrade, Serbia  
*Simulation Modeling of Dispatching Strategies in Recyclables Collection*
- 14.40 **Pál Tóth, Tamásné Szemmelveisz, Árpád Palotás, Á. Kovács** University of Miskolc, Hungary  
*A SEM and EDX Study of the Solid Combustion Residues from Co-Combustion of Sewage Sludge and Coal*
- 15.00 **Mariana Bran, Sandra Visan, Elena Irina Petrescu** Academy of Economics Studies, Romania  
*Manure Management from Pig Farms out in accordance with Environmental Rules*
- 15.20 **Viktória Mikita, Tamás Kántor** University of Miskolc, Hungary  
*Investigation of Soil Compaction Using Image Diagnostical Tools*
- 15.40 *Break*
- 16.00 **Johannes Glaab, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany  
*Small-Scale Flow-Through UV-C LED Disinfection Device*
- 16.20 **Péter Raisz<sup>1</sup>, Ferenc Dömötör<sup>2</sup>, Sándor Fegyverneki<sup>1</sup>** University of Miskolc<sup>1</sup>, Budapest University of Technology and Economics<sup>2</sup>, Hungary  
*Sampling from Delivered Scrap*
- 16.40 **Anikó Noémi Paripás** University of Miskolc, Hungary  
*Examination of a Refraction Inverse Problem on Different Geological Models*
- 17.00 *Summary*

## **D: METAL EXTRACTION, PROCESSING AND ENERGY UTILIZATION**

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**VENUE:** Room 203, Bld. B/1. 2<sup>nd</sup> floor, 203.

**Chairman:** Tamás KÉKESI *professor*

**Secretary:** Gergő RIMASZÉKI *PhD Student*

**Date:** March 18, 2010

- 14.00 Csilla Máté, Tamás Kékesi University of Miskolc, Hungary  
*Purification of Tungsten by Anion Exchange in Chloride Media*
- 14.20 Jürgen Antrekowitsch, Stefan Steinlechner University of Leoben, Austria  
*Characterization of Zinc Containing Residues from Copper and Zinc Industry*
- 14.40 Gergő Rimaszéki, József Majtényi, Tamás Kékesi University of Miskolc, Hungary  
*The Efficiency and Morphological Characteristic of the Electrorefining of Tin in Simple Sulfuric and Hydrochloric Acid Solutions*
- 15.00 *Break*
- 15.20 Stefan Steinlechner, Jürgen Antrekowitsch University of Leoben, Austria  
*Investigation in Simultaneous Recovery of Valuable Metals from Heavy-Metal Containing Residues*
- 15.40 Tibor Kulcsár, Tamás Kékesi University of Miskolc, Hungary  
*The Efficiency of Copper Electrowinning from Cupric Chloride Spent Etching Solutions*
- 16.00 Fusheng Niu, Yinying Liang, Shuxian Liu Hebei Polytechnic University, China  
*Study on Dispersion Behaviors of Oolitic Hematite Ultrafine Particles in Water*
- 16.20 József Svidró, Judit Tóth University of Miskolc, Hungary  
*Measurement of Gas Pressure Evolved on Chemically Bonded Sand Mould/Molten Aluminium Interface*
- 16.40 *Summary*

## E: MATERIALS SCIENCE AND TECHNOLOGY

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**VENUE:** Lecture hall Káldor Mihály, Bld. B/1. groundfloor, 8.

**Chairman:** **András ROÓSZ** *professor*

**Secretary:** **Tamás MENDE** *research fellow*

**Date:** **March 18, 2010**

- 14.00 **Dániel Madarász, István Budai, Csaba Mekler, György Kaptay** Bay Zoltán Institute for Nanotechnology, Hungary  
*Separation of Al/SiC Composites*
- 14.20 **József Szabó<sup>1</sup>, Csaba Mekler<sup>1</sup>, Gabriella Zsoldos<sup>2</sup>, István Budai, György Kaptay<sup>1</sup>** Bay Zoltán Institute for Nanotechnology<sup>1</sup>, University of Miskolc<sup>2</sup>, Hungary  
*Sedimentation of SiC Particles in Al/SiC Liquid Composites*
- 14.40 **György Kaptay** Bay Zoltán Institute for Nanotechnology, Hungary  
*On the Laws of Thermodynamics ( $3 + 1 = 4$ )*
- 15.00 **Péter Baumli<sup>1</sup>, Gergely Lakatos<sup>1</sup>, Anna Sycheva<sup>1</sup>, György Kaptay<sup>2</sup>** University of Miskolc, Bay Zoltán Institute for Nanotechnology<sup>2</sup>, Hungary  
*Interfacial Phenomena in the Ag/Si System*
- 15.20 **Krisztina Márkus Szedlák, A. László Gömze, János Erdélyi** University of Miskolc, Hungary  
*Crystalline Needles of Calcium-Silicate-Hydrate and Calcium-Aluminate-Hydrate Assimilated to Bending Strength of Concrete*
- 15.40 *Break*
- 16.00 **Ádám Egész, Ojima Fumihiko, A. László Gömze** University of Miskolc, Hungary  
*Developing of High Porosity Ceramics for Al<sub>2</sub>O<sub>3</sub> Matrix Composite Materials*
- 16.20 **Gábor Szabó, Péter Barkóczy** University of Miskolc, Hungary  
*Optimalisation of the Recrystallization of the Tungsten Filament in the Automotive Incandescent Lamps*
- 16.40 **Máté Szűcs** University of Miskolc, Hungary  
*Improvement of Flatness in Case of Al-Alloys by Optimizing the Cold Rolling Parameters*
- 17.00 **Szilvia Gyöngyösi, Péter Barkóczy, Anita Tóth** University of Miskolc, Hungary  
*The Simulation of Phase Transformations Driven by Short Range Diffusion by Cellular Automata*
- 17.20 **Vasile Lucian Diaconu<sup>1</sup>, Torsten Sjögren<sup>2</sup>, Peter Skoglund<sup>3</sup>, Diószegi Attila<sup>4</sup>** University of Miskolc, Hungary<sup>1</sup>, SP Technical Research Institute, Sweden<sup>2</sup>, SCANIA CV AB Materials Technology, UTMT<sup>3</sup>, Jönköping University, Sweden<sup>4</sup>  
*Thermomechanical Fatigue Investigation of Compacted Graphite Irons*
- 17.40 *Summary*

## E: MATERIALS SCIENCE AND TECHNOLOGY

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**VENUE:** Lecture hall Káldor Mihály, Bld. B/1. groundfloor, 8.

**Chairman:** Valéria MERTINGER *assoc. professor*

**Secretary:** Márton BENKE *research fellow*

**Date:** March 19, 2010

- 9.00 **Judit Papp** University of Miskolc, Hungary  
*Cu<sub>58</sub>Zr<sub>42</sub> Amorphous Powders Producing in Planetary Ball Mill During Dry and Wet Milling*
- 9.20 **László Hubai, Gábor Tamás, Zsolt Hermann** Nanocenter Ltd., Hungary  
*Development of a Silver Nanoparticle Based Antibacterial Sprayable Sol for Plastic Surfaces*
- 9.40 **Ferencz Peti<sup>1</sup>, Lucian Grama<sup>2</sup>, Liviu Dorin Pop<sup>2</sup>** SC CIEMatrimon SA<sup>1</sup>, Petru Maior University of Târgu-Mureş<sup>2</sup>, Romania  
*Researches Concerning the Development Steps of Automotive Diecasted Transmission Brackets*
- 10.00 **Corina Birleanu, Felicia Sucala, Ioan Turcu, Stefan Bojan** Technical University of Cluj-Napoca, Romania  
*Statistical Analysis of Crack Advance in Advanced Ceramic (Type SiC)*
- 10.20 **Xiuli Han<sup>1</sup>, Lina Liu<sup>1</sup>, Jinpeng Bai<sup>1</sup>, Qianyun Gao<sup>2</sup>** Hebei Polytechnic University<sup>1</sup>, Tangshan Industrial Vocational Technical College<sup>2</sup>, China  
*The Mineralogical Compositions and Microstructure of Concasting Slag Film*
- 10.40 **Lina Liu<sup>1</sup>, Xiuli Han<sup>1,2</sup>, Changcun Li<sup>1,2</sup>, Shui Lv<sup>1</sup>, Qianyun Gao<sup>3</sup>** Hebei Polytechnic University<sup>1</sup>, Mining Development and Safety Technology Key Lab of Hebei Province<sup>2</sup>, Tangshan Industrial Vocational Technical College<sup>3</sup>, China  
*Microstructure Characteristics of the Sintering Ore Made of Hematite in Sijiaying*
- 11.00 **Feng Xiaoxin<sup>1</sup>, Cai Jiwei<sup>1</sup>, Chai Hongjun<sup>2</sup>, Song Yuzeng<sup>3</sup>** Hebei Polytechnic University<sup>1</sup>, Division of Ready-mixed Concrete, Tangshan Construction Group Co. Ltd.<sup>2</sup>, Tangshan Station for Quality Supervision and Measurement of Architectural Engineering<sup>3</sup>, China  
*Investigation of Drying Shrinkage of Concrete Prepared with Iron Mine Tailings*
- 11.20 *Summary*

## F: FLUID AND HEAT ENGINEERING

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**VENUE:** Room 227. Bld. A/1. 2<sup>nd</sup> floor, 227  
**Chairman:** Gábor JANIGA *assoc. professor*  
**Secretary:** Péter BENCs *PhD Student*

**Date:** March 18, 2010

- 14.00 Gábor Janiga, Santhosh Seshadhri, Oliver Beuing, Mathias Neugebauer, Rocco Gasteiger, Bernhard Preim, Georg Rose, Martin Skalej, Dominique Thévenin Otto-von-Guericke University of Magdeburg, Germany  
*Mesh Dependency Study of the CFD-Modeling in an Intracranial Aneurysm*
- 14.15 Mohamed H. Mohamed, Gábor Janiga, Elemér Pap, Dominique Thévenin Otto-von-Guericke University of Magdeburg, Germany  
*Airfoil Shape Optimization of a Two-Stage Wells Turbine*
- 14.30 Jiri Polansky, Dalibor Dvorak University of West Bohemia, Czech Republic  
*Numerical Investigation of 3D Unsteady Flow in Centrifugal Fan*
- 14.45 Betti Bolló University of Miskolc, Hungary  
*GRID Independence Study for Flow Around a Stationary Circular Cylinder*
- 15.00 László Nagy, Imre Horváth Budapest University of Technology and Economics, Hungary  
*Boundary Conditions of Large-Eddy Simulation in Vicinity of Airfoil*
- 15.15 Róbert Dúl, Károly Jármái, Árpád Bence Palotás University of Miskolc, Hungary  
*CFD Simulation of a Fireplace*
- 15.30 *Break*
- 15.45 Zsolt Mátrai<sup>1</sup>, Róbert Bordás<sup>2</sup>, Gábor Janiga<sup>2</sup>, Dominique Thévenin<sup>2</sup> University of Miskolc, Hungary<sup>1</sup>, Otto-von-Guericke University of Magdeburg, Germany<sup>2</sup>  
*Laser-Doppler-Velocimetry Measurements in Artificial Medical Models*
- 16.00 Dávid Jesch Budapest University of Technology and Economics, Hungary  
*Experimental Study on Effect of Vibration on Thermal Convection*
- 16.15 Eszter Lukács, Tamás Réger, András Gulyás Budapest University of Technology and Economics, Hungary  
*Reducing the Pressure Loss in a Sudden Expansion by Passive Flow Control Elements*
- 16.30 Péter Dani<sup>1</sup>, András Kakucs<sup>2</sup>, Károly Jármái<sup>3</sup>, János Száva<sup>1</sup>, József Farkas<sup>3</sup>, Botond Gálfi<sup>1</sup> Transylvania University of Brasov, Romania<sup>1</sup>, Sapientia University, Marosvásárhely, Romania<sup>2</sup>, University of Miskolc, Hungary<sup>3</sup>  
*Comparative Stiffness Analysis of Covered and Uncovered Structural Elements with Intumescent Paints at High Temperatures*

## **F: FLUID AND HEAT ENGINEERING**

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**VENUE:** Room 227. Bld. A/1. 2<sup>nd</sup> floor, 227

**Chairman:** **Gábor JANIGA** *assoc. professor*

**Secretary:** **Péter BENCs** *PhD Student*

**Date:** **March 18, 2010**

16.45 **István Lakatos** Széchenyi István University, Hungary  
*Gasoline Engine Diagnostic on Chassis Dynamometers*

17.00 **István Lakatos** Széchenyi István University, Hungary  
*Instationary Engine-Power Measurement on Chassis Dynamometers*

17.15 **Péter Bencs, Szilárd Szabó** University of Miskolc, Hungary  
*Temperature Field Visualization around a Heated Circular Cylinder by Schlieren Technique*

17.30 *Summary*

## G: APPLIED MECHANICS

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**VENUE:** Room 17. Bld. A/1. mezzanine, 17.

**Chairman:** György SZEIDL *professor*

**Secretary:** Pál KOVÁCS *assist. professor*

**Date:** March 18, 2010

- 14.00      **Judit Molnár, Mihály Dobróka** University of Miskolc, Hungary  
*Inversion-Based Petrophysical Model for Describing the Pressure Dependence of Seismic Velocity*
- 14.20      **Balázs Tóth** University of Miskolc, Hungary  
*Dual-Mixed Hellinger-Reissner Functional for Elastodynamics*
- 14.40      **Lajos György Kocsán** University of Miskolc, Hungary  
*On the Selection of First-Order Stress Functions for Cylindrical Shells*
- 15.00      **István Ecsedi, Attila Baksa** University of Miskolc, Hungary  
*Dynamic Equilibrium Equations for Non-Homogeneous Timoshenko Beam*
- 15.20      **István Ecsedi, Pál Zoltán Kovács** University of Miskolc, Hungary  
*Static Analysis of an Elastic Circular Plate with a Piezoelectric Actuator*
- 15.40      *Break*
- 16.00      **Dániel Burmeister** University of Miskolc, Hungary  
*Stability of a Circular Plate Stiffened with a Cylindrical Shell*
- 16.20      **László Kiss, György Szeidl** University of Miskolc, Hungary  
*A Variational Formulation of Stability Problems by Taking the Pre-Buckling Deformations Into Account*
- 16.40      **Miklós Béres** University of Miskolc, Hungary  
*A Remark on the Fundamental Equation of Rigid Body Kinematics*
- 17.00      **Ákos József Lengyel, Ecsedi István** University of Miskolc, Hungary  
*Mechanics of Composite Beams*
- 17.20      **Lajos Bodó, Edgár Bertóti** University of Miskolc, Hungary  
*Pressure Vessel Stress Analysis Using the Adina Finite Element Software*
- 17.40      **Dániel Antal** University of Miskolc, Hungary  
*Dynamical Modeling of a Path Controlled Vehicle*
- 18.00      *Summary*

## G: APPLIED MECHANICS

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**VENUE:** Room 17. Bld. A/1. mezzanine, 17.

**Chairman:** György SZEIDL *professor*

**Secretary:** Pál KOVÁCS *assist. professor*

**Date:** March 19, 2010

- 9.00      **István Páczelt** University of Miskolc, Hungary  
*Comments to the Steady Wear State of the Rotating Axisymmetric Bodies*
- 9.20      **Pál Zoltán Kovács, István Páczelt** University of Miskolc, Hungary  
*Optimal Piezoelectric Domain Determination by Using Evolutionary Computation and the Finite Element Method*
- 9.40      **Miklós Béres** University of Miskolc, Hungary  
*Application of Dual Numbers for Analysis of Spatial Mechanisms*
- 10.00     **Sorin Vlase** University of Brasov, Romania  
*Finite Element Analysis of Flexible Multi-Body Systems*
- 10.20     *Break*
- 10.40     **Mihai Ridzi, Iosif Dumitrescu, Vilhelm Itu, Tufis Adriana Estera** University of Petrosani, Romania  
*Displacements and Strain States on the Extracting Structure of an Extracting Structure Provided that the Safety Brake Works*
- 11.00     **Ciprian Bolog** University of Petrosani, Romania  
*Equilibrium of Strings with Small Sag, Being Attached to Two Fixed Points on a Slope*
- 11.20     *Summary*



## H: MATHEMATICS AND COMPUTER SCIENCE

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**VENUE:** Room 341. Bld. A/4. 3<sup>rd</sup> floor, 341.  
**Chairman:** Sándor FEGYVERNEKI *assoc. professor*  
**Secretary:** Attila HÁZY *assist. professor*

**Date:** March 18, 2010

- 14.00 **István Fazekas<sup>1</sup>, Alexey Chuprunov<sup>2</sup>** University of Debrecen, Hungary<sup>1</sup>, Kazan State University, Russia<sup>2</sup>  
*An Exponential Inequality and Strong Limit Theorems for Conditional Expectations*
- 14.20 **József Túri** University of Miskolc, Hungary  
*On the Moments of Sums of Independent Identically Distributed Random Variables*
- 14.40 **Zsolt Karácsony** University of Miskolc, Hungary  
*Longest Runs in Coin Tossing*
- 15.00 **Sándor Fegyverneki** University of Miskolc, Hungary  
*A Simple Robust Estimation for Parameters of the Levy-Smirnov Distribution*
- 15.20 **Csilla Csendes** University of Miskolc, Hungary  
*Random Number Generation to Multivariate Stable Distributions*
- 15.40 **Gábor Tolnai, Renáta Iváncsy** Budapest University of Technology and Economics, Hungary  
*Time Series Analysis in Web Log Mining*
- 16.00 *Break*
- 16.15 **Tamás Mészáros, Gergely Mezei, Dénes Bisztray** Budapest University of Technology and Economics, Hungary  
*An Overlapping Technique for Iterative Rules in Graph Rewriting Systems*
- 16.35 **Peter Bakucz<sup>1</sup>, Boris A. Hoffmann<sup>2</sup>, Stephan Willems<sup>2</sup>** GS Elektromedizinische Geräte GmbH<sup>1</sup>, University of Hamburg<sup>2</sup>, Germany  
*Dynamical Prediction of Successful Defibrillation by Atrial Fibrillation ECG Signals in AED Environment*
- 16.55 **Kwami Nutefe Agbeko** University of Miskolc, Hungary  
*Some Series of Concave Young Functions*
- 17.15 **Attila Házy** University of Miskolc, Hungary  
*Bernstein-Doetsch Type Results for Generalized Approximately Convex Functions*
- 17.35 **Nutefe Agbeko Kwami, Attila Házy** University of Miskolc, Hungary  
*An Algorithmic Determination of Optimal Measure from Data and an Application*
- 17.55 **Vladimir Simic, Branka Dimitrijevic** University of Belgrade, Serbia  
*A Bee Colony Optimization Approach to Solving the Maximal Covering Location Problem: Part I – Theoretical Analysis*
- 18.10 **Vladimir Simic, Branka Dimitrijevic** University of Belgrade, Serbia  
*A Bee Colony Optimization Approach to Solving the Maximal Covering Location Problem: Part II - Computational Analysis*
- 18.25 **Pellumb Kllogjeri<sup>1</sup>, Körtesi Péter<sup>2</sup>** University of Elbasan, Albania<sup>1</sup>, University of Miskolc, Hungary<sup>2</sup>  
*Mathematical Games*
- 18.40 *Summary*

## I: PHYSICS AND PHYSICS EDUCATION

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**VENUE:** Room 13. Bld. A/1. mezzanine, 13.

**Chairman:** Béla PARIPÁS *assoc. professor*

**Secretary:** Endre KOVÁCS *assist. professor*

**Date:** March 18, 2010

- 14.00 **Norbert Hegman, Péter Pekker, István Dódony** Bay Zoltán Institute for Nanotechnology, Hungary  
*The Current and Future States of Transmission Electron Microscopy at Nanobay-Nanometrology Department*
- 14.20 **Anett Nagyvárad** University of Pécs, Hungary  
*Scanning of the LINBO<sub>3</sub> Pattern to Create Domain Inversion Structure*
- 14.40 **György Vikor, István Berencsi, Miklós Bereznai** Guardian Orosháza Ltd., Hungary  
*The Role of the Optical Thin Layers in the Glass Industry*
- 15.00 **Zoltán Demendy** University of Miskolc, Hungary  
*Rosby Waves and Plasma Physics*
- 15.20 **Endre Kovács<sup>1</sup>, Ian P. McCulloch<sup>2</sup>, Balázs Dóra<sup>3</sup>, Miklós Gulácsi<sup>4</sup>** University of Miskolc, Hungary<sup>1</sup>, University of Queensland, Australia<sup>2</sup>, Max-Planck-Institute for the Physics of Complex Systems, Germany<sup>3</sup>, Università Degli Studi Di Perugia, Italy<sup>4</sup>  
*Persistent Electric Current in Non-Superconducting Mesoscopic Rings*
- 15.40 *Break*
- 15.50 **Béla Paripás<sup>1</sup>, Béla Paláshty<sup>1</sup>, Zitnik Matjaz<sup>2</sup>** University of Miskolc, Hungary<sup>1</sup>, J.Stefan Institute, Ljubljana, Slovenia<sup>2</sup>  
*State-State Interference in Electron Induced Resonant Auger Decay*
- 16.10 **Béla Paláshty, Béla Paripás** University of Miskolc, Hungary  
*Application of the Ocean Optics Fiber Optic Spectrometer in the Education*
- 16.30 **László Ujfaludi** Eszterházy Károly College, Hungary  
*Hidden Dimensions of Beauty - Physics and Fine Art*
- 16.50 **József Vida** Eszterházy Károly College, Hungary  
*Improvement of Educational Quality of the Eger Magic Tower by Museum-Pedagogical Activities*
- 17.10 **Mihályné Dobróka** University of Miskolc, Hungary  
*Structure of the Universe*
- 17.30 **Pellumb Killogjeri** University "Aleksander Xhuvani" Elbasan, Albania  
*Geogebra for Presenting and Interpreting Grouped Data and Solving Problems of Physics*
- 17.50 *Summary*

## J: AUTOMATION AND TELECOMMUNICATION

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**VENUE:** Institute of Information Science, 2<sup>nd</sup> floor, 202/b.  
**Chairman:** Tihamér ÁDÁM *assoc. professor*  
**Secretary:** Attila VARGA *assist. lecturer*

**Date:** March 18, 2010

- 14.00 **Alexander Czinki, Alexander Renner** University of Applied Sciences Aschaffenburg, Germany  
*The Mechatronic Concept of the Aschaffenburg-Camra Dextrous Robot Hand*
- 14.20 **Angela Egri, Vali Chivuta Sirb, Nadia Stoicuta, Olimpiu Stoicuta** University of Petrosani, Romania  
*Vectorial Control System of the GMF360 Robot*
- 14.40 **Aleksandra Kostic-Ljubisavljevic, Andreja Samcovic** University of Belgrade, Serbia  
*Towards Some Relevant Applications of Location-Based Services*
- 15.00 **Péter Ekler, Ákos Ludányi** Budapest University of Technology and Economics, Hungary  
*Bringing Distributed Hash Table Technology to Mainstream Mobile Phones*
- 15.20 **Péter Ekler<sup>1</sup>, Tamás Lukovszki<sup>2</sup>** Budapest University of Technology and Economics<sup>1</sup>, Eötvös Loránd University<sup>2</sup>, Hungary  
*Experiences with Network Coding in Mobile BitTorrent Environment*
- 15.40 *Break*
- 16.00 **István Ferenczi** College of Nyíregyháza, Hungary  
*Profinet IO Controller Cycle Time Variation Measuring Method*
- 16.20 **Ildikó Bölkény** University of Miskolc, Hungary  
*Enhanced Driving System for High Pressure Generators*
- 16.40 **Péter Borsody** University of Miskolc, Hungary  
*Wireless Monitoring System for Gas Fountain Inhibitor Technology in Hungary*
- 17.00 **Csaba Vörös** University of Miskolc, Hungary  
*Model Apparatus for CT Investigation for EOR Application*
- 17.20 *Summary*

## K: ELECTROTECHNICS - ELECTRONICS

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**VENUE:** Lecture Hall VII. Bld. A/1, 1<sup>st</sup> floor, 102-3.

**Chairman:** **Ernő KOVÁCS** *assoc. professor*

**Secretary:** **Csaba BLÁGA** *assoc. professor*

**Date:** **March 18, 2010**

14.00 *Opening speech by Chairman*

14.15 **Viliam Fedak, Karol Kyslan, Frantisek Durovsky, Peter Keusch** Technical University of Kosice, Slovakia

*Load Torque Emulator in Testing Power Converters for Small Vehicles*

14.30 **Zselyke Gaál, Péter Tamás, Ákos Antal** Budapest University of Technology and Economics, Hungary

*Examination and Calibration of Moire Equipment for Orthopaedic Usage*

14.45 **Lajos Tóth** University of Miskolc, Hungary

*Construction of Wavelets to Match Transient Vibration Signals*

15.00 *Break*

15.15 **Mareiki Kaloumenos, Frank Amrhein, Johannes Glaab, Ralf Hellmann, Michael**

**Kaloudis, Michael Sauer** University of Applied Sciences Aschaffenburg, Germany  
*Development of an UV-Light Source with Highest Power Density Based on Light Diode Technology for Applications in Production Engineering*

15.30 **Mircea Ruba<sup>1</sup>, Rares Terec<sup>1</sup>, Ioana Bentia<sup>1</sup>, Lorand Szabo<sup>1</sup>, Ernő Kovács<sup>2</sup>** Technical University of Cluj-Napoca, Romania<sup>1</sup>, University of Miskolc, Hungary<sup>2</sup>

*Study of Fault Tolerant Modular Variable Reluctance Linear Machine*

15.45 **Maria Daniela Stochitoiu, Daniel Marcu Marius, Georgeta Buica, Iosif Acutescu** University of Petrosani, Romania

*The Restructure of Electrical Energy Production Field - the Main Request for Romanian Economical Development*

16.00 **Viliam Fedak, Matus Hric, Frantisek Durovsky** Technical University of Kosice, Slovakia

*Laboratory Model of Continuous Line with Multi-Motor Drive*

16.15 *Break*

## K: ELECTROTECHNICS - ELECTRONICS

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**VENUE:** Lecture Hall VII. Bld. A/1, 1<sup>st</sup> floor, 102-3.

**Chairman:** **Ernő KOVÁCS** *assoc. professor*

**Secretary:** **Csaba BLÁGA** *assoc. professor*

**Date:** **March 18, 2010**

- 16.30 **Richárd Bátorfi** University of Miskolc, Hungary  
*Measurement of Network Frequency for Standard Diagnostics of Electrical Power Networks*
- 16.45 **Mircea Ruba, Ioana Bentia, Loránd Szabó** Technical University of Cluj-Napoca, Romania  
*Modular Electrical Machines – a Survey*
- 17.00 **Sorin Radu<sup>1</sup>, Florin Adrian Paun<sup>2</sup>, Mihaela Paraian<sup>2</sup>** University of Petrosani<sup>1</sup>, Insemex Petrosani<sup>2</sup>, Romania  
*Standardized Test Methods for Determination of Electrostatic Charge Load on Persons*
- 17.15 *Break*
- 17.30 **Dan Paunescu, Vasile Iancu, Dan-Cristian Popa** Technical University of Cluj-Napoca, Romania  
*On the Design of Axial Flux Permanent Magnet Generator Topologies*
- 17.45 **Viktor Füvesi<sup>1</sup>, Ernő Kovács<sup>1</sup>, Lóránd Szabó<sup>2</sup>** University of Miskolc, Hungary<sup>1</sup>, Technical University of Cluj-Napoca, Romania<sup>2</sup>  
*Analyses of a Nonsmooth Actuator Drive*
- 18.00 **Attila Unhauzer** University of Miskolc, Hungary  
*Analysis of Power Fluctuation by Voice Frequency Control with a New Diagnostics System*
- 18.15 *Summary*

## K: ELECTROTECHNICS - ELECTRONICS

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**VENUE:** Lecture Hall VII. Bld. A/1, 1<sup>st</sup> floor, 102-3.

**Chairman:** **Ernő KOVÁCS** *assoc. professor*

**Secretary:** **Csaba BLÁGA** *assoc. professor*

**Date:** **March 19, 2010**

- 9.00 **Lorand Szabo, Emilian Liviu Someșan, Emil Pădurariu, Mircea Ruba, Ioan-Adrian Viorel** Technical University of Cluj-Napoca, Romania  
*Comments on Switched Reluctance Machine Mathematical Model*
- 9.15 **Arthur Matyas, Claudia Martis, Károly Biro** Technical University of Cluj-Napoca, Romania  
*Analysis of Two Six-Phase Electrical Machines for Electrical Power Assisted Steering Systems*
- 9.30 **Adrian-Cornel Pop, Petrus Vlad, Claudia Steluta Martis, Vasile Iancu** Technical University of Cluj-Napoca, Romania  
*Electrical Machines for Hybrid/Electrical Vehicle - State of the Art*
- 9.45 **Levente Szalontai, Ernő Kovács** University of Miskolc, Hungary  
*Reconstruction of the Epipolar Geometry*
- 10.00 *Break*
- 10.15 **Octavian Marghitas, Dan-Cristian Popa, Vasile Iancu** Technical University of Cluj-Napoca, Romania  
*Theoretic and Experimental Research on the Two Phased Linear Motor*
- 10.30 **Loránd Szabó, Csaba Szász, Virgil Chindriș** Technical University of Cluj-Napoca, Romania  
*Computer Aided Modeling and Simulation of Bio-Inspired Hardware Systems*
- 10.45 **Traian Cretu, Dan Iudean, Loránd Szabó, Radu A. Munteanu** Technical University of Cluj-Napoca, Romania  
*Study on the Influences of Degraded Stator and Rotor Materials on PMSM Vibrations*
- 11.00 **Csaba Blága** University of Miskolc, Hungary  
*Reactive Power Analysis of Single Phase Power Control - 2<sup>nd</sup> Part*
- 11.15 *Break*

## K: ELECTROTECHNICS - ELECTRONICS

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**VENUE:** Lecture Hall VII. Bld. A/1, 1<sup>st</sup> floor, 102-3.

**Chairman:** **Ernő KOVÁCS** *assoc. professor*

**Secretary:** **Csaba BLÁGA** *assoc. professor*

**Date:** **March 19, 2010**

- 11.30 **Tamás Bodolai**, **Arnold Rónalföldi** University of Miskolc, Hungary  
*Determination of Moment-Speed of Rotation Characteristic of Electrical Motors by Computer-Aided Measurement Method*
- 11.45 **Csaba Blaga**, **Ernő Kovács** University of Miskolc, Hungary  
*Simulation of Performance Curves of Starter*
- 12.00 **Gábor Fekete** University of Miskolc, Hungary  
*Energy Rectifier Based on Continuous Mechanic Filter*
- 12.15 **Ernő Kovács**<sup>1</sup>, **Csaba Blága**<sup>1</sup>, **Loránd Szabó**<sup>2</sup> University of Miskolc, Hungary<sup>1</sup>, Technical University of Cluj Napoca, Romania<sup>2</sup>  
*Simulation of Performance Curve of an Alternator*
- 12.30 **Angéla Váradi Szarka** University of Miskolc, Hungary  
*Effect of the Network Frequency Changes to the Accuracy of THD Measurement*
- 12.45 *Break*

## L: MACHINE AND CONSTRUCTION DESIGN

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**VENUE:** Department of Machine Elements, Bld. A/3. 1<sup>st</sup> floor, 15.

**Chairman:** János Ferenc SZABÓ *assoc. professor*

**Secretary:** Levente CZÉGÉ *assist. professor*

**Date:** March 18, 2010

- 14.00 **Hasan Gokkaya<sup>1</sup>, Gratiela Dana Boca<sup>2</sup>, Muammer Nalbant<sup>3</sup>** Karabuk University, Turkey<sup>1</sup>, North University of Baia Mare, Romania<sup>2</sup>, Gazi University, Turkey<sup>3</sup>  
***FEM - The Analysis of Time Chances and Temperature Related to Cutting Tool Coating***
- 14.15 **Hasan Gokkaya<sup>1</sup>, Gratiela Dana Boca<sup>2</sup>** Karabuk University, Turkey<sup>1</sup>, North University of Baia Mare, Romania<sup>2</sup>  
***Low Design Frequences - Improve the Quality and Reliability of Products***
- 14.30 **Lucian Grama<sup>1</sup>, Virgilius Vasilache<sup>2</sup>, Monica Vasilache<sup>1</sup>** Petru Maior University<sup>1</sup>, ELCEN S.A.<sup>2</sup>, Romania  
***Researches and Results in Improving the Heating System of the Plastics Injection Machines***
- 14.45 **Vilhelm Itu<sup>1</sup>, Iosif Dumitrescu<sup>1</sup>, Francisc Toth<sup>1</sup>, Stefan Jakob<sup>2</sup>** University of Petrosani<sup>1</sup>, Technosam SA Commercial Society, Satu Mare<sup>2</sup> Romania  
***Breaking Case Rehabilitation and Technical Verification of Breaking System in the MK 2,1 x 4 Winding Engine Mounted in Lonea Mine Skip Shaft***
- 15.00 *Break*
- 15.10 **Dumitru Jula, Florin Popescu, Stela Dinescu, Andrei Andras, Hilciu Ovidiu** University of Petrosani, Romania  
***Reliability Assessment for Continuous Mining Technological Systems***
- 15.25 **Ovidiu Bogdan Tomus, Gabriel Valentin Voicu, Grigore Petre, Lorin Poiana** University of Petrosani, Romania  
***Research Regarding the Use of CAD Methods on the Design of Bucket Wheel and Excavator Teeth and Bucket Based on Real Working Conditions***
- 15.40 **László Sárközi<sup>1</sup>, István Barkóczi<sup>2</sup>** University of Miskolc<sup>1</sup>, FUX Co.<sup>2</sup> Hungary  
***Strength Analysis of Electronic Transmission Strand Type 500/66 Given by the Standard ACSR Msz 149***
- 15.55 **György Hegedús, Antal Barak, Balázs Barna, Péter Demeter, Gábor Simon, Attila Szilágyi, György Takács** University of Miskolc, Hungary  
***Development of Analyzing Equipment of the Remanent Lifetime on Roller Bearings***
- 16.10 **Gyula Patkó, György Takács, Balázs Barna, Péter Demeter, György Hegedús, Antal Barak, Gábor Simon, Attila Szilágyi** University of Miskolc, Hungary  
***A Process for Establishing the Remanent Lifetime of Rolling Element Bearings***
- 16.25 *Break*



## L: MACHINE AND CONSTRUCTION DESIGN

---

**VENUE:** Department of Machine Elements, Bld. A/3. 1<sup>st</sup> floor, 15.

**Chairman:** János Ferenc SZABÓ *assoc. professor*

**Secretary:** Levente CZÉGÉ *assist. professor*

**Date:** March 18, 2010

16.40 Ales Bílkovsky Czech Technical University, Czech Republic  
*Work in SIMVIA2*

16.55 Ondrej Marek Czech Technical University, Czech Republic  
*Wave-Based Control of Flexible Bodies*

17.10 Parth Domadiya University of Miskolc, Hungary  
*An Optimization Approach to Reduce Noise Transmission*

17.25 Levente Czégé University of Miskolc, Hungary  
*Selection of Variable Coupled Planetary Gear Drives*

17.40 *Summary*

## M: MATERIAL PROCESSING TECHNOLOGIES

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**VENUE:** Room 14. Bld. A/1. mezzanine, 14.  
**Chairman:** **Miklós TISZA** *professor*  
**Secretary:** **Zoltán Dávid KOCSIS** *PhD Student*

**Date:** **March 18, 2010**

- 14.00 **Miklós Tisza, Péter Zoltán Kovács** University of Miskolc, Hungary  
*Incremental Sheet Metal Forming*
- 14.20 **Dávid Kocsis** University of Miskolc, Hungary  
*Laser Material Processing Studies at the Department of Mechanical Engineering*
- 14.40 **Dániel Juhász, András Balogh** University of Miskolc, Hungary  
*Problem of Close-Standing Spot Welds in Sheet Metal Constructions*
- 15.00 **Michael Mozin, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany  
*New Nozzle Design and Fabrication for Gas Supported Laser Remote Fusion Cutting*
- 15.20 **Anna Risch, Kristof Hühnlein, Jürgen Knöll, Ralf Hellmann** University of Applied Sciences  
Aschaffenburg, Germany  
*Picosecond and Nanosecond Pulsed Laserscribing of Transparent Conductive Indium Tin  
Oxide*
- 15.40 **Pop Cosmin, Gabor Marius** E.ON Gaz Distribuție, Romania  
*Procedures and Methods used for Welding Plastic Pipes used for Transporting Natural Gases*
- 16.00 *Summary*

# **N1: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS**

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**VENUE:** Lecture hall XV. Bld. C/1. 1<sup>st</sup> floor, 101.

**Chairman:** **János KUNDRÁK** *professor*

**Co-chairman:** **Zebala WOJCHIECH** *professor*

**Secretary:** **Csaba FELHŐ** *assist. lecturer*

**Date:** **March 18, 2010**

- 14.00 **János Kundrák<sup>1</sup>, Bernard Karpuschewski<sup>2</sup>, Csaba Felhő<sup>1</sup>** University of Miskolc, Hungary<sup>1</sup>,  
Otto-von-Guericke University of Magdeburg, Germany<sup>2</sup>  
*Determination of the Expected Roughness of Cut Surface Based on Theoretical Roughness*
- 14.15 **Bernard Karpuschewski<sup>1</sup>, János Kundrák<sup>2</sup>, Csaba Felhő<sup>2</sup>, Mourek Daniel<sup>1</sup>** Otto-von-Guericke  
University of Magdeburg, Germany<sup>1</sup>, University of Miskolc, Hungary<sup>2</sup>  
*Postprocessor Development for a Five-Axis Tool Grinding Machine*
- 14.30 **Wojciech Zebala, Andrzej Ryniewicz** Cracow University of Technology, Poland  
*Aspects of Machine Tool Kinematics Accuracy*
- 14.45 **Olga Verezub<sup>1</sup>, Zoltan Kalazi<sup>2</sup>, Gabor Búza<sup>2</sup> Anatolij Ivanovich Grabchenko<sup>3</sup>, Kaptay  
George<sup>4</sup>** University of Miskolc, Hungary<sup>1</sup>, BAY-ATI Research Institute for Materials Science,  
Hungary<sup>2</sup>, National Technical University “Kharkov Polytechnic Institute”, Ukraine<sup>3</sup>, Research  
Institute for Nanotechnology, Hungary<sup>4</sup>  
*Preparation of a TIC Reinforced In-Situ Steel Matrix Surface Nanocomposite by Laser Melt  
Injection Technology*
- 15.00 **M. Numan Durakbasa<sup>1</sup>, P. Herbert Osanna<sup>1</sup>, Pinar Demircioglu<sup>2</sup>, Liviu Crisan<sup>3</sup>** Vienna  
University of Technology, Austria<sup>1</sup>, Adnan Menderes University, Romania<sup>2</sup>, Technical University  
Cluj-Napoca, Romania<sup>3</sup>  
*Surface Measurement and Evaluation Methods of High Precision Technical Structures*
- 15.15 **Berce Petru, Nicolae Balc, Razvan Pacurar** Technical University of Cluj-Napoca, Romania  
*Industrial Applications of Selective Laser Sintering Technology*
- 15.30 **Liu Shuxian, Wang Qianping, Niu Fusheng** Hebei Polytechnic University, China  
*Effect of Different Heat Treatment Temperature on Properties of SiO<sub>2</sub>-ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>- Cr<sub>2</sub>O<sub>3</sub>  
Coatings on Stainless Steel Substrate*
- 15.45 **Imrich Lukovics, Ondrej Bilek** Tomas Bata University In Zlin, Czech Republic  
*High Speed Grinding*
- 16.00 *Summary*

## **N1: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS**

**VENUE:** Lecture hall XV. Bld. C/1. 1<sup>st</sup> floor, 101.

**Chairman:** **János KUNDRÁK** *professor*

**Co-chairman:** **Zebala WOJCHIECH** *professor*

**Secretary:** **Csaba FELHŐ** *assist. lecturer*

**Date:** **March 18, 2010**

- 16.10 **Krisztina Bodnár** University of Miskolc, Hungary  
*Characteristics of Abrasive Waterjet Cutting*
- 16.20 **Csaba Felhő** University of Miskolc, Hungary  
*Development of a Software for Calculation of Theoretical Roughness in Turning of Cylindrical Surfaces*
- 16.30 **Gergely Szabó** University of Miskolc, Hungary  
*Modeling of Adiabatic Shear in Case of Hard Turning*
- 16.40 **Renáta Monostori** University of Miskolc, Hungary  
*The Measurement Technical Analysis of a Hip-Joint Prosthesis*
- 16.50 **Sándor Bodzás** University of Miskolc, Hungary  
*The Geometrical Examination of Worm Gear Hobs*
- 17.00 **László Ráczkövi** University of Miskolc, Hungary  
*Examination of Torsional Vibration in Case of Drilling*
- 17.10 **Zoltán Mándy** University of Miskolc, Hungary  
*The Third Wave Advant Edge of Finite Element the Application of Software in the Course of Chipping and Introducing Some Solutions*
- 17.20 *Summary*

## **N2: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS**

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**VENUE:** Room 16. Bld. A/1. mezzanine, 16.

**Chairman:** Csaba GYENGE *professor*

**Co-chairman:** Zsolt MAROS *senior lecturer*

**Secretary:** Krisztina BODNÁR *PhD Student*

**Date:** March 18, 2010

- 16.20 **Csaba Gyenge, Ancuta Costea, István Fülöp** Technical University of Cluj-Napoca, Romania  
*Main Aspects of Introduction the Predictive Maintenance Procedures in Romanian Paper Industry*
- 16.30 **Szabolcs Biró<sup>1</sup>, Tibor Cselle<sup>2</sup>, Václav Hájek<sup>3</sup>, Sándor Sipos<sup>1</sup>** Óbuda University<sup>1</sup>, Platit AG<sup>2</sup>, PIVOT A.s.<sup>3</sup>, Hungary  
*Evaluation of Cutting Performance on Pramet Carbide Inserts with Several Coatings, Made by Platit Ag.*
- 16.40 **Bogdan Slodki** Cracow University of Technology, Poland  
*Chip Forms in Turning Inconel 625 with - SM Iscar Chipformer*
- 16.50 **Balc Nicolae, Razvan Pacurar, Petru Berce** Technical University of Cluj-Napoca, Romania  
*Rapid Product Development Using the SLS Tooling Method*
- 17.00 **Sorina Stanila, Sorin Apostu, Ioan Prip** University of Petrosani, Romania  
*Method for Seismic Induced Stress Monitoring*
- 17.10 **Sándor Csuka<sup>1</sup>, Sándor Sipos<sup>1</sup>, István Tomoga<sup>2</sup>, László Orosz<sup>2</sup>** Óbuda University<sup>1</sup>, Sandvik Hungary Ltd.<sup>2</sup>, Hungary  
*Flexible Production with Exchangable Headed Type of Milling Cutters*
- 17.20 **Annamaria Rafa, Csaba Gyenge** Technical University of Cluj-Napoca, Romania  
*Some Specific Aspects Regarding the Manufacturing of Renewable Energy Exploitation Equipments*
- 17.30 **Richárd Horváth, Gergő Mihályi, Sándor Sipos** Óbuda University, Hungary  
*Design of end Mill Cutter with Applying FEM-Method*
- 17.40 **Pacurar Razvan, Petru Berce, Nicolae Balc** Technical University of Cluj-Napoca, Romania  
*Finite Element Analysis for Estimating the Shrinkage of Metal Parts During SLS Post-Processing Stage in the Oven*
- 17.50 **Marian Kwatera** Cracow University of Technology, Poland  
*Balancing of Assembly Line*
- 18.00 **Ondrej Bilek, Imrich Lukovics, Ondrej Daniel** Tomas Bata University in Zlin, Czech Republic  
*Stiffness Analysis of Machine Frame using CAD/CAE*
- 18.10 **Gabor Marius<sup>1</sup>, Pop Cosmin<sup>2</sup>** S.C. Art Serv S.R.L.<sup>1</sup>, EON-gas<sup>2</sup>, Romania  
*Superfinishing Effects on Hypoid Gears Surface Finish and Transmission Errors*
- 18.20 **Richárd Horváth, Sándor Sipos** Óbuda University, Hungary  
*Machinability of High Silicon Content Aluminium Alloys*
- 18.30 *Summary*

## **N3: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS**

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**VENUE:** Room 18. Bld. A/1. mezzanine, 18.  
**Chairman:** **Anatoliy GRABCHENKO** *professor*  
**Co-chairman:** **Gyula VARGA** *assoc. professor*  
**Secretary:** **Gergely SZABÓ** *PhD Student*

**Date:** **March 18, 2010**

- 16.20 **Anatoly Grabchenko, Vladimir Dobroskok, Sergey Tschernyshov, Yaroslav Garaschenko** National Technical University "Kharkiv Polytechnic Institute", Ukraine  
*Materialization Accuracy of Products by Generative Technologies of Macrolevel*
- 16.30 **Wojciech Zebala, Andrzej Matras** Cracow University of Technology, Poland  
*Optimization of Turbine Parts Milling*
- 16.40 **János Kundrák, Gergely Szabó** University of Miskolc, Hungary  
*Examination of Plastic Strain in Chip Root with FEM Simulation in Case of Hard Turning*
- 16.50 **Zsuzsa Balajti, Illés Dudás** University of Miskolc, Hungary  
*Error Analysis of Geometrical Dimensioning in Production of Cylindrical Worm Having Concave Arched Profile*
- 17.00 **Anatoly Grabchenko, Vladimir Fedorovich, Evgeniy Babenko, Dmitriy Romashov, Dmitriy Fedorenko** National Technical University "Kharkiv Polytechnic Institute", Ukraine  
*Improvement of Abrasive-Diamond Tools Based on 3D-Simulation*
- 17.10 **Gyula Varga<sup>1</sup>, Takayuki Watanabe<sup>2</sup>, Ikuo Tanabe<sup>2</sup>** University of Miskolc, Hungary<sup>1</sup>, Nagaoka University of Technology, Japan<sup>2</sup>  
*Characteristics of Diamond Like Carbon Coatings*
- 17.20 **Libao An<sup>1</sup>, Chunguang Lu<sup>1</sup>, Yu Hou<sup>2</sup>** Hebei Polytechnic University<sup>1</sup>, University of Science Technology Beijing<sup>2</sup>, China  
*Optimization of Machining Parameters for Multi-Pass Turning Operations*
- 17.30 **Renáta Monostori, Illés Dudás** University of Miskolc, Hungary  
*Measuring Technical Analysis of Crown Wheel*

## **N3: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS**

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**VENUE:** Room 18. Bld. A/1. mezzanine, 18.  
**Chairman:** Anatoliy GRABCHENKO *professor*  
**Co-chairman:** Gyula VARGA *assoc. professor*  
**Secretary:** Gergely SZABÓ *PhD Student*

**Date:** March 18, 2010

- 17.40 **Ferenc Szigeti<sup>1</sup>, Gyula Varga<sup>2</sup>, László Péter<sup>1</sup>, Attila Százvai<sup>1</sup>** College of Nyíregyháza<sup>1</sup>,  
University of Miskolc<sup>2</sup>, Hungary  
*Examination of Surface Roughness at Environmentally Friendly Manufacturing*
- 17.50 **Yuriy Gutsalenko, Aleksandr Mironenko, Tatyana Tretyak, Natalya Kryukova, Nina  
Zubkova** National Technical University "Kharkiv Polytechnic Institute", Ukraine  
*Tooling Design and Development of Shaping Technology of Bevel Gears of Double-Link  
Geared Variators*
- 18.00 **Zsuzsa Balajti** University of Miskolc, Hungary  
*Practical Application of the Monge Projection in the Production Process*
- 18.10 **Sándor Bodzás, Illés Dudás** University of Miskolc, Hungary  
*Modern Check up of Spiroid Worm*
- 18.20 **Libuse Sykorova, Martina Malachova** Tomas Bata University in Zlin, Czech Republic  
*Analyse of Concentrated Power Action for PMMA*
- 18.30 *Summary*

## O: APPLIED INFORMATION ENGINEERING

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**VENUE:** Lecture Hall V., Bld. A/1. mezzanine 3-4.  
**Chairman:** **László DUDÁS** *assoc. pofessor*  
**Secretary:** **Olivér HORNYÁK** *assoc. professor*

**Date:** **March 18, 2010**

- 14.00 **Bence Kővári** Budapest University of Technology and Economics, Hungary  
*Limitations of Feature Based Off-Line Signature Verification Methods*
- 14.20 **Péter Martinek, Balázs Villányi** Budapest University of Technology and Economics, Hungary  
*Optimal Composition of Schema Matching Algorithms*
- 14.40 **László Siroki, Gergely Mezei** Budapest University of Technology and Economics, Hungary  
*Translation of Domain-Specific Models and Model Transformations to Prolog*
- 15.00 **Zsombor Erdődy-Nagy, Péter Ekler** Budapest University of Technology and Economics, Hungary  
*Efficient Content Sharing on Android Platform*
- 15.20 **Péter Bikfalvi, Ferenc Erdélyi, Tibor Tóth** University of Miskolc, Hungary  
*A New Approach to Solving the Tasks of Production Planning and Control: The "Production Triangle" Model*
- 15.40 *Break*
- 16.00 **Attila Szilágyi, Bertalan Forstner** Budapest University of Technology and Economics, Hungary  
*Designing and Implementing a Computer Mouse on a Symbian S60 Based Mobilephone*
- 16.20 **Dávid Zakál, László Lengyel** Budapest University of Technology and Economics, Hungary  
*Implementing Unified Device Management in a Heterogeneous Environment*
- 16.40 **Levente Hunyadi, István Vajk** Budapest University of Technology and Economics, Hungary  
*Model Reconstruction from a Point Cloud in the Errors-in-Variables Context*
- 17.00 *Summary*



## O: APPLIED INFORMATION ENGINEERING

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**VENUE:** Lecture Hall V., Bld. A/1. mezzanine 3-4.  
**Chairman:** **László DUDÁS** *assoc. pofessor*  
**Secretary:** **Olivér HORNYÁK** *assoc. professor*

**Date:** **March 19, 2010**

- 8.00 **László Dudás** University of Miskolc, Hungary  
*The Effect of Worm Profile on Contact Lines*
- 8.20 **László Kovács, László Bednarik** University of Miskolc, Hungary  
*DITA Metadata and XSLT-FO in Document Management*
- 8.40 **László Kovács, László Griger, Zsolt Tóth** University of Miskolc, Hungary  
*Induction of PCFG Grammar Trees*
- 9.00 **Ákos Dudás** Budapest University of Technology and Economics, Hungary  
*Evaluation of Hash Table Implementations*
- 9.20 **Dmitriy Dunaev, László Lengyel** Budapest University of Technology and Economics, Hungary  
*Algorithmic State Machine Flowchart Model for Average-Scale Software Development*
- 9.40 **Balázs Engedy, Sándor Juhász** Budapest University of Technology and Economics, Hungary  
*Using Binary Delta Compression for Remote Update of Embedded Systems*
- 10.00 **Ágnes Korotij<sup>1</sup>, Bettina Hernádi<sup>2</sup>, Zsolt Zsigmond Kovács<sup>3</sup>** KOVEX-Computer Ltd.<sup>1</sup>, University of Miskolc<sup>2</sup>, DEKUP NPO<sup>3</sup>, Hungary  
*Glossaries Reconsidered: The Conceptual Model of Environmental Accounting*
- 10.20 *Break*
- 10.40 **Péter Korondi<sup>1</sup>, Péter Galambos<sup>1</sup>, András Róka<sup>1</sup>, Gábor Sörös<sup>2</sup>** MTA SZTAKI<sup>1</sup>, Budapest University of Technology and Economics<sup>2</sup>, Hungary  
*Investigation of Peripheral Vision Based Information Rendering*
- 11.00 **György Vigh** Suli-Soft-Design, Hungary  
*Power Line Communication*
- 11.20 **Jing Chen, Zhu Qingjie, Xu Linlin** Hebei Polytechnic University, China  
*Strategy and Risk Analysis of GIS-based Ordered Weighted Averaging Method*
- 11.40 **Qingjie Zhu, Su Youpo** Hebei Polytechnic University, China  
*GIS-Based Multi-Criteria Evaluation of Site Suitability for Buried Pipeline*
- 12.00 *Summary*

## O: APPLIED INFORMATION ENGINEERING

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**VENUE:** Lecture Hall V., Bld. A/1. mezzanine 3-4.

**Chairman:** **László DUDÁS** *assoc. pofessor*

**Secretary:** **Olivér HORNYÁK** *assoc. professor*

**Date:** **March 19, 2010**

- 14.00 **László Kovács, Attila Perlaki** University of Miskolc, Hungary  
*Cost Analysis of Nearest Neighbor Search with HP Tree*
- 14.20 **Gabriella Daróczy** University of Miskolc, Hungary  
*Artificial Intelligence: Reality of Fiction?*
- 14.40 **Attila Perlaki** University of Miskolc, Hungary  
*Developing a Knowledge Map for University of Miskolc - The IT Side*
- 15.00 **Péter Bagó** University of Pécs, Hungary  
*Opportunities of Coospace Development*
- 15.20 **Krisztián Mihály, Olivér Hornyák** University of Miskolc, Hungary  
*Generic Framework for Scheduling Problems*
- 15.40 **Angela Egri, Vali Sirb Chivuta, Olimpiu Stoicuta, Nadia Stoicuta, Roxana Bubatu**  
University of Petrosani, Romania  
*Híbrid Control System for Flexible Fabrication Systems*
- 16.00 *Break*
- 16.20 **János Kovács, Antónia Berecz** Gábor Dénes College, Hungary  
*Fuzzy Robot Workshop on DGAU*
- 16.40 **Olivér Hornyák<sup>1</sup>, Gábor Sáfrány<sup>2</sup>** University of Miskolc<sup>1</sup>, Evopro Ltd.<sup>2</sup>, Hungary  
*Models and Methods to Detect Similarity of Manufacturing Machines*
- 17.00 **Olivér Hornyák<sup>1</sup>, Gábor Sáfrány<sup>2</sup>** University of Miskolc<sup>1</sup>, Evopro Ltd.<sup>2</sup>, Hungary  
*Detecting Similarity in PLC Codes*
- 17.20 *Summary*

## **P: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS**

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**VENUE:** Regional Adult Education Centre, Room 207.

**Chairman:** **Béla ILLÉS** *professor*

**Secretary:** **Péter TELEK** *assist. professor*

**Date:** **March 18, 2010**

14.00 *Opening Ceremony*

14.10 **Annegret Brandau, Juri Tolujew** Otto-von-Guericke University of Magdeburg, Germany  
*Logistics Event Management*

14.25 **Elke Glistau<sup>1</sup>, Michael Schenk<sup>1</sup>, Norge Machado Coello<sup>2</sup>** Otto-von-Guericke University of  
Magdeburg, Germany<sup>1</sup>, Universität Santa Clara, Cuba<sup>2</sup>  
*Logistics Process Analysis - Academic Education and Practical Trainings*

14.40 **Sebastian Trojahn** Otto-von-Guericke University of Magdeburg, Germany  
*Procedure for the Positioning of Local Consolidation Facilities under Ecological and Economic  
Aspects*

14.55 **Heike Mrech, Ines Hofmann** University of Merseburg, Germany  
*Application of the Numerical Simulation for Variation Considerations of Mould Layouts in  
Foundries with Single Item and Small Series Production*

15.10 **István Szentmiklósi, Béla Illés** University of Miskolc, Hungary  
*Informationssystem of Network Operating Chains*

15.25 **Richárd Ladányi<sup>1</sup>, György Sárközi<sup>2</sup>** Bay Zoltán Foundation for Applied Research<sup>1</sup>, Borsod  
Volán Public Transport Co.<sup>2</sup>, Hungary  
*The Role and Importance of Simulation in the Logistical Processes of Public Transport*

15.40 *Break*

15.55 **Marta Kadlubek** Czestochowa University of Technology, Poland  
*Approaches to Customer Service and Order Handling*

16.10 **József Kovács, Silviu Nan Marin, Iosif Andras, Gheorghe Bogdan Urdea** University of  
Petrosani, Romania  
*Research Regarding the Operation of Continuous Transportation Systems in Valea Jiului  
Colliery's Conditions*

16.25 **Katarzyna Grondys** Czestochowa University of Technology, Poland  
*Application of Electronic Supply Chain in Company Management*

16.40 **Drazen Popovic, Milorad Vidovic, Nenad Bjelic Branislava** Faculty of Transport and Traffic  
Engineering, Serbia  
*Matching Heuristics for Inventory Routing Problem in Fuel Delivery*

16.55 **Marta Kadlubek** Czestochowa University of Technology, Poland  
*Aspect of Order Handling Cycle*

17.10 *Summary*

## **P: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS**

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**VENUE:** Regional Adult Education Centre, Room 207.

**Chairman:** **György KOVÁCS** *assoc. professor*

**Secretary:** **Péter TAMÁS** *researcher*

**Date:** **March 19, 2010**

- 8.30 **János Németh, Béla Illés** University of Miskolc, Hungary  
*Movement Improvement of Container-Car used for Slagtransport*
- 8.45 **Kiss Imrich, Miroslav Šenkyr, Jan Michalko** University of Security Management, Slovakia  
*Development Conception of the Broad Gauge Railways*
- 9.00 **Tamás Bányai** University of Miskolc, Hungary  
*High-Speed Identification in Robot Cells*
- 9.15 **Peter Kostal<sup>1</sup>, Illés Béla<sup>2</sup>** Faculty of Material Science and Technology in Trnava, Slovakia<sup>1</sup>,  
University of Miskolc, Hungary<sup>2</sup>  
*Implementation of the Subject Production Logistics into the Teaching Process*
- 9.30 **György Kovács, Attila Molnár** University of Miskolc, Hungary  
*Method for Determination of an Optimal Storage Structure*
- 9.45 **Peter Kostal<sup>1</sup>, Sobrino Daynier Rolando Delgado<sup>2</sup>, Fernando Marrero Delgado<sup>2</sup>** Faculty of  
Material Science and Technology in Trnava, Slovakia<sup>1</sup>, Central University “Marta Abreu” De  
Las Villas, Santa Clara<sup>2</sup>  
*The Importance of an Exhaustive Diagnostic in the SCM. Proposal of a Diagnostic Method*
- 10.00 **Tamás Bányai** University of Miskolc, Hungary  
*Moving House Logistics in Office Buildings*
- 10.15 **Andrea Mudriková, Štefan Horváth** Faculty of Material Science and Technology in Trnava,  
Slovakia  
*Material Flow Simulation in Production*
- 10.30 **Kiss Imrich, Aurel Sloboda** University of Security Management, Slovakia  
*Safety of the Experimental Hydrogen Car*
- 10.45 *Break*

## **P: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS**

---

**VENUE:** Regional Adult Education Centre, Room 207.

**Chairman:** **György KOVÁCS** *assoc. professor*

**Secretary:** **Péter TAMÁS** *researcher*

**Date:** **March 19, 2010**

- 11.00 **Péter Tamás, György Kovács, Béla Illés** University of Miskolc, Hungary  
*Cost Model for the Finished Goods Storage Activities in Case of Outsourcing Examination*
- 11.15 **Noémi Elbert** Pannon University, Hungary  
*Logistics Management of Product Phase-out: Analysis of the Path-Dependency in the Product Life Cycle*
- 11.30 **Norbert Tóth, László Kovács** University of Miskolc, Hungary  
*Importance of Integrated Production Planning and Logistics in Assembling and Production Procedures of Mechanical Goods*
- 11.45 **Tamás Tomkovics, László Kovács** University of Miskolc, Hungary  
*Design of Automated Piece Good Sorting Systems*
- 12.00 **Péter Tamás, György Kovács, Béla Illés** University of Miskolc, Hungary  
*Establishment of a Virtual Logistics Enterprise for Examination of Finished Goods Storage Activity*
- 12.15 **László Kovács, Béla Illés, Péter Bozzay, Péter Tamás** University of Miskolc, Hungary  
*Establishment of a High-Tech Laboratory at the Materials Handling and Logistics of University of Miskolc*
- 12.30 **Róbert Skapinyecz, Béla Illés** University of Miskolc, Hungary  
*The Role of Electronic Marketplaces in the Support of Collaborative Freight Forwarding*
- 12.45 **Norbert Tóth, László Kovács** University of Miskolc, Hungary  
*Logistic Development of Paint Packaging System*
- 13.00 **Emese Ficsor** University of Miskolc, Hungary  
*Analyses of a Logistical Activity*
- 13.15 *Debate / Summary*

## Q1: ECONOMIC CHALLENGES IN THE XXI CENTURY

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**VENUE:** Room 312., Bld. A/3. 3<sup>rd</sup> floor, 312  
**Chairman:** István KUNOS *assoc. professor*  
**Secretary:** Róbert MARCINIÁK *assist. lecturer*

**Date:** March 18, 2010

- 14.00 **Noémi Hajdú** University of Miskolc, Hungary  
*Subsystems of Marketing-Controlling, Considering the 2<sup>nd</sup> Subsystem: System of Objectives*
- 14.20 **Noémi Hajdú** University of Miskolc, Hungary  
*Subsystems of Marketing-Controlling II., Considering the 3<sup>rd</sup> Subsystem: Planning System*
- 14.40 **Gergely Balla** University of Miskolc, Hungary  
*The Changes of Enterprises Characteristics of the Spatial Economical Structure in the North Hungarian Region*
- 15.00 **Erzsébet Pápai** University of West Hungary, Hungary  
*The Strategy of the Hungarian Future*
- 15.20 **Sandra Katarina Kukec, Tanja Šestanj-Perić** University of Zagreb, Croatia  
*Involvement of Croatian Higher Education Institutions in International Projects*
- 15.40 **Constantin Cucosel** North University of Baia Mare, Romania  
*The Place and the Importance of the Local Budgets in Romania*
- 16.00 **Constantin Cucosel** North University of Baia Mare, Romania  
*An Analysis on the Execution of the Local Budget for the Coas Town*
- 16.20 *Break*
- 16.40 **Boca Gratiela Dana<sup>1</sup>, Hasan Gokkaya<sup>2</sup>** North University of Baia Mare, Romania<sup>1</sup>, Karabuk University, Turkey<sup>2</sup>  
*The 8 Elements of TQM = House of Quality*
- 17.00 **Boca Gratiela Dana<sup>1</sup>, Hasan Gokkaya<sup>2</sup>** North University of Baia Mare, Romania<sup>1</sup>, Karabuk University, Turkey<sup>2</sup>  
*5 S in Practice*
- 17.20 **Svjetlana Letinic, Verica Budimir, Mirjana Jelec Raguz** Polytechnic of Pozega, Croatia  
*Current State and Perspectives of Student Accommodation in Croatia*
- 17.40 **Mirjana Jelec Raguz** Polytechnic of Pozega, Croatia  
*Cooperation of the Higher Education Institutions with Key Actors towards Regional Development: European Good Practice Examples*
- 18.00 *Summary*

## Q1: ECONOMIC CHALLENGES IN THE XXI CENTURY

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**VENUE:** Room 312., Bld. A/3. 3<sup>rd</sup> floor, 312  
**Chairmen:** István SZINTAY *professor*  
Mariann SOMOSI-VERES *assoc. professor*  
**Secretary:** Richárd KÁSA *PhD Student*

**Date:** March 19, 2010

- 9.00 **Ileana-Sorina Boca Rakos** Valahia University of Targoviste, Romania  
*Particularities of Mines Closure Projects within the Context of the Mining Field Reform in Romania*
- 9.20 **Paulina Catana, Silvia Samara** Valahia University, Romania  
*Macroeconomic Policy through an Open Economy*
- 9.40 **Paulina Catana, Silvia Samara** Valahia University, Romania  
*Harmonization of Accounting and Tax at European and International Level*
- 10.00 **Mariana Bran<sup>1</sup>, Iuliana Dobre<sup>1</sup>, Mircea Nastase<sup>1</sup>, Marcela Stefan<sup>1</sup>, Ion Marin<sup>2</sup>** Academy of Economics Studies<sup>1</sup>, S.C. Tohani S.A.<sup>2</sup> Romania  
*Analysis of Potential Romanian Wine. Case Study*
- 10.20 **Luka Mladineo, Jelena Vidović** University Center for Professional Studies, Croatia  
*Accounting Treatment of Leases According to IAS 17 in Croatia*
- 10.40 **Anca Mehedintu, Cerasela Pirvu** University of Craiova, Romania  
*Approaches to Enterprise Resources Planning Systems – Accountancy Support*
- 11.00 **Alin Cristian Isac, Claudia Isac, Codruta Dura, Imola Driga** University of Petrosani, Romania  
*Investments for Saving and Credit for Housing Systems in Romania*
- 11.20 **Ilie Rascolean, Robert Szabo, Alexandra Trofin** University of Petrosani, Romania  
*The Analysis of the Poll Tax in Conditions of Economic Crisis in Romania*
- 11.40 *Summary*

## **Q1: ECONOMIC CHALLENGES IN THE XXI CENTURY**

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**VENUE:** Room 312., Bld. A/3. 3<sup>rd</sup> floor, 312  
**Chairman:** István SZINTAY *professor*  
Mariann SOMOSI-VERES *assoc. professor*  
**Secretary:** Richárd KÁSA *PhD Student*

**Date:** March 19, 2010

- 14.00 **Rita Csenge** OTP Bank Co., Hungary  
*The Development of Efficient Market Theory and its Historical Background*
- 14.20 **Dijana Poernjić, Petar Pepur, Luka Mladineo** University of Split, Croatia  
*Creative Accounting on the Capital Market*
- 14.40 **Marina Luminita Sarbovan** Tibiscus University of Timisoara, Romania  
*Crisis, a Step Forward Sustainable Development*
- 15.00 **Cristina Drumea** Transylvania University of Brasov, Romania  
*European Union Emission Trading Scheme (ETS). An Analysis of its Impact for Romanian Economy and its Effectiveness*
- 15.20 **Ivica Filipović, Marijana Vasilj** University Center for Professional Studies, Croatia  
*Auditor's Role in Detecting Frauds in an Audit of Financial Statements*
- 15.40 **Marko Miletić, Branko Sorić, Joško Lozić** University Center for Professional Studies, Croatia  
*Dividend Increase Effects on Stock Price in Croatia*
- 16.00 **Vyacheslav Tovazhnyanskiy** National Technical University "Kharkov Polytechnical Institute", Ukraine  
*Ground of Indexes of Diagnostics of Crisis on Machine-Building Enterprise*
- 16.20 *Summary*



## Q2: ECONOMIC CHALLENGES IN THE XXI CENTURY

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**VENUE:** Room 318., Bld. A/4. 3<sup>rd</sup> floor, 318  
**Chairman:** **László BERÉNYI** *assist. professor*  
**Secretary:** **Gábor RÉTHI** *PhD Student*

**Date:** **March 18, 2010**

- 14.00 **Viola Tatay, Tamás Koltai** Budapest University of Technology and Economics, Hungary  
*Solving Assembly Line Balancing Models in Excel Environment to Support Production Management Decisions*
- 14.20 **Viola Tatay, Krisztina Inczédy, Tamás Koltai** Budapest University of Technology and Economics, Hungary  
*The Comparison of the Optimal and Real Operation in a Yeast Production Plant - A Case Study*
- 14.40 **Gábor Réthi** University of Miskolc, Hungary  
*Cultural Environment - Environmental Culture*
- 15.00 **Richárd Kása** University of Miskolc, Hungary  
*Hard Modeling with Soft Computing*
- 15.20 *Break*
- 15.40 **Adrienn Papp** University of Miskolc, Hungary  
*Does Personal Income Tax Change Social Welfare?*
- 16.00 **László Barna** University of Miskolc, Hungary  
*Identifying the Risks of Production Processes*
- 16.20 **László Berényi** University of Miskolc, Hungary  
*Environmental-Consciousness in the Office*
- 16.40 *Summary*

## Q2: ECONOMIC CHALLENGES IN THE XXI CENTURY

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**VENUE:** Room 318., Bld. A/4. 3<sup>rd</sup> floor, 318  
**Chairman:** **Zoltán BÍRÓ** *assoc. professor*  
**Secretary:** **Gábor RÉTHI** *PhD Student*

**Date:** **March 19, 2010**

- 9.00 **Sándor Gergely** Károly Róbert College, Hungary  
*Global Challenges, Local Responses and Local Economy*
- 9.20 **Mihaela Mocanu** Academy of Economics Studies, Romania  
*Ethical Dilemmas of Financial Auditors in the Context of Independence as Separation Metaphor*
- 9.40 **Aleksandra Nowakowska, Joanna Nowakowska-Grunt** Czestochowa University of Technology, Poland  
*Food Distribution as the Contexts of Relation between Import and Export in 2003-2008 in Poland*
- 10.00 **Anna Wiśniewska-Salek** Czestochowa University of Technology, Poland  
*Role of Clusters in Supply Chain in Furniture Industry*
- 10.20 **Janusz Krzysztof Grabara** Czestochowa University of Technology, Poland  
*Project of Reverse Logistics Structure Adjusted to the Needs of Management Computer Systems*
- 10.40 **Helena Kościelniak** Czestochowa University of Technology, Poland  
*Financial Monitoring in Management of Electricity Distribution Company*
- 11.00 **Joanna Kwiatkowska** Czestochowa University of Technology, Poland  
*Building the University Image: Internet Marketing Strategy*
- 11.20 **Zdenko Klepić, Arnela Bevanda, Branimir Skoko** Economics University of Mostar, Bosnia and Herzegovina  
*Implementation of Management Function Human Resource Management in Companies: A Case of Herzegovina Region*
- 11.40 **Igor Živko, Josipa Grbavac, Anela Čolak** Economics University of Mostar, Bosnia and Herzegovina  
*Financial Crises Impact on Banking Sector in Bosnia and Herzegovina*
- 12.00 **Jelica Petrovic Vujacic, Ivan Vujacic** University of Belgrad, Serbia  
*Challenges to Globalization*
- 12.20 *Summary*

## Q2: ECONOMIC CHALLENGES IN THE XXI CENTURY

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**VENUE:** Room 318., Bld. A/4. 3<sup>rd</sup> floor, 318  
**Chairman:** **Zoltán BÍRÓ** *assoc. professor*  
**Secretary:** **Gábor RÉTHI** *PhD Student*

**Date:** **March 19, 2010**

- 14.00 **Nikolina Smrekar** Faculty of Economics and Business Zagreb, Croatia  
*Appliance of Accounting Policies in SMEs - Croatian Case*
- 14.20 **Hrvoje Percevic** Faculty of Economics and Business Zagreb, Croatia  
*Transfer Pricing as an Instrument of Maximising Consolidate Profit in Multinational Companies*
- 14.40 **Ivana Pokrovac, Boris Tusek** Faculty of Economics and Business Zagreb, Croatia  
*Quality Assessment in Internal Auditing*
- 15.00 **Marius Cioară<sup>1</sup>, Mariana Man<sup>2</sup>** Scholar Inspectorate of Hunedoara County<sup>1</sup>, University of Petrosani<sup>2</sup>, Romania  
*Researches Regarding the Information System of Costs in Romanian Primary and Secondary Education*
- 15.20 *Summary*

## R: HUMANITIES

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**VENUE:** Lecture Hall VI., Bld. A/1. 1<sup>st</sup> floor, 101.  
**Chairman:** **Sarolta SIMIG-FENYŐ** *assoc. professor*  
**Secretary:** **Zoltán TÖLTÉSSY** *research fellow*

**Date:** **March 18, 2010**

- 14.00 **Ludmilla Hulpa** Uzhhorod National University, Ukraine  
*The Recent Trends in Higher Education Structure in Ukraine*
- 14.20 **Dagmar Cagáňová, Andrea Mudriková** Faculty of Material Science and Technology in Trnava, Slovakia  
*Educational Process Improvement in Virtual Laboratory via E-learning*
- 14.40 **Hella Hegyi** Baranya County Police Headquarters, Hungary  
*Studying the Integration Process to the Workplace at the Boarding Guard Headquarter of Pécs*
- 14.55 **Hella Hegyi** Baranya County Police Headquarters, Hungary  
*The Possibilities of Competence-Based Selection at the Law Enforcement Organizations*
- 15.10 *Break*
- 15.30 **Csilla Dobos** University of Miskolc, Hungary  
*The Role and Types of Explicitation in Intralingual and Interlingual Translation*
- 15.45 **Zoltán Töltéssy** University of Miskolc, Hungary  
*What is Memory in Memory Like?*
- 16.00 **Erika Kegyes** University of Miskolc, Hungary  
*Linguistics and Logistic*
- 16.15 *Break*
- 16.30 **László Czeglédi** Eszterházy Károly College, Hungary  
*The Library of the Tisza Family at Geszt*
- 16.45 **Ildikó Bodnár, Tamás Kisida** University of Miskolc, Hungary  
*Encounter of the Hearing Persons and the Deaf*
- 17.05 **Sarolta Simig Fenyő** University of Miskolc, Hungary  
*The Cultural and Communicative Function of Silence*
- 17.20 *Summary*

## R: HUMANITIES

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**VENUE:** Lecture Hall VI., Bld. A/1. 1<sup>st</sup> floor, 101.  
**Chairman:** Sarolta SIMIG-FENYŐ *assoc. professor*  
**Secretary:** Zoltán TÖLTÉSSY *research fellow*

**Date:** March 19, 2010

- 9.00 **Ivo Mihajlović** Eötvös Loránd University, Hungary  
*R.W. Seton-Watson and the Making of Yugoslavia*
- 9.20 **Tünde Dobróka** University of Miskolc, Hungary  
*Possibilities of the Application of Phenomenology of Givenness to Classical Music Phenomena*
- 9.40 **Tünde Dobróka** University of Miskolc, Hungary  
*Possibilities of the Application of Phenomenology of Givenness to Modern Music Phenomena*
- 10.00 **Doina David, Calin Florea** Dimitrie Cantemir University, Romania  
*Archetype Structures Belonging to the Traditional Romanian Culture – The Cosmic Christianity*
- 10.20 *Break*
- 10.40 **Mykola Palinchak** Uzhhorod National University, Ukraine  
*State-Church Relationships and its Constitutional Regulation in Ukraine*
- 11.00 **Mariana Borcoman** Transylvania University of Brasov, Romania  
*The Specificity of the Country of Rupea within Romanian's Cultural Legacy*
- 11.20 **Orsolya Lili Sztermen, Gáborné Vitéz, Norbert Veréb** University of Miskolc, Hungary  
*Student Science on the University's Webpage*
- 11.40 *Summary*

## S: HEALTH SCIENCE

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**VENUE:** Room 314., Bld. A/1. 3<sup>rd</sup> floor, 314  
**Chairman:** László BARKAI *professor*  
**Secretary:** Andrea LUKÁCS *lecturer*

**Date:** March 19, 2010

- 9.00 **Andrea Lukács, Eleonóra Juhász, Csaba Kató, Mária Szendrák Koppány** University of Miskolc, Hungary  
*12 Minute Running and Cycling Test in Young Female Subjects with Different Body Mass Indices and Waist Circumferences*
- 9.20 **Konradin Weber, A. Vogel, C. Fischer, G. van Haren** University of Applied Sciences Duesseldorf, Germany  
*Measurements and Results of the Impact of Particle Matter PM 10, PM 2.5 and PM 1 Caused by Cigarette Smoke in Typical Pubs in Germany compared with Fine Particle Concentrations in Ambient Air*
- 9.40 **Konradin Weber** University of Applied Sciences Duesseldorf, Germany  
*Measurements and Results of the Impact of Fine Particles PM 10, PM 2.5 and PM 1 Caused by the Demolition of Buildings in Duesseldorf (Germany)*
- 10.00 **Fusheng Wang, Guo Liwen, Zhang Ying** Hebei Polytechnic University, China  
*The Analysis and Countermeasures of Miners' Unsafe Behaviors in Operating Environment*
- 10.20 **Orsolya Nagy Szabó, András Koleszár** Óbuda University, Hungary  
*Special Underwear for Young Girls Having Scoliosis Problem*
- 10.40 **Róbert Sándor Szűcs** College of Szolnok, Hungary  
*Light and Dietetic Products from Aspect of Youth*
- 11.00 **Katalin Papp<sup>1</sup>, Valéria Tóthova<sup>2</sup>, Adrienn Siket Újvári<sup>1</sup>** University of Debrecen, Hungary<sup>1</sup>, South Bohemia University, Czech Republic<sup>2</sup>  
*Holistic Aspect in the Elderly Care*
- 11.20 **Ildikó Faragó<sup>1</sup>, Sándor Márton<sup>2</sup>, Ferenc Túry<sup>3</sup>, Melinda Madlén<sup>3</sup>** University of Miskolc<sup>1</sup>, University of Debrecen<sup>2</sup>, Semmelweis University<sup>3</sup>, Hungary  
*Caries Experience and Its Related Factors in Hungarian Police Student's Population*
- 11.40 **János Demeter** University of Miskolc, Hungary  
*The Landing Opportunities of the Rescue-Chopper-EC 135 T2 - In an Appointed Area of the Bükk Mountain*
- 12.00 **Eleonóra Juhász<sup>1</sup>, Emőke Kiss-Tóth<sup>1</sup>, Csaba Kató<sup>1</sup>, Tóth-Kane Kumba Dada<sup>2</sup>** University of Miskolc<sup>1</sup>, Aqua Terápia Ltd.<sup>2</sup>, Hungary  
*Potential Developments in the Physiotherapy and Wellness Services of the Cavebath at Miskolc-Tapolca*
- 12.20 **Andrea Lukács, Emőke Kiss-Tóth, László Barkai** University of Miskolc, Hungary  
*Quality of Life of Children and Adolescents with Type 1 Diabetes Mellitus*
- 12.40 *Summary*

## OPTIONAL PROGRAMME

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

### microCAD Party

**19.00, 18 March 2010**

**Venue:** Main Building A/4. Assembly Hall (*Entry: only with invitation cards*)

#### Programme

<i>19<sup>00</sup> - 19<sup>20</sup></i>	<i>Musical Performance Offered by Students of Bartók Béla Institute for Music</i>
<i>19<sup>20</sup> - 19<sup>40</sup></i>	<i>Inauguration of the honorary members of the microCAD</i>
<i>19<sup>40</sup> - 21<sup>30</sup></i>	<i>Dinner</i>

### Excursion to TOKAJ-SÁROSPATAK

**19 March 2010**

<i>Departure:</i>	13.00
<i>Arrival in Miskolc:</i>	21.00
<i>Meeting place:</i>	outside the main building entrance of the university

#### Programme

Arrival in Tokaj at about 14.00. After taking a short walk in the 18<sup>th</sup>-century city centre, a visit to the Wine Museum will follow. Leaving for Sárospatak at about 15.45. Visiting the Rákóczi Castle Museum (including its Lórántffy Loggia, Perényi Wing and Red Tower), one of the most important centres of 16-18<sup>th</sup>-century Hungarian history. Leaving at about 17.30 for Szegi Wine Cellar, owned by the largest Hungarian vintner enterprise. Visit to the cellar, then wine tasting followed by the dinner at the nearby Várhegy (Castlehill) Restaurant in Tolcsva, a marvellous settlement of the Tokaj-Wine Region World Heritage.

### Excursion to SCHEMNITZ (Slovakia)

**20 March 2010**

<i>Departure:</i>	7.30
<i>Arrival in Miskolc:</i>	20.00
<i>Meeting place:</i>	outside the main building entrance of the university

#### Programme

The return travel by bus takes about three - three and half hours. The programme includes a walk around the town and visit to the following tourist sights:

## **KAMMERHOF**

Kammerhof is one of the largest building complexes in the town and it dates back to the early 16th century. The whole complex went through various stages of reconstruction and enlargement, therefore it bears traces of all architectural styles. It used to serve as the seat of the Mining Chamber and the Office of the Chamber Count - the administration of mines, smelting works and mints in the region of today's Central Slovakia.

## **BERGGERICHT**

Originally, there was a renaissance house built in the middle of the 16th century on the site of the present baroque house. The original house was rebuilt in the first half of the 18th century. The facade of the house is plain with ledges over windows and oriels. The entrance and the ground-floor are vaulted. The ceilings are decorated with stuccos. The outstanding medic and main chamber earl Gottfried Hellenbach owned the house at the beginning of the 18th century. Between 1792–1854, the district mining court seated in the building. The Mining and Forestry Academy used this building later on. It has been the seat of a museum since 1927. There is a collar of the so called New Michael Shaft and a small medieval mining gallery dating from the middle of the 16th century in the courtyard of the building. The sight is a National Cultural Monument.

## **OLD CASTLE**

In the early 13th century a Romanesque basilica with three naves, the Church of Saint Mary, was built. In the 15th century a wall was erected to protect the church and the cemetery next to it. In the 1540s the church was rebuilt so that it could function as a fortress against the Turkish raids. The vault above the main nave was pulled down and the present courtyard of the castle emerged. Later the walls were fortified. The building complex of the Old Castle includes also the Chapel of St. Michael. There are interesting fragments of 14th-century frescoes on the walls of the Chapel. The nearby „Himmelreich" bastion also dates back to the 14th century and it has a history of serving as a prison.

## **ACADEMY OF FORESTRY AND MINING**

In 1762 Maria Theresia founded the Mining Academy in Banska Stiavnica (Schemnitz, Selmechánya), the first school of its kind in the Habsburg Empire. It functioned until 1919 and hosted important European experts and inventors. Later on, based on the functional model of the Academy, the Polytechnic School of Paris was established. The Academy's chemical laboratories were among the best equipped in the 18th century. The University of Miskolc considers this Academy of Mining to be its predecessor.

## **HOLY TRINITY SQUARE**

It was built in the early 16th century and it forms the architectural heart of the city. Its shape had been determined mainly by the Town Hall and the Church of St. Catherine. It is lined by splendid houses originally owned by rich burghers and mining entrepreneurs. In the middle of the square, the stately Holy Trinity Column catches the eyes of visitors. It was built out of gratitude for the end of the plague, which had troubled the town from 1710 to 1711.