



XXV. microCAD
International Scientific Conference
31 March – 1 April 2011

PROGRAMME

WELCOME FROM THE RECTOR

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

You are holding the program booklet of the *XXV. 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, the professional and personal relations between the experts will remarkably contribute to the efficient co-operation between participants and institutions as well.

In relation to the 25th jubilee anniversary, some of the outstanding achievements – among which continuity and reputation have the primary emphasis – are worthy of being mentioned.

Over the last 24 years, the microCAD Conference has become the most significant multidisciplinary conference and meeting of professionals at the University of Miskolc.

Participants coming from 12-16 different countries return to the conference every year to present their latest scientific results.

More than 7000 presentations, 36 thousand pages of publications, 96 international agreements signed between universities and numerous academic and research proposals witness the achievements of the last 24 years.

I recommend you the program of the *XXV. 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 *XXV. microCAD International Scientific Conference*.

Prof. Gyula PATKÓ
Rector of the
University of Miskolc

SCIENTIFIC COMMITTEE OF THE CONFERENCE

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

DETAILED PROGRAMME

of the XXV. microCAD International Scientific Conference
University of Miskolc, 31 March – 1 April 2011

31 March (Thursday) 2011

10⁰⁰ – 10¹⁰ **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

10¹⁰ – 10⁴⁵ **Eric G. EDDINGS** professor, University of Utah, United States of America
Clean Fuel Technologies to Address Global CO₂ Issues

10⁴⁵ – 11²⁰ **Tuncdan BALTACIOGLU** professor, vice-rector, Izmir University of
Economics, Turkey
*Sustainable Supply Chain through Global Sourcing Risk Management
Strategies*

11²⁰ – 11⁵⁵ **José Carlos QUADRADO** professor, president, Lisbon Superior Engineering
Institute, Portugal
From Knowledge to Change

11⁵⁵ – 12¹⁵ Break

12¹⁵ – 13³⁰ **Reception**
Venue: Main Building A/4. Assembly Hall (*Entry: only with invitation cards*)

13³⁰ – 14⁰⁰ Break

14⁰⁰ – 18⁰⁰ **Presentations in the sections**
Venue: as listed in the section table

19⁰⁰ – 21³⁰ **microCAD 2011 Party**
Venue: Main Building A/4. Assembly Hall (*Entry: only with invitation cards*)

1 April (Friday) 2011

9⁰⁰ - 12⁰⁰ **Presentations in the sections**
Venue: as listed in the section table

12⁰⁰ - 14⁰⁰ Lunch break

14⁰⁰ - 18⁰⁰ **Presentations in the sections**
Venue: as listed in the section table

OPTIONAL PROGRAMME

1 April 2011 13¹⁵ - 22⁰⁰ **Excursion to AGGTELEK-NOSZVAJ**

REGISTRATION FOR THE CONFERENCE

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

30 March (Wednesday) 2011	---	12 ⁰⁰ - 20 ⁰⁰
31 March (Thursday) 2011	8 ⁰⁰ - 12 ³⁰	13 ³⁰ - 17 ⁰⁰
1 April (Friday) 2011	8 ⁰⁰ - 12 ⁰⁰	----

ORGANISATIONAL COMMITTEE OF THE CONFERENCE

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

Address of the Scientific and Organisational Committee:
Miskolci Egyetem Tudományszervezési 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

Sign	Name	Venue	
Plenary	Plenary session	Lecture hall XXXVII.	Bld. A/7. groundfloor
A	Environmental and Energy Management	Lecture hall VII.	Bld. A/1. 1 st floor, 102.
B	Earth Science and Engineering	Csókás János Room	Bld. A/2. 2 nd floor, 213.
C	Metal Extraction, Processing and Energy Utilization	Káldor Mihály Room	Bld. B/1. groundfloor
D	Fluid and Heat Engineering	Lecture hall X.	Bld. A/1. 2 nd floor, 218.
E	Applied Mechanics	Room 439.	Bld. A/4. 4 th floor, 439.
F	Mathematics and Computer Science	Room 341.	Bld. A/4. 3 rd floor, 341.
G	Physics and Physics Education	Room 314.	Bld. A/1. 3 rd floor, 314.
H	Automation and Telecommunication	Room 311.	Bld. A/1. 3 rd floor, 311.
I	Electrical Engineering	Room 220.	Bld. A/1. 2 nd floor, 220.
J	Machine and Construction Design	Department of Machine and Construction Design	Bld. A/3. 1 st floor, 115.
K	Material Science. Material Processing Technologies	Lecture hall XVI.	Bld. C/1. 2 nd floor, 202.
L1	Production Engineering and Manufacturing Systems	Room 1.	Bld. C/1. groundfloor, 1.
L2	Production Engineering and Manufacturing Systems	Lecture hall XV.	Bld. C/1. 1 st floor, 101.
M	Applied Information Engineering	Room 12.	Bld. A/1. mezzanine 12.
N	Material Flow Systems. Logistical Information Technology	Room 106.	Bld. A/5. 1 st floor, 106.
O	Legal Science	Room 31.	Bld. A/6. groundfloor 31.
P	Economic Challenges in the 21 st Century	Room 112.	Bld. A/1. 1 st floor, 112.
Q	Humanities and Social Sciences	Lecture hall XII.	Bld. A/3. 3 rd floor, 313.
R	Medical and Health Science	Room 318.	Bld. A/1. 3 rd floor, 318.

A: ENVIRONMENTAL AND ENERGY MANAGEMENT
Sustainable National Resources Management Center of Excellence*

VENUE: Lecture hall VII., Bld. A/1. 1st floor, 102.
Chairman: Anikó TÓTH *assist. professor*
Secretary: István SZUNYOGH *assist. lecturer*

Date: March 31, 2011

Keynote presentation

14.00 **Ádám Konkoly** Mátra Power Plant Co., Hungary
The Applied GPS Navigation System of the World's Largest Operating Compact Bucket Wheel Excavator in Bükkábrány Opencast Mine of the Mátra Power Plant Company

Section presentations

14.20 **Konradin Weber, Vogel Andreas, Fischer Christian, Van Haren Günther, Tobias Pohl** University of Applied Sciences, Germany
First Results of Aircraft Measurements of the Eyjafjallajökull Volcano Ash Plume Over Germany in April/May 2010

14.40 **Konradin Weber, A. Vogel, C. Fischer, G. Van Haren, C. Kollesch, S. Fuchs, K. Sadowski** University of Applied Sciences, Germany
Measurements of Hotel Ship Emissions of Fine Particles PM10, PM2.5 and PM1 at the River Rhine in Duesseldorf, Germany

15.00 **Numan M. Durakbasa, Gökçen Bas** Vienna University of Technology, Austria
The Integration of Energy and Environmental Management System to a Model of Industrial Plant

15.20 **Sándor Gergely** Károly Róbert College, Hungary
Social, Economic and Environmental Effects of Producing and Using Renewable Energy in the Northean Hungarian Region

15.40 **Stefan Belle, Manuel Rosenberger, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
Optical Fibre Sensing in the Production Process and Storage of Biofuels

16.00 *Break*

16.20 **Piroska Harazin, Kálmán Kósi** Budapest University of Technology and Economics, Hungary
Up-to-Date Tools of Performance Evaluation in Case of Intellectual and Environmental Capital

16.40 **Péter Kováts, József Molnár** University of Miskolc, Hungary
Analysis of the Effect of Interest Rate on the Optimal Location of Mining Facilities

17.00 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával. „A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

A: ENVIRONMENTAL AND ENERGY MANAGEMENT
Sustainable National Resources Management Center of Excellence*

VENUE: Lecture hall VII., Bld. A/1. 1st floor, 102.
Chairman: **Anikó TÓTH** *assist. professor*
Secretary: **Péter KAZÁR** *PhD Student*

Date: **April 1, 2011**

- 9.00 **Alla Gorova, Svetlana Lysytska, Iryna Klimkina, Tatyana Skvortsova, Artem Pavlychenko** National Mining University, Ukraine
The Role of Genetic Methods in Assessing Ecological Conditions in the Technogenic-Loaded Regions of Ukraine
- 9.20 **Iosif Moldovan¹, Mihai Sorin Radu², Sorin Apostu², Teodora Mititica²** Ministry of Communication¹, University of Petrosani², Romania
Mining Environment Risk Management Approach
- 9.40 **Emanoel Andronache¹, Eugen Traista²** Petrila Hospital¹, University of Petrosani², Romania
Jiu Valey Bituminous Coal's Inorganic Mass Structure
- 10.00 **Emanoel Andronache¹, Eugen Traista²** Petrila Hospital¹, University of Petrosani², Romania
Air Impact Assessment of Coal Burning Activity in Petrila
- 10.20 *Break*
- 10.40 **Carmen Florea, Alexandra (Mihai) Bonculescu, Gabriel Praporgescu** University of Petrosani, Romania
For Environment Monitoring Integrated Information Database Creation for Gorj County
- 11.00 **Yordanka Tasheva, Petko Petkov** University A. Zlatarov, Bulgaria
Investigations for Synthesis of Corrosion Inhibitors from Naftenic Acids in Petroleum
- 11.20 **Yordanka Tasheva, Yana Koleva, Petko Petkov** University A. Zlatarov, Bulgaria
Prediction of the Biodegradation of Dibenzothiophene
- 11.40 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával. „A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

A: ENVIRONMENTAL AND ENERGY MANAGEMENT
Sustainable National Resources Management Center of Excellence

VENUE: Lecture hall **VII.**, Bld. **A/1.** 1st floor, 102.
Chairman: **Zoltán TURZÓ** *assoc. professor*
Secretary: **Péter KAZÁR** *PhD Student*

Date: **April 1, 2011**

- 14.00 **Gábor Fekete** University of Miskolc, Hungary
Energy Management on New Basis
- 14.20 **Judit Szántó, Tamás Madarász, Péter Szűcs, János Lakatos, Balázs Zákányi, Renáta Tóth**
University of Miskolc, Hungary
Simulation of PRB Operation by Hydrogeological Modelling
- 14.40 **Viktória Mikita¹, Kriston Sándor²** University of Miskolc¹, UNI-FLEXYS Ltd.², Hungary
Determination of Soil Compaction and Saturation Distribution under Different Vertical Loads in Loose Agricultural Soils
- 15.00 **István Barabás, Adrian Todorut** Technical University of Cluj-Napoca, Romania
Studies on Compatible Fuel Properties of Biodiesel–Diesel Fuel–Bioethanol Blends for Fuel Use in Compression Ignition Engines
- 15.20 **Krisztina Kalicz Papp** University of Miskolc, Hungary
Air-Classifiers - An Introduction of a Research Work
- 15.40 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával. „A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

B: EARTH SCIENCE AND ENGINEERING

VENUE: Csókás János Room, Bld. A/2. 2nd floor, 213.

Chairman: Gábor PETHŐ *assoc. research professor*

Secretary: Noémi Anikó PARIPÁS *Phd Student*

Date: March 31, 2011

Keynote presentation

14.00 **Ákos Gyulai, Norbert P. Szabó** University of Miskolc, Hungary
The Role of Geophysical Methods in Geoenvironmental Exploration

Section presentations

14.20 **János Demeter, Endre Dobos** University of Miskolc, Hungary
Analysing Social Geographical Factors of Emergency Pathographies in Hungary

14.40 **Péter Koleszár, István Papp** University of Debrecen, Hungary
Influence of Slag Minerals on the Utilisation of Ladle Furnace Slags

15.00 **Ferenc Móricz** University of Miskolc, Hungary
Mineralogical and Geochemical Characterization of Sulphidic Mine Waste from the Itos Sn-Ag Deposit, Oruro

15.20 **Hazim N. Dmour** King Saud University, Saudi Arabia
Practical Pressure Transient Analysis of a Hydraulically Fractured Tight Gas Reservoir – A Case History

15.40 **Judit Somogyi Molnár, Mihály Dobróka** University of Miskolc, Hungary
Explanation of the Stress Dependence of Seismic/Acoustic Velocity and Absorption Coefficient in Porous Rocks

16.00 **Anikó Noémi Paripás, Tamás Ormos** University of Miskolc, Hungary
Investigating the Problem of Equivalence in Kinematic Refraction Inversion

16.20 *Summary*

C: METAL EXTRACTION, PROCESSING AND ENERGY UTILIZATION

Applied Materials Science and Nanotechnology Center of Excellence*

VENUE: Káldor Mihály Room, Bld. B/1. groundfloor

Chairman: Tamás KÉKESI *professor*

Secretary: Gergő SZEKRÉNYESI *Phd Student*

Date: March 31, 2011

- 14.00 **Stefan Steinlechner, Jürgen Antrekowitsch** University of Leoben, Austria
Investigations in Clinkering for the Removal of Halogens from Secondary Zinc Oxides
- 14.20 **Gerald Schneeberger, Jürgen Antrekowitsch** University of Leoben, Austria
Characterization of Dusts from Bof-Steelmaking and Foundry Industry
- 14.40 **Gergő Rimaszéki, Tamás Kekesi** University of Miskolc, Hungary
Investigation of the Electrode Processes During the Electrolytic Tin Refining in Hydrochloric Acid Solutions Applying the Potentiodynamic Method
- 15.00 **Csilla Máté, Tamás Kékesi** University of Miskolc, Hungary
Purification of Molybdenum-Trioxide Generated in the Tungsten Spiral Production Industry
- 15.20 **Gábor Lévai, Melinda Godzsák, Alfred Ender, Róbert Márkus, Tamás I. Török**
University of Miskolc, Hungary
Production and Examination of Colour-Galvanized Steel Test Sheets
- 15.40 **Melinda Godzsák, Jenő Dúl, Judit Pázmán, Zoltán Gácsi** University of Miskolc, Hungary
Examination of Aluminium Based Automobile Castings
- 16.00 *Break*
- 16.20 **Helga Kovács¹, Tamásné Szemmelveisz²** Bay Zoltán Foundation for Applied Research¹,
University of Miskolc², Hungary
Solution Properties of the Ash of Log Samples Contaminated with Heavy-metals
- 16.40 **Helga Kovács¹, Ágnes Wopera², Tamásné Szemmelveisz²** Bay Zoltán Foundation for Applied
Research¹, University of Miskolc², Hungary
*Air Pollutants Formed During the Combustion of Sorghum Pellet Coming from Industrial
Brownfield Lands*
- 17.00 **Alex Nemes, Tamásné Szemmelveisz, Árpád Bence Palotás** University of Miskolc, Hungary
Self Sustaining City - The Future City
- 17.20 **Róbert Dúl¹, Palotás Árpád Bence², Jármái Károly²** CFD Engineering Hungary Ltd.¹,
University of Miskolc², Hungary
*Heat Exchanger Development for Domestic Fireplaces via Computational Fluid Dynamics
Simulations*
- 17.40 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával. „A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

D: FLUID AND HEAT ENGINEERING

VENUE: Lecture hall X., Bld. A/1. 2nd floor, 218.

Chairman: László BARANYI *professor*

Secretary: Péter BENCs *PhD Student*

Date: March 31, 2011

- 14.00 **Gábor Janiga, Christian Rössl, Santhosh Seshadhri, Martin Skalej** Otto-von-Guericke University of Magdeburg, Germany
Overview of the Virtual Intracranial Stenting Challenge 2010
- 14.15 **Zoltán Csáti, Gabriella Bognár** University of Miskolc, Hungary
Investigation of Temperature Distribution for Polymer Melts
- 14.30 **Krzysztof Jesionek¹, Janusz Badur², Michał Karcz², Marcin Lemański², Witold Zakrzewski²** Wrocław University of Technology¹, IFFM Gdańsk², Poland
Remarks on Steam Condensation Modelling Related to Steam Turbine of Large Output
- 14.45 **John Demetriou², Dimitrios Dimitriou¹, Eugene Retsinis²** Imperial College, London, United Kingdom¹, Technical University of Athens, Greece²
Geometry of Inclined Hydraulic Jump Over Rough Channel Floor
- 15.00 **Christoph Roloff, Christian Bendicks, Bernd Michaelis, Katja Zähringer, Dominique Thévenin** Otto-von-Guericke University of Magdeburg, Germany
Particle Tracking Velocimetry with Fluorescent Micro-Particles
- 15.15 **László Kalmár¹, Gábor Janiga², Gergely Kristóf³, Béla Fodor¹, László Soltész⁴, Zoltán Varga¹** University of Miskolc, Hungary¹, Otto-von-Guericke-University Magdeburg, Germany², Budapest University of Technology and Economics, Hungary³, Elektrolux Lehel Ltd. Floor Care Factory, Hungary⁴
Numerical Simulation and Analysis of the Flow in a One-Stage Blower
- 15.30 *Break*

D: FLUID AND HEAT ENGINEERING

VENUE: Lecture hall X., Bld. A/1. 2nd floor, 218.

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

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

Date: **March 31, 2011**

- 15.45 **Betti Bolló, László Baranyi** University of Miskolc, Hungary
Computation of Low-Reynolds Number Flow Around an Oscillated Circular Cylinder
- 16.00 **Enikő Kurilla, Péter Bencs, Szilárd Szabó** University of Miskolc, Hungary
Design of Suction Pipe for a Wind-Tunnel
- 16.15 **Péter Bencs, Szilárd Szabó, Balázs Barna, Ildikó Makó** University of Miskolc, Hungary
Effect of Gap Geometry on Flow Losses
- 16.30 **Norbert Szaszák¹, Károly Lakatos¹, Zsolt Mátrai¹, László Soltész², Szilárd Szabó¹**
University of Miskolc¹, Electrolux Lehel Ltd. Floor Care Factory², Hungary
Experimental Development of Guide Vanes and Return Guide Vanes of a Mini Blower
- 16.45 **István Lakatos** Széchenyi István University, Hungary
The Order of Comparative Examinations on Chassis Dynamometers
- 17.00 **Péter Bencs¹, Péter Tóbiás¹, Szilárd Szabó¹, Róbert Bordás², Katharina Zähringer²,
Dominique Thévenin²** University of Miskolc, Hungary¹, Otto-von-Guericke University of
Magdeburg, Germany²
*Development of PIV-BOS Technique for Simultaneous Measurement of Velocity and
Temperature Fields*
- 17.15 *Summary*

E: APPLIED MECHANICS

VENUE: Room 439. Bld. A4. 4th floor, 439.
Chairman: György SZEIDL *professor*
Secretary: Balázs TÓTH *assist. professor*

Date: March 31, 2011

- 14.00 **Balázs Tóth** University of Miskolc, Hungary
Vibration Analysis of Cylindrical Shells Based on a Dual-Mixed Finite Element Formulation
- 14.20 **Sorin Vlase¹, Carol Ambrus², Anghel Chiru¹, Ionatan Popa¹** Transilvania University of
Brasov¹, INAR SA Brasov², Romania
Vibration Analysis of a Heavy Truck with Two Identical Engines
- 14.40 **Tamás Szabó, Attila Olasz** University of Miskolc, Hungary
Direct and Inverse Kinematical and Dynamical Analysis of the Fanuc LR Mate 200IC Robot
- 15.00 **Tamás Mankovits¹, Tamás Portik¹, Tamás Szabó²** University of Debrecen¹, University of
Miskolc², Hungary
One-Dimensional Shape Optimization of a Rubber Spring Using FEM
- 15.20 **László Kiss, György Szeidl** University of Miskolc, Hungary
Stresses in Curved Beams Made of Heterogeneous Materials
- 15.40 *Break*
- 16.00 **János Száva¹, Botond-Pál Gálfi¹, András Kakucs²** Transilvania University of Brasov¹,
Sapientia University of Cluj-Napoca², Romania
*Theoretical and Experimental Approach to the Evaluation of the Early-, and Late-Wood
Mechanical Characteristics*
- 16.20 **Lajos György Kocsán** University of Miskolc, Hungary
*Finite Element Formulation of a Cylindrical Shell Model in Terms of First-Order Stress
Functions and Rotations*
- 16.40 **Dániel Burmeister** University of Miskolc, Hungary
*Stability of a Circular Plate Stiffened by a Cylindrical Shell - Equations for Non-Axissymmetric
Deformations*
- 17.00 **István Ecsedi, Attila Baksa** University of Miskolc, Hungary
*Static Response of a Hollow Piezoelectric Cylinder Reinforced by Thin Elastic Shells on its
Curved Boundary Surfaces*
- 17.20 *Summary*

E: APPLIED MECHANICS

VENUE: Room 439. Bld. A4. 4th floor, 439.

Chairman: György SZEIDL *professor*

Secretary: Balázs TÓTH *assist. professor*

Date: April 1, 2011

- 9.00 **Vasile Zamfir, Horia Virgolici** University of Petrosani, Romania
Interpolation Methods in Linkage Synthesis
- 9.20 **Vasile Zamfir, Horia Virgolici** University of Petrosani, Romania
Positional Synthesis of Four-Bar Linkage by the Interpolation Method
- 9.40 **Dávid Gönczi, István Ecsedi** University of Miskolc, Hungary
The Saint-Venant Torsion of Composite Elliptical Cylinder
- 10.00 **Ákos József Lengyel, István Ecsedi** University of Miskolc, Hungary
Frequency Analysis of a Beam with Oblique Supports
- 10.20 *Summary*

F: MATHEMATICS AND COMPUTER SCIENCE

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

Date: **March 31, 2011**

- 14.00 **Peter Bakucz** GS Elektromediczinische Geräte GmbH, Germany
Fetal-Maternal ECG Separation with Nonlinear Projection
- 14.20 **Zsolt Csuka, László Lengyel** Budapest University of Technology and Economics, Hungary
Defining Software Quality Factors
- 14.40 **Sándor Czirbusz** Eötvös Loránd University, Hungary
Computation of Chebyshev Polynomials in Computer Algebra Systems
- 15.00 **Gábor Nagy** Eötvös Loránd University, Hungary
Generalized Number Systems with Modified Canonical Digit Sets
- 15.20 **Gergő Szekrényesi** University of Miskolc, Hungary
Parallel Algorithm for Determining the „Small Solutions” of Thue Equations
- 15.40 **Attila Házy** University of Miskolc, Hungary
Bernstein-Doetsch Type Results for Generalized Convex Functions
- 16.00 *Break*
- 16.20 **Sándor Fegyverneki** University of Miskolc, Hungary
A Simple Robust Estimation for Parameters of Cauchy Distribution
- 16.40 **Csilla Csendes** University of Miskolc, Hungary
Multivariate Normality Testing Methods
- 17.00 **Imre Piller** University of Miskolc, Hungary
Estimation of Fractal Surface Dimension
- 17.20 **Krisztián Hriczó, Gabriella Bognár** University of Miskolc, Hungary
On the Investigation of Marangoni Effect for Newtonian Fluids
- 17.40 **Szilvia Szilágyi** University of Miskolc, Hungary
The Partial Order Induced by an Acyclic Function
- 18.00 *Summary*

G: PHYSICS AND PHYSICS EDUCATION

VENUE: Room 314. Bld. A/1. 3rd floor, 314.

Chairman: Béla PARIPÁS *professor*

Secretary: Endre KOVÁCS *assist. professor*

Date: March 31, 2011

- 14.00 **Endre Kovács¹, Zsolt Gulácsi²** University of Miskolc¹, University of Debrecen², Hungary
Investigation of a Quasi 2D System with Hubbard Interaction by Positive Semidefinite Operators
- 14.20 **Réka Trencsényi, Zsolt Gulácsi** University of Debrecen, Hungary
Correlation Effects in Armchair Chains
- 14.40 **János Majár** University of Miskolc, Hungary
Spin Effects on Gravitational Waves Emitted by Compact Binary Systems
- 15.00 **Károly Tókési¹, D.G. Arbó²** Institute of Nuclear Research of HAS¹, Institute for Astronomy and Space Physics², Hungary
Ionization by Intense and Short Electric Pulses - Classical Picture
- 15.20 **Béla Paripás, Béla Palásthy** University of Miskolc, Hungary
Discrepancies Between the Experimental and Theoretical Results on the Resonant Auger States of Ar
- 15.40 *Break*
- 15.50 **József Vida** Eszterházy Károly College, Hungary
Popular Science Programmes of the Magic Tower (Varázstorony)
- 16.10 **László Ujfaludi** Eszterházy Károly College, Hungary
Physics and Fine Arts - Revolutionary Trends in the Early 20th Century
- 16.30 **Béla Paripás, Béla Palásthy** University of Miskolc, Hungary
New Experimental Devices in the Education of the Department of Physics
- 16.50 **Klára Dobróka** University of Miskolc, Hungary
Parameters of the Universe
- 17.10 *Summary*

G: PHYSICS AND PHYSICS EDUCATION

VENUE: Room 314. Bld. A/1. 3rd floor, 314.

Chairman: Béla PARIPÁS *professor*

Secretary: Endre KOVÁCS *assist. professor*

Date: April 1, 2011

- 9.00 **Eva-Maria Heilmann, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
High Speed Fiber Laser Material Processing of Stainless Steel Tapes Under Tension
- 9.20 **Eva-Maria Heilmann, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
Water Jet Guided Laser Cutting Using a Green Disc Laser
- 9.40 **Benedikt Adelman, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
Different Modulation Schemes in Fibre Laser Cutting
- 10.00 **Benedikt Adelman, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
DOE Based Optimization of Fiber Laser Cutting of Metals
- 10.20 **Anna Risch, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
ITO Thin Film Laser Patterning by Picosecond Laser
- 10.40 **Anna Risch, Ralf Hellmann** University of Applied Sciences Aschaffenburg, Germany
Laserinduced Modification of GZO Thin Film
- 11.00 *Summary*

H: AUTOMATION AND TELECOMMUNICATION

VENUE: Room 311., Bld. A/1. 3rd floor, 311.
Chairman: László CZAP *assoc. professor*
Secretary: K. Attila VARGA *assist. lecturer*

Date: March 31, 2011

- 14.00 **Manuel Rosenberger, Stefan Belle, Ralf Hellmann** University of Applied Sciences
Aschaffenburg, Germany
*Optical Interrogation of Chemical and Temperature Bragg Grating Sensors Using Tunable
Fiber Coupled Bandpass Filter*
- 14.20 **Krisztián Pándi** Budapest University of Technology and Economics, Hungary
Application Layer Approach to Network Bandwidth Aggregation in Mobile Environment
- 14.40 **Domokos Kiss, Gábor Tevesz** Budapest University of Technology and Economics, Hungary
Discrete Realizations of Navigation Functions for Obstacle Avoidance of Mobile Robots
- 15.00 **Dániel Varga, Gábor Tevesz** Budapest University of Technology and Economics, Hungary
Motion Planning Approaches to Highly Redundant Manipulators
- 15.20 *Break*
- 15.40 **István Ferenczi** College of Nyíregyháza, Hungary
Methods to Determine a Profinet IRT Bus Cycle Time
- 16.00 **Ildikó Bölkény** University of Miskolc, Hungary
High Pressure Control
- 16.20 **Vladimir Simic, Aleksandra Kostic-Ljubisavljevic** University of Belgrade, Serbia
The Application of Radio Frequency Identification in Supply Chains: A Comprehensive View
- 16.40 **Attila K. Varga, István Ajtonyi** University of Miskolc, Hungary
Localization in Ad-Hoc Wireless Sensor Networks
- 17.00 *Summary*

I: ELECTRICAL ENGINEERING

VENUE: Room 220. Bld. A/1, 2nd floor, 220.

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

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

Date: **March 31, 2011**

14.00 *Opening speech by Chairman*

14.05 **Károly Ágoston Biró, Felicia Surdu, Claudia Steluta Martis** Technical University of Cluj
Napoca, Romania
3D Finite Element Method Validation of a Reversed Claw Pole Alternator and Armature Reaction

14.20 **Ciprian Harlisa¹, Mircea Arion¹, Lorand Szabo¹, Ernő Kovács²** Technical University of Cluj
Napoca, Romania¹, University of Miskolc, Hungary²
Advanced Diagnosis Methods Used in Electrical Machine's Monitoring – A Literature Survey –

14.35 **Tibor Balogh, Viliam Fedák, František Ďurovský** Technical University of Košice, Slovakia
Field-Oriented Control of the BLDC Motor

14.50 **Csaba Blága** University of Miskolc, Hungary
Reactive Power Analysis of Single Phase Power Control - The 3rd Part

15.05 *Break*

15.15 **Viktor Füvesi, Ernő Kovács** University of Miskolc, Hungary
Analyse the Modelling Capability of Feedforward Neural Network

15.30 **Tamás Bodolai** University of Miskolc, Hungary
Development of a New Method for Contactless Vibration Measurement

15.45 **Gábor Fekete, Levente Szalontai** University of Miskolc, Hungary
The Force System and the Energy of a Permanent Magnet Excited Field

16.00 *Summary*

J: MACHINE AND CONSTRUCTION DESIGN

VENUE: Department of Machine and Construction Design, Bld. A/3. 1st floor, 115.
Chairman: János Ferenc SZABÓ *assoc. professor*
Secretary: Zoltán BIHARI *assist. professor*

Date: March 31, 2011

- 14.00 **Dumitru Jula, József Kovács, Iosif Dumitrescu, Andrei Andras, Ovidiu Bogdan Tomus**
University of Petrosani, Romania
Upgrading the Boom Positioning Mechanism of Bucket Wheel Excavators Utilized in Romanian Open Pit Lignite Mines
- 14.20 **Marin Silviu Nan, Florin Dumitru Popescu, Iosif Andras, Iosif Kovacs, Dumitru Jula**
University of Petrosani, Romania
Spare Parts Reliability Assessment Based on an Integrated Management System
- 14.40 **László Kamondi, Renáta Szűcs** University of Miskolc, Hungary
Thinking as a Constructor - Acquirement and Saving of the Knowledge
- 15.00 **Mariann Zsuzsa Cserépi** University of Miskolc, Hungary
The Opportunities of Variators in Power Tools
- 15.20 **Mariann Zsuzsa Cserépi** University of Miskolc, Hungary
Opportunities of Flexible Transmitter Elements in Power Tools
- 15.40 *Break*
- 16.00 **Attila Szilágyi, Tamás Szabó, György Takács** University of Miskolc, Hungary
Lifetime Prediction of Ballscrew Constructions
- 16.20 **Tamás Fekete** University of Miskolc, Hungary
The Three-Phase Alternating Current Hydraulic Motor
- 16.40 **András Malik, János Németh, Tamás Szabó** University of Miskolc, Hungary
Analysis of Forces of the Multi Sheave Friction Drives with FEM Modelling
- 17.00 **Zoltán Bihari, József Szente** University of Miskolc, Hungary
Investigation of Roller Freewheels Used in Engine Starter Motors
- 17.20 *Summary*

K: MATERIAL SCIENCE. MATERIAL PROCESSING TECHNOLOGIES

VENUE: Lecture Hall XVI., Bld. C/1. 2nd floor, 202.

Chairman: Miklós TISZA *professor*

Secretary: Dániel JUHÁSZ *PhD Student*

Date: March 31, 2011

- 14.00 **Andrea Bíró, Miklós Tisza** University of Miskolc, Hungary
Carbonitriding of Low Alloyed Case Hardening Steels Below and Above the Iron-Nitrogen Eutectoid Temperature
- 14.20 **Dániel Juhász, András Balogh** University of Miskolc, Hungary
Resistance Spot Welding of Material Hybrid Car Bodies
- 14.40 **András Molnár¹, András Balogh²** Micromet NMA Ltd.¹, University of Miskolc², Hungary
Cold – Gas Dynamic Spray Technology Investigation and Applications
- 15.00 **Dezső Pék Széchenyi István** University, Hungary
CMT-Technology in the Welding of Ferrite Steel with Co₂ Protective Gas
- 15.20 **Vasile Adrian Ceclan, Nicolae Balc, Gheorghe Achimas, Bogdan Cuc** Tehnical University of Cluj-Napoca, Romania
Determination of the Mechanical Characteristics of Tubular Specimens Used in the Automotive Industry
- 15.40 **Szabolcs Szalai, Károly Kardos, Gábor Dogossy** Széchenyi István University, Hungary
Development of a Modern Sheet Metal Testing Machine
- 16.00 **Alina Florentina Budai, Gheorghe Achimas, Vasile Adrian Ceclan, Laurentiu Stoica** Technical University of Cluj-Napoca, Romania
Hydroforming of Sheet Metals and Tubular Parts
- 16.20 *Break*
- 16.40 **Márta Plangár¹, András Roósz²** ALCOA-KÖFÉM Ltd.¹, University of Miskolc², Hungary
"Brown Band" Effect for Corrosion Resistant Al-Alloys
- 17.00 **Zoltán Molnár, Gábor Mucsi, Barnabás Csóke** University of Miskolc, Hungary
Preliminary Experiments of Nano-Particle Production in Stirred Media Mill
- 17.20 **Paul Bere, Petru Berce, Horatiu Iancau, Emilia Sabau, Claudiu Florea** Technical University of Cluj-Napoca, Romania
Research Regarding Mechanical Characteristics of Tubes from Polymer Matrix Composite Materials
- 17.40 **Emilia Sabau, Nicolae Balc, Liana Hancu, Paul Bere, Razvan Pruna** Technical University of Cluj-Napoca, Romania
Research Regarding the Influence of Manufacturing on the Mechanical Characteristics of Composite Materials
- 18.00 **Corina Birleanu** Technical University Cluj-Napoca, Romania
Aspects Concerned the Surface Quality in the Hydrodynamic Lubrication Regime - The Case of the Steel Journal - Advanced Ceramic Cylindrical Bearing
- 18.20 *Summary*

L1: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS

Innovative Mechanical Design and Technology Center of Excellence*

VENUE: Room 1., Bld. C/1. groundfloor, 1.

Chairman: János KUNDRÁK *professor*

Co-chairman: Wojciech ZEBALA *professor*

Secretary: Krisztina BODNÁR *assist. lecturer*

Date: March 31, 2011

- 14.00 **Wojciech Zębala, Tadeusz Otko, Andrzej Matras** Cracow University of Technology, Poland
Geometric Parameters Measurements of Nozzle Surface
- 14.15 **Csaba Gyenge, Vasile-Eugen Muntean** Tehnical University of Cluj - Napoca, Romania
Some Characteristic Aspects Regarding High Performance Milling
- 14.30 **Jozef Beno, Ildiko Mankova** Technical University of Kosice, Slovakia
Experimental and Modelling Procedures for Cutting Zone Phenomena
- 14.45 **János Kundrák, Csaba Felhó** University of Miskolc, Hungary
Roughness Examinations in Hard Turning
- 15.00 **Richárd Horváth, Sándor Sipos** Óbuda University, Hungary
Topological Maps of Surfaces, Machined with Diamond Inserts
- 15.15 **Alexandru Bucur, Gheorghe Achimas, Mircea Alexandru Bucur** Technical University of Cluj-Napoca, Romania
The Use of Environmentally Friendly Lubricants in Metal Forming Processes
- 15.30 **Pál Bánlaki, Ferenc Dömötör, Zoltán Weltsch** Budapest University of Technology and Economics, Hungary
Advanced Diagnostics of Cutting Process of Metal Composite Materials
- 15.45 **Sándor Bodzás¹, Illés Dudás¹, László Péter², Gergely Dezső², Péter Kósa², Attila Százvai²**
University of Miskolc¹, College of Nyíregyháza², Hungary
Rapid Prototyping Model of Conical Worm with Arched Profile
- 16.00 **Anatoly I. Grabchenko, Vladimir L. Dobroskok, Sergey I. Tchernyshov, Yaroslav N. Garashchenko** National Technical University "Kharkov Polytechnic Institute", Ukraine
Reverse Engineering of Products by Using an Optical-Digital Machine Imetric Iscan
- 16.15 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával. „A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

L1: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS

Innovative Mechanical Design and Technology Center of Excellence

VENUE: Room 1., Bld. C/1. groundfloor, 1.

Chairman: Ildikó MANKOVA *professor*

Co-chairman: Zsolt MAROS *senior lecturer*

Secretary: István SZTANKOVICS *assist. lecturer*

Date: March 31, 2011

- 16.20 **Florica Mioara Serban, Nicolae Balc, Gheorghe Achimas, Laurentiu Stoica** Technical University of Cluj-Napoca, Romania
Finite Element Simulation of the Free Cylindrical Bending Process of Metallic Sheets
- 16.30 **Gergely Dezsó¹, Illés Dudás², László Péter¹, Sándor Bodzás²** College of Nyíregyháza¹, University of Miskolc², Hungary
Multicontact Problem of Spiroid Worm Gear Drives
- 16.40 **Peti Ferencz¹, Lucian Grama², Attila Sárossy³, Ioan Solovăstru³** S.C. CIEMatrimon S.A.¹, "Petru Maior" University of Târgu-Mureş², SC CIE R&D ROM SRL, Târgu-Mureş³, Romania
Product and Manufacturing Process Development for Diecasted Oil Pump Housing
- 16.50 **Sándor Bodzás, Illés Dudás** University of Miskolc, Hungary
Production Geometry and Finite Element Method Analysis of Archimedean Worm Gear Drive
- 17.00 **Gratiela Dana Boca** North University of Baia Mare, Romania
Taguchi Method to Improve Quality Engineering Design Product
- 17.10 **Zsuzsa Balajti** University of Miskolc, Hungary
The Connection between the Production and Projective Geometry
- 17.20 **Renáta Monostori** University of Miskolc, Hungary
Modelling and Finite Element Analysis of Hip-Joint Prosthesis
- 17.30 **Shailendra K. Jha¹, Matvey D. Uzunyan²** Netagi Subhas Institute of Technology, New Delhi, India¹, National Technical University "Kharkov Politechnic Insitute", Ukraine²
Cutting Performance of Synthetic Diamond Abrasives on Cemented Tungsten Carbide Using Single Grit Grinding
- 17.40 **Zoltán Mándy¹, Illés Dudás²** University of Debrecen¹, University of Miskolc², Hungary
The Aggregation Approachment of the Holonic Manufacturing Systems
- 17.50 **Yuriy G. Gutsalenko, Aleksander L. Mironenko, Tatyana E. Tretyak, Natalya V. Kryukova, Nina V. Zubkova** National Technical University "Kharkov Polytechnic Institute", Ukraine
Tooling Design and Development of Shaping Technology of Bevel Gears of Double-Link Variators
- 18.00 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával.„A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

L2: PRODUCTION ENGINEERING. MANUFACTURING SYSTEMS

Innovative Mechanical Design and Technology Center of Excellence*

VENUE: Lecture Hall XV., Bld. C/1. 1st floor, 101.

Chairman: Anatoliy GRABCHENKO *professor*

Co-chairman: Gyula VARGA *assoc. professor*

Secretary: Viktor MOLNÁR *assist. lecturer*

Date: March 31, 2011

- 16.20 **Tadeusz Otko, Wojciech Zębala** Cracow University of Technology, Poland
Measurement Systems Accuracy of Travel in CNC Machine Tools
- 16.30 **Attila Kovács¹, Gyula Varga², Ferenc Szigeti¹, Attila Százvai¹** College of Nyíregyháza¹,
University of Miskolc², Hungary
Environmentally Friendly Drilling of Wear-Resistant Steel
- 16.40 **Bogdan Słodki, Grzegorz Struzikiewicz, Łukasz Ślusarczyk** Cracow University of Technology,
Poland
*Chip Forms and Their Correlation with Temperature and Cutting Forces in Inconel 625 and
718 Turning*
- 16.50 **Péter Zentay¹, Richárd Horváth¹, Bálint Laczik²** Óbuda University¹, Budapest University of
Technology and Economics², Hungary
Application of Reverse Engineering in Manufacturing Design and Technology
- 17.00 **János Kundrák, István Deszpoth, Gergely Szabó** University of Miskolc, Hungary
Joint Application and Combination of Hard Turning and Grinding in Precision Machining
- 17.10 **Szabolcs Biró, Attila Nagy, Sándor Sipos** Óbuda University, Hungary
Up to Date Cutting Inserts with Modern Geometry for Machining Applications
- 17.20 **Anatoly I. Grabchenko, Ivan N. Pyzhov, Valery A. Fadeev, Vladimir A. Fedorovich**
National Technical University "Kharkov Polytechnic Institute", Ukraine
Specificity of Using Diamond Micropowders in Wheels on Metallic Bonds
- 17.30 **János Kundrák, László Ráczkövi** University of Miskolc, Hungary
Definition of Tool Life in Hard Boring
- 17.40 **Naoyuki Kuribayashi¹, Hiromi Isobe¹, Gyula Varga²** Nagaoka University of Technology,
Japan¹, University of Miskolc, Hungary²
Transportation of Substrate by Non-Contact Handling Device Using Ultrasonic Oscillation
- 17.50 **János Kundrák, Olga Verezub, Károly Gyáni** University of Miskolc, Hungary
Investigation of the Properties of White Layer Formation During Hard Turning
- 18.00 *Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával.„A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

M: APPLIED INFORMATION ENGINEERING

VENUE: Room 12., Bld. A/1. mezzanine 12.
Chairman: László DUDÁS *assoc. pofessor*
Secretary: Olivér HORNYÁK *assoc. professor*

Date: March 31, 2011

- 14.00 **Dávid Zakál, László Lengyel** Budapest University of Technology and Economics, Hungary
A Domain-Specific Language for Hierarchical Service Modeling
- 14.20 **Krisztián Fekete** Budapest University of Technology and Economics, Hungary
Vulnerabilities of Popular Social Networking Applications
- 14.40 **Dmitriy Dunaev, László Lengyel** Budapest University of Technology and Economics, Hungary
Security Shield as a New Approach to Security in Automated Systems
- 15.00 **Ákos Dudás** Budapest University of Technology and Economics, Hungary
Performance Analysis of Pre-Execution for Hash Table Inserts and Lookups on Multi-Core CPU
- 15.20 **Balázs István Mészégető** Budapest University of Technology and Economics, Hungary
Location-Based Social Service
- 15.40 **György Vigh** private entrepreneur, Hungary
Protection of Computers in Practice
- 16.00 *Break*
- 16.20 **Iosif Andras, Florin Tiberiu Iacob-Ridzi, Andras Andrei** University of Petrosani, Romania
Artificial Intelligence Based Methods in Modelling Some Mining Equipment Operation
- 16.40 **Zsolt Borsi, László Kozma** Eötvös Loránd University, Hungary
Verifying Universal CTL Properties by Checking the Properties on the Abstract Model of the System*
- 17.00 **Vali Sirb, Angela Egri, Nicolae Patrascoiu, Adrian Tomus** University of Petrosani, Romania
Modeling, Simulation and Control of a Support Section with Petri Nets Using Visual Object Net ++
- 17.20 **Krisztián Mihály¹, Gyula Kulcsár², Olivér Hornyák²** SAP Hungary Ltd.¹, University of Miskolc², Hungary
Basic Concepts of an Extended General Shop Scheduler in Manufacturing
- 17.40 *Summary*

M: APPLIED INFORMATION ENGINEERING

VENUE: Room 12., Bld. A/1. mezzanine 12.
Chairman: László DUDÁS *assoc. pofessor*
Secretary: Olivér HORNYÁK *assoc. professor*

Date: April 1, 2011

- 9.00 **László Dudás** University of Miskolc, Hungary
Visualisation of Kinematic Properties of Space in SC System
- 9.20 **Gyula Kulcsár** University of Miskolc, Hungary
A Practice-Oriented Approach for Solving Production Scheduling Problems
- 9.40 **Balázs Villányi, Péter Martinek** Budapest University of Technology and Economics, Hungary
Refinement of Schema Matcher Calibration Methods
- 10.00 **Balázs Villányi, Péter Martinek** Budapest University of Technology and Economics, Hungary
A Universal Schema Matching Algorithm Optimization Solution
- 10.20 *Break*
- 10.40 **Radu Dan Gaceanu, György Orbán** Eötvös Loránd University, Hungary
Using RSL to Describe the Stock Exchange Domain
- 11.00 **László Siroki, Gergely Mezei** Budapest University of Technology and Economics, Hungary
An Introduction to Model Version Control Systems
- 11.20 **Csongor Toth, Cris Precup, Antonela Naaji, Arpad Toth, Zsolt Gyori, Mircea Ifrim**
"Vasile Goldis" Western University of Arad, Romania
Femur Fracture Simulator for Modelling Car Accidents
- 11.40 *Summary*

M: APPLIED INFORMATION ENGINEERING

VENUE: Room 12., Bld. A/1. mezzanine 12.
Chairman: László DUDÁS *assoc. pofessor*
Secretary: Olivér HORNYÁK *assoc. professor*

Date: April 1, 2011

- 14.00 **Péter Martinek, Péter Suha** Budapest University of Technology and Economics, Hungary
Auto Scaling Solutions in Enterprise Cloud Computing
- 14.20 **Csaba Barcsák, Péter Mileff** University of Miskolc, Hungary
Preprocessing and Real Time Visualization of CT and MRI Data
- 14.40 **Zsolt Tóth, László Kovács** University of Miskolc, Hungary
Cost Analysis of Grammar Induction with CFG
- 15.00 **Gabriella Daróczy** University of Miskolc, Hungary
Cognitive Metaphors: Analyses and Requirements for Computer Interpretation
- 15.20 **Olivér Hornyák¹, Gábor Sáfrány²** University of Miskolc¹, EvoPro Ltd.², Hungary
Detecting Similarity in PLC Codes
- 15.40 *Summary*

N: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS

Mechatronics and Logistics Center of Excellence*

VENUE: Room 106., Bld. A/5. 1st floor, 106.

Chairman: Béla ILLÉS *professor*

Secretary: Péter TELEK *assist. professor*

Date: March 31, 2011

14.00 *Opening Ceremony*

14.10 **Elke Glistau¹, Yasel Costa Salas², Norge Coello Machado², Juri Tolujew¹** Otto-von-Guericke University of Magdeburg, Germany¹, Isaiás Universidad Central "Marta Abreu" de Las Villas, Cuba²
Assistance to Decision-Making in Route Planning Problems Related to Repair Electrical Breakdowns

14.25 **Elke Glistau¹, Norge Isaiás Coello Machado², Béla Illes³** Otto-von-Guericke University of Magdeburg, Germany¹, Universidad Central "Marta Abreu" de Las Villas, Cuba², University of Miskolc, Hungary³
Quality Control Charts for New Logistical Processes with Specification Limits

14.40 **Rerngtiwa Tippayasak** Otto-von-Guericke University of Magdeburg, Germany
Turbulence Oriented Logistics Planning

14.55 **Henning Strubelt, Florian Felsner** Otto-von-Guericke University of Magdeburg, Germany
Ramp-Up Management Methods for Job-Production

15.10 **Markus Koch** Otto-von-Guericke University of Magdeburg, Germany
Application of Classification Schemes to Logistics Planning Tasks

15.25 **Heike Mrech, Thomas Flucke** Hochschule Merseburg, Germany
Increased Decision Certainty in the Early Stages of Product Development

15.40 *Break*

15.55 **Janusz Grabara, Anna Brzozowska** Czestochowa University of Technology, Poland
Organization of Outsourcing Services Incorporated Factors in the Business Company Markets

16.10 **Adalet Oner, Sinem Umsu, Zeynep Hasanogulu Yasar** University, Turkey
3D Container Loading Problem

16.25 **Peter Košťál, Andrea Mudrikova** Slovak University of Technology, Slovakia
Material Flow and Group Technology at the Flexible Cell Assembling

16.40 **Peter Bigoš, Jozef Kulka, Martin Mantic, Melichar Kopas** Technical University of Kosice, Slovakia
Experimental Measuring of Local Stress Increments on the Blast Furnace Shell

16.55 **Svetlana Dabic, Momcilo Miljus** Faculty of Transport and Traffic Engineering, Serbia
Some Logistics Aspects of Tire Retreating

17.10 **Iosif Andras, Gheorghe Bogdan Urdea, Florin Nitescu, Elena Roşu, Nicolae Diaconu** University of Petrosani, Romania
Analysis of Transportation System at Lupeni Mine Plant (Romania)

17.25 *Debate/Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával...A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

N: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS

Mechatronics and Logistics Center of Excellence*

VENUE: Room **106.**, Bld. **A/5.** 1st floor, 106.
Chairman: **Tamás BÁNYAI** *assoc. professor*
Secretary: **Péter TAMÁS** *researcher*

Date: **April 1, 2011**

- 8.30 **Béla Illés, János Németh** University of Miskolc, Hungary
Rotational Speed of the Product in Storage and Examination of Parameters Influencing
- 8.45 **Tamás Bányai, Béla Illés, Ágota Bányai** University of Miskolc, Hungary
Development of Digital Curriculum in the Field of Logistics
- 9.00 **Gábor Bohács, Béla Kulcsár** Budapest University of Technology and Economics, Hungary
Application Experiences of a Camera-Based Data Collection System for Simulation
- 9.15 **György Sárközi** Borsod Volán Public Transport Co., Hungary
Possibilities of Applying E-Ticketing Data for Planning and Modelling in Public Transport
- 9.30 **Richárd Ladányi** Bay Zoltán Foundation for Applied Research, Hungary
Optimisation of Selective Waste Collection Routes on the Basis of Geographical Information System (GIS)
- 9.45 **Béla Oláh** College of Szolnok, Hungary
Sensitivity Analysis of a Genetic Algorithm in Function of the Population Size
- 10.00 **Sándor Hajdu¹, Béla Kulcsár²** University of Debrecen¹, Budapest University of Technology and Economics², Hungary
Dynamical Modeling Possibilities of Storage and Retrieval Machine Structures
- 10.15 **István Szentmiklósi, Béla Illés** University of Miskolc, Hungary
Controlsystems of Networked Operate Chains
- 10.30 *Break*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával.„A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

N: MATERIAL FLOW SYSTEMS, LOGISTICAL INFORMATICS

Mechatronics and Logistics Center of Excellence*

VENUE: Room 106., Bld. A/5. 1st floor, 106.
Chairman: György KOVÁCS *assoc. professor*
Secretary: Péter TAMÁS *researcher*

Date: April 1, 2011

- 10.45 **Béla Illés, János Németh** University of Miskolc, Hungary
Automated Crane Load Oscillation Damping with Auxiliary Rope
- 11.00 **Richárd Ladányi, Norbert Tóth** Bay Zoltán Foundation for Applied Research, Hungary
Case Study of a Supplier Warehousing Process Rationalization
- 11.15 **István Szentmiklósi, Béla Illés** University of Miskolc, Hungary
Data Acquisition Systems of Networked Operate Chains
- 11.30 **Péter Telek¹, Peter Kostal², Andrea Mudrikova², Béla Illés¹** University of Miskolc, Hungary¹,
Slovak University of Technology, Slovakia²
e-Learning Possibilities in the Education of Logistics
- 11.45 **Róbert Skapinyecz, Béla Illés** University of Miskolc, Hungary
Working Concept of e-Marketplace Based Virtual Transport Enterprises
- 12.00 **Tamás Tomkovics, László Kovács** University of Miskolc, Hungary
Methods of Planning Optimal Developed Sorting System
- 12.15 **Tibor Jedlicska, Béla Illés, Péter Tamás** University of Miskolc, Hungary
Storage Activity in an Intelligent Logistics System
- 12.30 **Szabolcs Szabady, Tibor Jedlicska, Béla Illés** University of Miskolc, Hungary
Increasing the Performance of Maintenance Activities with Simulation Method
- 12.45 **Miroslav Senkyr, Kiss Imrich, Maslan Michal** University of Security Management, Slovakia
State of the Art of Development of Dobra Intermodal Terminals after Integration with TransContainer Moskau
- 13.00 *Debate / Summary*

* A TÁMOP-4.2.1.B-10/2/KONV-2010-0001 „A felsőoktatás minőségének javítása kiválósági központok fejlesztésére alapozva a Miskolci Egyetem stratégiai kutatási területein” című projekt támogatásával...A projekt az –Új Magyarország Fejlesztési Terv keretében - az Európai Unió támogatásával, az Európai Szociális Alap társfinanszírozásával valósul meg.”

O: LEGAL SCIENCE

VENUE: Room 31., Bld. A/6. ground floor

Chairman: Zoltán NAGY *assoc. professor*

Secretary: Zoltán VARGA *assist. lecturer*

Date: March 31, 2011

14.00 *Opening speech by Chairman*

14.10 **Zoltán Nagy** University of Miskolc, Hungary
The Reform of the Financial Supervisory Activity in the European Union and in Hungary

14.30 **István Kovács** University of Miskolc, Hungary
Problems with the Public-Private Partnership (PPP)

14.50 **Ágnes Váradi** Széchenyi István University, Hungary
Claim to Justice in the Civil Process

15.10 **Zsuzsa Stipta** University of Miskolc, Hungary
Gender Mainstreaming in Legal Provisions

15.30 **Edit Zsuzsanna Tárczy** University of Miskolc, Hungary
Unfair Commercial Practices in Italy

15.50 **Zoltán Varga** University of Miskolc, Hungary
The Financial Reform of the Hungarian Pension System

16.10 *Summary*

P: ECONOMIC CHALLENGES IN THE 21st CENTURY

VENUE: Room 112., Bld. A/1. 1st floor, 112
Chairman: **Sándor BOZSIK** *assoc. professor*
Secretary: **Imre KELEMEN** *assist. lecturer*

Date: **March 31, 2011**

- 14.00 **Verica Budimir, Robert Idlbek, Svjetlana Letinić** Polytechnic in Požega, Croatia
Performance Measures Applicable in Budget Users
- 14.20 **Hrvoje Percevic** Faculty of Economics and Business, Croatia
The Impact of Financial Option Subsequent Measurement on Company's Financial Position and Income
- 14.40 **Igor Živko, Branimir Skoko, Anela Čolak** Faculty of Economics Mostar, Bosnia and Herzegovina
Credit Activities and Risk in Banking Sector of Bosnia and Herzegovina Under Financial Crisis
- 15.00 **Martina Dragija, Ivana Dražić Lutilsky, Sanja Broz Tominac** Faculty of Economics and Business, Croatia
The Introduction of Modern Cost Management Methods in the Public Sector
- 15.20 **Paulina Catana** "Valahia" University, Targoviste, Romania
The Cost Information in the Field of Cummunity Public Utility Services
- 15.40 *Break*
- 15.50 **Constantin Cucosel** North University of Baia Mare, Romania
Organizing Quality Control of Audit Services
- 16.10 **Constantin Cucosel** North University of Baia Mare, Romania
Professional Standards of the Auditor Activity
- 16.30 **Alin Isac, Claudia Isac, Codruta Dura** University of Petrosani, Romania
Analysis of the Submission and Processing of Financial Statements in Romania
- 16.50 **Jürgen Zerth** International Dialog College and Research Institute Diakonie Neuendettelsau, Germany
The Impact of Managed Care on Formal and Informal Caregivers - Pros and Cons for Long-Term Care from an Economic Point of View!
- 17.10 *Summary*

P: ECONOMIC CHALLENGES IN THE XXI CENTURY

VENUE: Room 112., Bld. A/1. 1st floor, 112
Chairman: István KUNOS *assoc. professor*
Secretary: Mónika ORLOCZKY *assist. lecturer*

Date: April 1, 2011

- 9.00 **Sándor Gergely** Károly Róbert College, Hungary
Upgrading Economic Value of Integrating State
- 9.20 **Gratiela Dana Boca** North University of Baia Mare, Romania
Quality Risk Management Iceberg
- 9.40 **Támás Koltai, Viola Tatay** Budapest University of Technology and Economics, Hungary
Supporting Production Management Decisions with Assembly Line Balancing Models in the Presence of Skilled and Unskilled Workers
- 10.00 **Támás Koltai, Krisztina Inczédy** Budapest University of Technology and Economics, Hungary
Approximate Scheduling of a Yeast Production Process - A Case Study
- 10.20 **Zsuzsa Nagy** Károly Róbert College, Hungary
Innovation Clusters and Knowledge Bases
- 10.40 **Zsolt Harangozó** University of Miskolc, Hungary
Simulation Modelling of Transiens Systems
- 11.00 **László Barna** University of Miskolc, Hungary
Challenges of Intercultural Project Management
- 11.20 **István Juhász** Eszterházy Károly College, Hungary
Differences of Motivation of the Workforce in Indian and Chinese Organizations, Using Hofstede's Dimensions
- 11.40 *Summary*

P: ECONOMIC CHALLENGES IN THE XXI CENTURY

VENUE: Room 112., Bld. A/1. 1st floor, 112
Chairman: Zoltán BARTHA *assist. professor*
Secretary: Mónika ORLOCZKY *assist. lecturer*

Date: April 1, 2011

- 14.00 **Erzsébet Pápai** University of West Hungary, Hungary
The Price and Value of Work
- 14.20 **Goran Kutnjak, Matija Radović, Luka Samaržija** Faculty of Economics Rijeka, Croatia
Reaffirmation of Cooperative Entrepreneurship in the Republic of Croatia
- 14.40 **Goran Kutnjak, Matija Radović, Luka Samaržija** Faculty of Economics Rijeka, Croatia
SME Development Aid Programs in the Republic of Croatia
- 15.00 **Mariana Bran¹, Livia Vidu², Iuliana Dobre¹** Bucharest Academy of Economic Studies¹,
University of Agricultural Sciences and Veterinary Medicine Bucharest², Romania
*Study Regarding Economic State of Agriculture from South Muntenia Development Region,
Romania*
- 15.20 **Livia Vidu¹, Mariana Bran², Gheorghe Georgescu¹, Alina Udroi¹** University of Agricultural
Sciences and Veterinary Medicine Bucharest¹, Bucharest Academy of Economic Studies²,
Romania
Buffalo and their Products in Corelation with Organic Farming
- 15.40 *Break*
- 15.50 **Melinda Klausz** Pannon University, Hungary
Developments of Social Media Strategies
- 16.10 **Tamás Nándor Tógyer** University of Miskolc, Hungary
The Hungarian Agribusiness
- 16.30 **Andrey Kravets** National Technical University "Kharkov Polytechnical Institute", Ukraine
*Enhancement of Organizational and Legal Support of Joint-Stock Companies' Development
in Ukraine*
- 16.50 *Summary*

Q: HUMANITIES AND SOCIAL SCIENCES

VENUE: Lecture Hall **XII.**, Bld. **A/3.** 3rd floor, 313.
Chairman: **Kinga SZABÓ-TÓTH** *assoc. professor*
Secretary: **Virág HAVASI** *assist. professor*

Date: **March 31, 2011**

- 14.00 **Ildikó Bodnár** University of Miskolc, Hungary
Hungarian Language Practice for Deaf Students on the Basis of Poems
- 14.20 **Ildikó Zoltán** “Petru Maior” University, Târgu Mureş, Romania
A Comparative Study of English and Hungarian Idioms with Animals
- 14.40 **Maria Alexe** National University of Arts, Romania
An Intercultural Dialogue Differences and Similarities in Balkans Cultures
- 15.00 **Gizella Horváth** Partium Christian University, Oradea, Romania
Ironic Gestures of Dead Authors
- 15.20 *Break*
- 15.40 **Renáta Szemán** University of Miskolc, Hungary
The Impact of Music Education on Early Childhood Language Development (Picture Based Storytelling)
- 16.00 **Julianna Szabó** Szent István University, Hungary
A Pre-Study to the Examination of Intercultural Competences of Teachers’ Communities Living along the Hungarian-Romanian Border Roles of Traditions, Symbols in Forming Identity and Strengthening Self
- 16.20 **Tünde Bajzát** University of Miskolc, Hungary
How to Develop the Learners’ Intercultural Competence Defined in Byram’s Model
- 16.40 **Csilla Dobos** University of Miskolc, Hungary
Major Stylistic Features and Socio-Cultural Stratification of Legal Language
- 17.00 *Summary*

Q: HUMANITIES AND SOCIAL SCIENCES

VENUE: Lecture Hall **XII.**, Bld. **A/3.** 3rd floor, 313.

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

Secretary: **Virág HAVASI** *assist. professor*

Date: **April 1, 2011**

- 9.00 **Erzsébet Virág Horváth** Szent István University, Hungary
Borderline between Myth and Reality (István Sinka's „Myths”)
- 9.20 **Andrea Kovács Duró** University of Miskolc, Hungary
Student Teachers View Evaluation
- 9.40 **Dagmar Cagánová, Peter Košťál, Andrea Mudriková** Slovak University of Technology, Slovakia
E-Learnig in „Automated Control Systems” Teaching
- 10.00 **László Czeglédi** Eszterházy Károly College, Hungary
Erudition and Books in the Radvány Mansion
- 10.20 **Ana Aleksic, Marina Rudman** University of Zagreb, Croatia
Organizational Socialization: Examining Socialization Tactics Applied in Croatian Companies
- 10.40 *Summary*

R: MEDICAL AND HEALTH SCIENCE

VENUE: Room 318., Bld. A/1. 3rd floor, 318.

Chairman: Olivér RÁCZ *professor*

Secretary: Andrea LUKÁCS *lecturer*

Date: March 31, 2011

- 14.00 **Andrea Lukács, Emőke Kiss-Tóth, Nóra Simon, László Barkai** University of Miskolc, Hungary
Linguistic Process and Cognitive Interviewing of PEDSQL™ 3.0 Diabetes Module for Hungarian Adaptation
- 14.15 **Andrea Lukács, László Szabó, László Barkai** University of Miskolc, Hungary
Effect of Six Week Regular Exercise on the Motor Tests and Quality of Life in Prepuberty Age
- 14.30 **Manuel Rosenberger, Stefan Belle, Ralf Hellmann** University of Applied Sciences
Aschaffenburg, Germany
Detection of Unlabelled DNA Hybridization with a Planar Bragg-Grating Sensor
- 14.50 **Małgorzata Fortuna¹, Jacek Szczurowski², Anna Konieczna³** Karkonosze College in Jelenia
Góra¹, Wrocław University of Environmental and Life Sciences², University School of Physical
Education in Wrocław³, Poland
Stress Influence on Human Organism on the Basis of Analysis HRV Parameters
- 15.05 **Małgorzata Fortuna¹, Jacek Szczurowski², Anna Konieczna³** Karkonosze College in Jelenia
Góra¹, Wrocław University of Environmental and Life Sciences², University School of Physical
Education in Wrocław³, Poland
*The Influence of Different Kind of Exercises on Autonomic Nervous System Function in
Healthy Woman*
- 15.20 *Break*

R: MEDICAL AND HEALTH SCIENCE

VENUE: Room 318., Bld. A/1. 3rd floor, 318.

Chairman: Olivér RÁCZ *professor*

Secretary: Andrea LUKÁCS *lecturer*

Date: March 31, 2011

- 15.30 **George Pribac¹, Aurel Ardelean¹, Corina Rosioru², Liana Mos¹, Endre Mathe³** "Vasile Goldis" Western University Arad¹, Babes-Bolyai University, Cluj-Napoca², Romania, College of Nyiregyháza, Hungary³
Hepatoprotective Effects of Trigonella Foenum Graecum Seeds in Ethanol-Induced Toxicity
- 15.45 **George Pribac¹, Aurel Ardelean¹, Constantin Craciun², Coralia Cotoraci¹, Maria Czapar³** Vasile Goldis Western University Arad¹, Babes-Bolyai University, Cluj-Napoca², Romania, College of Nyiregyháza, Hungary³
Ultrastructural Studies on Hepatoprotective Effects of Trigonella Sp. Seeds on Experimental Alcoholic Liver
- 16.00 **Ildikó Faragó** University of Miskolc, Hungary
Dental Application of Antimicrobial Photodynamic Therapy and its Importance in Dentistry (Presentation of Cases)
- 16.20 **Orsolya Nagy Szabó, András Koleszár** Óbuda University, Hungary
Functional Design and Testing of Corset Under Linen
- 16.40 *Break*
- 16.50 **Eleonóra Juhász** University of Miskolc, Hungary
Affect of Staying and Training in the Climatic Area on Cardiopulmonary System and Metabolism Process
- 17.05 **Eleonóra Juhász, László Barkai** University of Miskolc, Hungary
Analysis of Results of Komplex Physiotherapy in Thermal Carstic Water of Miskolctapolca Cavebath Based on the Physical Qualities of the Water
- 17.20 **János Demeter, Endre Dobos** University of Miskolc, Hungary
Logistics at the Ambulance Station of Miskolc
- 17.40 *Summary*

OPTIONAL PROGRAMMES

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

microCAD Party

19.00, 31 March 2011

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

Programme

<i>19⁰⁰ - 19²⁰</i>	<i>Musical Performance Offered by Students of Bartók Béla Institute for Music</i>
<i>19²⁰ - 19³⁵</i>	<i>Inauguration of the honorary members of the microCAD</i>
<i>19³⁵ - 19⁴⁵</i>	<i>Awarding the microCAD Memory Prize</i>
<i>19⁴⁵ - 21³⁰</i>	<i>Dinner</i>

Excursion to AGGTELEK-NOSZVAJ

1 April 2011

<i>Departure:</i>	13.15
<i>Arrival in Miskolc:</i>	22.00
<i>Meeting place:</i>	outside the main building entrance of the university

Programme

Visiting the **world famous Baradla Dripstone Cave** which is more than 17 km long and is part of the **World Heritage** since 1995. After a one-hour tour in the Cave, the group will leave for Noszvaj, a small, but marvellous resort village situated at the foots of Bükk Mountains. Visit to the Thummerer Winery, a family owned entrepreneurship. Wine tasting and dinner included.