

**“Lucian Blaga” University of Sibiu - Romania**

**Faculty of Engineering**

Department of Industrial Engineering and Management

Teachers Training Department

with

University of Kaiserslautern -Center for Human-Machine-Interaction at the German Research

Center for Artificial Intelligence

Institute for Production Engineering, Faculty of Technical Sciences, Novi Sad, Serbia

AGH University of Science and Technology Krakow – Poland

With the support of:

Ministry of National Education

The Manufacturing Engineering University Association (AUIF)

Academic Society of Management of Romania (SAMRO)



# **CONFERENCE PROGRAM**

**OF THE 6<sup>TH</sup> INTERNATIONAL CONFERENCE  
ON MANUFACTURING SCIENCE AND EDUCATION**

**- MSE 2013 -**

**ACADEMIC DAYS OF SIBIU – SMART SUSTAINABLE DEVELOPMENT**

**12<sup>th</sup> - 15<sup>th</sup> of June, 2013  
Sibiu, Romania**



**INTERNATIONAL PROGRAM COMMITTEE**

Conference Chairman: Ioan BONDREA, ROM

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ICLANZAN T., ROM	TORRETTA V., ITA
ILIESCU MIHAIELA, ROM	ULMANU V., ROM
IONESCU N., ROM	VALLESPER J., SPA
IZVERCEANU MONICA, ROM	VELISEK K., SK
KIFOR C., ROM	VITTORIA P., BRA
KOSTAL P., SK	VLASE A., ROM
KUZMANOVIĆ S., SER	VOHRA P., USA
LATA I., ROM	ZELJKOVIĆ M., SER
LAZAR A., ROM	
LUPULESCU N., ROM	

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Conference President: Ioan BONDREA

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BEJU L.D.	POPESCU L.
CIOCA L.	PURCAR C.
CIOCA M.	ZERBES M.



## Agenda

Start	End		
<b>Wednesday, June 12<sup>th</sup>, 2013</b>			
17:00	19:00	<b>Welcome Reception and Early Registration</b> (Faculty of Engineering, 4 Cioran Str., Room: IM 106)	
19:00	21:00	<b>Reception Cocktail</b> (University's Restaurant, 31 Victoriei Blvd.)	
<b>Thursday, June 13<sup>th</sup>, 2013</b>			
08:00	11:00	<b>Registration</b> (University's Library, 4 Lucian Blaga Str., Aula Magna)	
08:00	14:00	<b>Book Exhibition</b> (University's Library, 4 Lucian Blaga Str. Aula Magna)	
09:00	09:55	<b>MSE 2013 Conference - Opening Ceremony</b> A word of welcome from the university's organizers and guests (University's Library, 4 Lucian Blaga Str., Aula Magna)	
10:00	11:45	<b>Plenary Session</b> (University's Library, 4 Lucian Blaga Str., Aula Magna)	
11:45	12:00	<b>Break</b> (University's Library, 4 Lucian Blaga Str. Aula Magna)	
12:00	13:30	<b>The "Lucian Blaga" University of Sibiu is proud to award the title "Doctor Honoris Causa" to Prof. Eng. Detlef Zühlke, Ph.D. from University of Kaiserslautern</b> (University's Library, 4 Lucian Blaga Str., Aula Magna)	
14:00	15:00	<b>Lunch</b> (University's Restaurant, 31 Victoriei Blvd.)	
15:00	19:00	<b>Workshop: SMART Education in Engineering and Business,</b> <b>With the support of the Academic Society of Management of Romania (SAMRO)</b> (Faculty of Engineering, 4 Cioran Str., Room: IM 301)	
15:00	17:00	<b>Parallel Session: Paper Presentations</b>	
		<b>Academic Education and Management</b> Session A1 (Room IM 323)	<b>Management, Marketing and Economical Engineering</b> Session B (Room IM 319)
		<b>Design, Manufacturing and Management of Technological Equipment and Systems</b> Session C1 (Room IM 202)	<b>Management, Modeling and Monitoring of Manufacturing Processes</b> Session D (Room IM 302)
		<b>Quality Management &amp; Biomedical Engineering</b> Session E & F (Room IE 302)	<b>Research Activity in Technical Universities &amp; Virtual Manufacturing, Digital Factory</b> Session G&H (Room IM 222)
<b>Engineering in Oil and Gas Field</b> Session I1 (Room IE 301)		<b>Safety and Health at Work</b> Session J1 (Room E12 Academic Meeting Center Banatului Str.)	
17:00	17:15	<b>Break</b>	
17:15	19:00	<b>Parallel Session: Paper Presentations</b>	
		<b>Academic Education and Management</b> Session A2 (Room IM 323)	<b>E-Learning, E-Design, E-Research</b> Session K (Room IM 222)
		<b>Design, Manufacturing and Management of Technological Equipment and Systems</b> Session C2 (Room IM 202)	<b>Transport Engineering, Traffic Management</b> Session L (Room IE 302)
<b>Safety and Health at Work</b> Session J2 (Room E12 Academic Meeting Center Banatului Str.)			
20:00		<b>Banquet</b> (“Impăratul Romanilor” Restaurant 4, Nicolae Balcescu Str.)	

Start	End	
<b>Friday, June 14<sup>th</sup>, 2013</b>		
09:30	11:30	<b>Plenary Session</b> (Avram Iancu Auditorium, 5-7 Victoriei Blvd.)
11:30	12:00	<b>Break</b>
12:00	14:00	<b>Workshop: Education and the virtual world–AVITECH S.A. Company</b> (Avram Iancu Auditorium, 5-7 Victoriei Blvd.)
14:00	15:30	<b>Lunch</b> (University's Restaurant, 31 Victoriei Blvd.)
15:30	17:00	<b>Workshop: Education and the virtual world–AVITECH S.A. Company</b> (Avram Iancu Auditorium, 5-7 Victoriei Blvd.)
18:00		<b>Meet Colleagues</b> <i>Tulghes Inn (National Museum Complex "Astra"), No 16-20, Pădurea Dumbrava St.</i>

Start	End	
<b>Saturday, June 15<sup>th</sup>, 2013</b>		
09:30		<b>Concluding remarks and closing of the conference</b> (Avram Iancu Auditorium, 5-7 Victoriei Blvd.)
<b>Theatre Festival</b>		

### Wednesday, June 12<sup>th</sup>, 2013

17.00 - 19.00	Welcome Reception and Early Registration	Faculty of Engineering
19.00	Reception Cocktail	University's Restaurant, 31 Victoriei Blvd

### Thursday, June 13<sup>th</sup>, 2013

08:00 – 11:00	Registration	“Aula Magna” University’s Library, 4 Lucian Blaga Str.
08:00 – 14:00	Book Exhibition	“Aula Magna” University’s Library, 4 Lucian Blaga Str.
09:00 – 09:55	Opening Ceremony	“Aula Magna” University’s Library, 4 Lucian Blaga Str.

10:00 – 11:45	Plenary Session	“Aula Magna” University’s Library, 4 Lucian Blaga Str.
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- ❖ Prof. Eng. **Constantin Oprean**, PhD, DHC President of the Senate, Lucian Blaga University of Sibiu

*THE ECO-BIO-ECONOMY IN THE KNOWLEDGE-BASED SOCIETY*

- ❖ Prof. Eng. **Navalusic Slobodan** Ph.D, Institute for Production Engineering, Faculty of Technical Sciences, Novi Sad, Serbia

*PROGRAM SYSTEMS WITH HAPTIC INTERACTION*

- ❖ Prof. Eng. **Nicolae Bâlc** Ph.D., Prof. Eng. **Petru Berce** Ph.D., Technical University of Cluj-Napoca, Romania

*SELECTIVE LASER MELTING RESEARCH AND APPLICATIONS*

- ❖ Prof. **Moussa Karama**, Ecole Nationale d’Ingénieurs de Tarbes, Equipe M2SP

*PROBABILISTIC APPROACHES AND RELIABILITY DESIGN - APPLICATION TO THE TRANSPORTATION FIELD*

- ❖ Prof. Eng. **Ragazzi Marco** Ph.D, Dipartimento di Ingegneria Civile e Ambientale dell’Università degli Studi di Trento, Italy

*TEN YEARS OF RESEARCH ACTIVITIES BETWEEN TWO ITALIAN AND ROMANIAN UNIVERSITIES: WASTE MANAGEMENT, ENERGY PRODUCTION, HEALTH IMPACT AND SITE REMEDIATION*

15:00	19:00	Workshop: SMART Education in Engineering and Business, With the support of the Academic Society of Management of Romania (SAMRO) (Faculty of Engineering , 4 Cioran Str., Room: IM 301)
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## Parallel Session: Paper Presentations

Thursday, June 13<sup>th</sup>, 2013

15.00 – 17.00

Session A1

Room IM 323

### Academic Education and Management

Chairmen:

**CARMEN COMANICIU**

**RADIAN BELU**

**DANIEL MARA**

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|----|--|--|
| 1. | DANIELA ROXANA ANDRON  | <i>ACADEMIC EDUCATION, AS SEEN BY STUDENTS</i>   |
| 2. | RADIAN BELU, RICHARD CHIOU<br>AND TZU-LIANG TSENG                    | <i>INTEGRATING SUSTAINABILITY CONCEPTS INTO<br/>ENGINEERING AND TECHNOLOGY CURRICULUM</i>                              |
| 3. | LILIANA BUNESCU AND CARMEN<br>COMANICIU                              | <i>HOW MUCH IMPORTANCE GRANTED THE YOUNG PEOPLE<br/>TO TAXES?</i>  |
| 4. | CARMEN COMANICIU AND<br>LILIANA BUNESCU                              | <i>HOW THE ROMANIAN YOUNG PEOPLE PERCEIVE THE<br/>COMPLIANCE OF THE PRINCIPLES OF TAXATION?</i>                        |
| 5. | GEORGE DRAGHICI  | <i>A POINT OF VIEW ON EDUCATION IN INTEGRATED PRODUCT<br/>DESIGN</i>   |
| 6. | LUMINITA-MARIA GOGAN AND<br>ANCA DRAGHICI                            | <i>A POSSIBLE APPROACH FOR MEASURING THE<br/>INTELLECTUAL CAPITAL</i>  |
| 7. | LARISA IVASCU, MONICA<br>IZVERCIAN, FRANZ QUINT AND<br>ALINA RADU    | <i>APPLYING THE PRINCIPLES OF ACTIVITY-BASED COSTING<br/>METHOD FOR THE MODELING OF THE SUSTAINABLE<br/>UNIVERSITY</i> |
| 8. | DANIEL MARA  | <i>FAMILY AND SCHOOL IN PREPARING CHILDREN FOR LIFE</i>  |
| 9. | CRISTINA MOHORA, GABRIELA<br>RAVEICA, ANDRA PENA AND<br>DOREL ANANIA | <i>THE RESULTS OF A NEW APPROACH IN EDUCATION IN<br/>REHABILITATION ENGINEERING</i>                                    |



Session B

Room IM 319

**Management, Marketing and Economical Engineering****Chairmen:**

**MONICA IZVERCIAN**  
**DĂNUȚ DUMITRASCU**  
**ANCA DRAGHICI**  
**CĂLIN DENEȘ**

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|-----|---|---|
| 1.  | ILIE BANU, IOANA-MADALINA BUTIUC -<br>BANU AND MARIN POPESCU                          | <i>THE ACTUAL COST OF THE TAXPAYER'S TAXATION AND<br/>THE NEED FOR REFORM OF THE ROMANIAN TAX<br/>ADMINISTRATION</i>                  |
| 2.  | CELLA-FLAVIA BUCIUMAN, MONICA<br>IZVERCIANU AND SABINA SERAN                          | <i>THE CONCEPT OF ORGANIZATIONAL AGILITY IN<br/>ROMANIAN COMPANIES</i>  |
| 3.  | ELISABETA BUTOI   | <i>COGITATE, CREATE, COMMUNICATE, CHANGE &amp;<br/>COLLABORATE CONDUCTING</i>   |
| 4.  | CALIN DENES AND VALENTIN GRECU  | <i>THE IMPACT OF STUDYING BUSINESS COMMUNICATION<br/>ON ENGINEERING STUDENTS</i>  |
| 5.  | CRISTINA FENISER AND FLORIN FENISER   | <i>STRATEGIC BEHAVIOUR OF FIRMS IN THE INDUSTRY</i>   |
| 6.  | MARTIN HEINISCH   | <i>SYSTEMATIC ANTI-CLAIM MANAGEMENT REDUCES<br/>SUPPLEMENTAL CLAIMS</i>   |
| 7.  | LARISA IVASCU, MONICA IZVERCIAN,<br>LUCIAN-IONEL CIOCA AND ALINA RADU                 | <i>SUSTAINABILITY IN BUSINESS TODAY: THE IMPLICATION<br/>OF ROMANIAN COMPANIES IN THE SUSTAINABLE<br/>DEVELOPMENT</i>                 |
| 8.  | GABRIELA LOBONTIU AND MIRCEA<br>LOBONTIU  | <i>INVESTIGATION UPON THE MANAGERIAL STYLE OF THE<br/>SMALL BUSINESS OWNER-MANAGER</i>  |
| 9.  | GINA-MARIA MORARU, PAUL DAN<br>BRÎNDAȘU AND DAN MIRICESCU                             | <i>TOP MANAGERS' PERCEPTIONS OF THE TRAINING OF<br/>HUMAN RESOURCES FROM THEIR COMPANIES</i>  |
| 10. | ORIANA NEGULESCU AND NOURAS<br>BARBU LUPULESCU  | <i>A MODEL OF DECISION MAKING FOR ECO UTILITIES<br/>SYSTEM IN ISOLATED SITES</i>  |
| 11. | CLAUDIU PIRNAU, NICULAE<br>MARINESCU, ALEXANDRU SERGIU<br>NANU AND DANIELA GHICULESCU | <i>THE SMALL AND MEDIUM-SIZED ENTERPRISES<br/>NETWORKS, THE FIRST STEP IN THE FUTURE INNOVATIVE<br/>REGIONAL CLUSTERS DEVELOPMENT</i> |
| 12. | ALINA RADU, MONICA IZVERCIAN AND<br>LARISA IVASCU                                     | <i>A SYSTEMIC APPROACH ON HUMAN RESOURCES<br/>PLANNING</i>  |

Session C1

Room IM202

## **Design, Manufacturing and Management of Technological Equipment and Systems**

Chairmen:

**NICOLAE BÂLC**  
**MIRCEA LOBONȚIU**  
**OCTAVIAN BOLOGA**  
**MARIAN BORZAN**

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|-----|---|--|
| 1.  | MARIUS BIBU, MARIANA DUMITRU<br>AND CRISTIAN DEAC   | <i>RESEARCHES ON THE PLASMA CARBURISING AND<br/>NITROSULPHURING OF SOME STRUCTURAL STEELS</i>                |
| 2.  | CARMEN COTIGA, OCTAVIAN BOLOGA AND<br>CRISTIAN DEAC   | <i>CONTRIBUTIONS TO ASSESSING MATERIALS FOR<br/>PROSTHETIC PARTS OBTAINED BY INCREMENTAL<br/>FORMING</i>     |
| 3.  | DANIEL GHICULESCU, DANIELA GHICULESCU<br>AND SIMONA MARINESCU                                 | <i>DIFFICULTY OF DUPLICATION AND MAINTAINING<br/>OF SCA IN THE FIELD OF NONCONVENTIONAL<br/>TECHNOLOGIES</i> |
| 4.  | NADEŽDA HANKEOVÁ AND FRANTIŠEK<br>PECHÁČEK  | <i>DESCRIPTION OF MAINTENANCE ACTIVITIES ON<br/>CONCEPT MILL</i>   |
| 5.  | MARTINA KUSA, NADEZDA HANKEOVA AND<br>FRANTISEK PECHACEK                                      | <i>THE METHODOLOGY OF PLANNING AN<br/>EXPERIMENT AT MANUFACTURING OF PARTS IN A<br/>ROBOTIC SYSTEM</i>       |
| 6.  | ALINA IOANA LUCA, NICOLAE BALC, IOAN<br>ALEXANDRU POPAN AND BORZAN CRISTINA<br>STEFANA        | <i>RESEARCH TO IMPROVE THE SURFACE QUALITY<br/>OF METAL PARTS MADE BY INVESTMENT CASTING</i>                 |
| 7.  | ALIN VASILE MIRON, NICOLAE BÂLC,<br>ALEXANDRU POPAN, CRISTINA ȘTEFANA<br>BORZAN AND PAUL BERE | <i>STUDIES ON WATER JET CUTTING OF 2D PARTS<br/>MADE FROM CARBON FIBER COMPOSITE<br/>MATERIALS</i>           |
| 8.  | SÁNDOR RAVAI NAGY AND MIRCEA<br>LOBONȚIU  | <i>GEAR TEETH BENDING TEST UPON THE GEAR WITH<br/>ASYMMETRIC TEETH</i>                                       |
| 9.  | GHEORGHE SINDILĂ  | <i>DETERMINING THE LIMIT COEFFICIENT OF<br/>CIRCULAR HOLES' EDGES BENDING</i>                                |
| 10. | ALEKSANDAR ZIVKOVIC, MILAN ZELJKOVIC<br>AND SLOBODAN TABAKOVIĆ                                | <i>NONLINEAR DYNAMIC BEHAVIOURS OF BALL<br/>BEARING DUE TO RACEWAYS WAVINESS</i>                             |

## Agenda

Session D

Room IM 302

**Management, Modeling and Monitoring of Manufacturing Processes**

Chairmen:

**PETRU BERCE****GEORGE DRĂGHICI****MIHAIELA ILIESCU**

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|---|--|
| 1. NICOLAE BALC, NICOLAE PANC AND PETRU BERCE   | <i>RESEARCH ON DIMENSIONAL ACCURACY OF THE METAL PARTS MADE BY RAPID METAL CASTING</i>                           |
| 2. LIVIA DANA BEJU, SLOBODAN NAVALUŠIĆ AND MILAN ZELJKOVIĆ                                    | <i>ANALYSIS OF MANUFACTURING CELL THROUGH THEORY OF CONSTRAINT PERSPECTIVE</i>                                   |
| 3. CRISTIN BIGAN AND VALENTIN PANDURU   | <i>THE USE OF MATLAB FOR WIND TURBINE SYSTEMS NOISE LEVEL MODELING AND SIMULATION</i>                            |
| 4. MARIUS COSMA   | <i>EXPERIMENTAL RESEARCHES IN BALL NOSE END MILLING ON 150 INCLINED SURFACES</i>                                 |
| 5. SILVIA FERENT-PIPAS, BOGDAN-CIPRIAN PADUREAN, EMANUELA POP, PETRUS RARES AND CIUPAN CORNEL | <i>MATHEMATICAL MODEL AND CONSIDERATIONS ABOUT CUTTING COSTS OF A WATER JET MACHINE</i>                          |
| 6. LORELEI GHERMAN, OANA DODUN, LAURENTIU SLATINEANU AND MEHDI GHULAM                         | <i>FACTORS INTERACTION AT ABRASIVE JET MACHINING</i>   |
| 7. MIHAIELA ILIESCU AND BOGDAN - GABRIEL VLASE  | <i>MODELING AXIAL FORCE AND TORQUE IN WIDENING X6CRNIT118-10 STAINLESS STEEL MATERIALS</i>                       |
| 8. MILOŠ MADIĆ, DUŠAN PETKOVIĆ AND MIROSLAV RADOVANOVIĆ                                       | <i>MATHEMATICAL MODELING OF DRAG LINE SEPARATION IN CO<sub>2</sub> LASER NITROGEN CUTTING OF STAINLESS STEEL</i> |
| 9. MILOŠ MADIĆ, MIROSLAV RADOVANOVIĆ AND DUŠAN PETKOVIĆ                                       | <i>TAGUCHI AND GA BASED OPTIMIZATION OF DRAG LINE SEPARATION IN LASER CUTTING</i>                                |
| 10. VINCENZO TORRETTA, MASSIMO RABONI, ELENA CRISTINA RADA, MARCO RAGAZZI AND SABRINA COPELLI | <i>AEREAULIC BEHAVIOUR OF A BIOTRICKLING FILTER PILOT PLANT: EXPERIMENTS AND SIMULATIONS</i>                     |

Session E

Room IE 302

**Quality Management**

Chairmen:

**CONSTANTIN OPREAN**  
**SLOBODAN NAVALUŠIĆ**  
**CLAUDIU KIFOR**

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| 1. ALEXANDRU BOROIU, AUREL MIHAIL TITU,<br>CONSTANTIN OPREAN AND ANDREI-<br>ALEXANDRU BOROIU | <i>IMPROVING RELIABILITY MODELING IN THE<br/>CASES OF TRUNCATED TESTS</i>                      |
| 2. ALEX MAGDOIU, CONSTANTIN OPREAN AND<br>LAURENTIU NAE                                      | <i>QUALITY ALONG THE PRODUCT LIFE CYCLE</i>  |
| 3. RAMONA PAKOCS AND NOURĂŞ BARBU<br>LUPULESCU   | <i>INTEGRATED APPROACH OF QUALITY<br/>MANAGEMENT WITH INTELLECTUAL PROPERTY<br/>MANAGEMENT</i> |
| 4. SORIN PARPUCEA  | <i>PROBLEMS THAT MAY INTERFERE WITH QUALITY<br/>MANAGEMENT IN CONSTRUCTIONS IN ROMANIA</i>     |
| 5. SORIN VOLOSCIUC AND MONICA DRAGOSIN   | <i>POWER QUALITY EVALUATION IN THE<br/>DISTRIBUTION NETWORKS</i>                               |

Session F

Room IE 302

**Biomedical Engineering**

Chairmen:

**SLOBODAN NAVALUŠIĆ**  
**CONSTANTIN VASILOAICA**

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|--|---|
| 1. CRISTINA ŞTEFANA BORZAN, PETRU BERCE, DANUŢ<br>VASILE LEORDEAN, ALINA LUCA, ALIN VASILE<br>MIRON AND MOROVIČ LADISLAV | <i>STUDY OF A TRIDIMENSIONAL MODEL OF A<br/>CUSTOM IMPLANT IN CRANIO-<br/>MAXILLOFACIAL SURGERY</i> |
| 2. CONSTANTIN VASILOAICA, DANA HEARRLY AND<br>ANCA FRATILA   | <i>ASPECTS CONCERNING THE OPTIMIZATION<br/>OF DENTAL PROSTHESIS</i>                                 |

## Agenda

Session G

Room IM 222

**Research Activity in Technical Universities****Chairmen:****LAURENTIU SLATINEANU****SORIN MIHAI CROITORU****LAUREAN BOGDAN****LIVIA – DANA BEJU**

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|---|---|
| 1. STEFAN BARBU AND LAUREAN BOGDAN  | <i>BALL SCREW, IMPORTANT COMPONENT OF MACHINE TOOLS FEED DRIVES</i>                           |
| 2. DAN CHIORESCU, GHEORGHE NAGIT AND DORIN LUCA   | <i>THE INFLUENCE OF PROCESS PARAMETERS ON THE QUALITY OF DEEP DRAWN CYLINDRICAL CUP</i>       |
| 3. ADRIAN COMAN, PETRU BERCE, BERE PAUL AND RODEAN SIMONA                                 | <i>MOLD SILICONE RUBBER REINFORCEMENT WITH STRENGTH STRUCTURE USED FOR INVESTMENT CASTING</i> |
| 4. IRINA ISTRATE, ADRIAN BADEA, GIANNI ANDREOTTOLA, MARCO RAGAZZI AND ELENA CRISTINA RADA | <i>SOIL POLLUTION RESEARCH IN THE FRAME OF ROMANIAN - ITALIAN ACADEMIC EXCHANGE</i>           |
| 5. NICOLETA LUNGU, SORIN MIHAI CROITORU, MARIAN BORZAN AND ADRIAN TRIF                    | <i>TEMPERATURE PREDICTION IN OTHOGONAL CUTTING PROCESS WITH FINITE ELEMENT METHOD</i>         |
| 6. IOAN PLESA   | <i>SOURCE OF INSPIRATION: AN APPROACH TO CREATIVE EXPLORATION IN PRODUCT CONCEPTION</i>       |

Session H

Room IM 222

**Virtual Manufacturing, Digital Factory****Chairmen:****LAURENTIU SLATINEANU****SORIN MIHAI CROITORU****LAUREAN BOGDAN****LIVIA-DANA BEJU**

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|--|---|
| 1. NICUSOR BAROIU, SILVIU BERBINSCHI, VIRGIL TEODOR AND NICOLAE OANCEA     | <i>RESEARCH REGARDING DURABILITY FOR MULTI-FLUTE CURVED EDGES DRILLS</i>                          |
| 2. MARIUS ANDREI MIHALACHE, GHEORGHE NAGIT AND RIPANU MARIUS IONUT         | <i>OPTIMIZATION PROCEDURE OF A SCANNED SOLID BODY THROUGH FEA BY MEANS OF REVERSE ENGINEERING</i> |
| 3. BOGDAN-CONSTANTIN PÎRVU, JOCHEN SCHLICK, STEFAN HODEK AND DETLEF ZÜHLKE | <i>CONCEPTUAL OVERVIEW OF A SMART-FACTORY ARCHITECTURE</i>  |

Session II

Room IE 301

**Engineering in Oil and Gas Field****Chairmen:****DAN PAUL ȘTEFĂNESCU****VALENTIN PETRESCU****MARIUS BIBU**

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| 1. | ANDRZEJ BARCZYŃSKI AND<br>MARIUSZ ŁACIAK | <i>INTERCHANGEABILITY OF FUEL GAS IN THE ASPECT OF SAFE USE AND<br/>SUPPORT OF NATURAL GAS NETWORKS</i>            |
| 2. | ION FOIDAS AND DAN-PAUL<br>ȘTEFĂNESCU    | <i>NODAL ANALYSIS - BASED IMPACT ASSESSMENT OF THE PRODUCTIVE<br/>FORMATION DAMAGE</i>                             |
| 3. | MARIUSZ ŁACIAK                           | <i>RECEIVING AND STORING OF LNG OF VARYING COMPOSITION IN VIEW<br/>OF SAFE EXPLOITATION OF UNLOAD LNG TERMINAL</i> |
| 4. | MARIA LAZAR                              | <i>STABILITY ESTIMATION FOR WASTE DUMPS FROM JIU VALLEY USING<br/>FUZZY THEORY</i>                                 |
| 5. | MARIA LAZAR                              | <i>GLOBAL APPROACH OF THE ECOLOGICAL REHABILITATION IN THE<br/>MINING AREAS OF OLTENIA</i>                         |
| 6. | DAN PAUL ȘTEFĂNESCU<br>AND ION FOIDAS    | <i>ASPECTS REGARDING THE PRESSURES CONTROL IN CONVENTIONAL<br/>DRILLING (OVERBALANCED)</i>                         |
| 7. | MIHAELA TODERAS                          | <i>MATHEMATICAL MODEL USING THE ENTROPY TO ANALYSE THE<br/>PILLAR STABILITY IN SALT MINES</i>                      |
| 8. | MIHAELA TODERAS                          | <i>DILATANCY PHENOMENON OF SEDIMENTARY ROCK MASS FROM JIU<br/>VALLEY COALFIELD</i>                                 |

Session J1

Room Banatului 12

**Safety and Health at Work****Chairmen:****MARCO RAGAZZI****VINCENZO TORRETTA****LUCIAN – IONEL CIOCA**

- |  |  |
|--|--|
| 1. MOISE IOAN ACHIM, MIHAI CORCHES AND LARISA DRAGOLEA   | <i>THE IMPACT OF ANDESITE EXPLOITATION ON SOIL IN THE ZLATNA-ALMASUL MARE AREA</i>   |
| 2. GABRIEL BUJOR BABUT AND ROLAND IOSIF MORARU   | <i>METHODOLOGICAL GUIDE FOR CONTRACTING PREVENTION AND PROTECTION SERVICES</i>   |
| 3. IOANA LORENA BALAN  | <i>THE IMPLICATIONS OF MANAGEMENT IN SAFETY AND HEALTH AT WORK</i>   |
| 4. LUCIAN-IONEL CIOCA AND ROLAND IOSIF MORARU  | <i>EMERGING OHS RISKS: CHALLENGES AND IMPLICATIONS IN ROMANIA</i>  |
| 5. DORU COSTIN DARABONT, GILDA RUSU-ZAGĂR, OCTAVIAN IORGA AND LUCIAN-IONEL CIOCA                                     | <i>OCCUPATIONAL RISK ASSESSMENT IN TERMS OF ORGANIZATIONAL FLEXIBILITY OF ENTERPRISES</i>  |
| 6. ANGELICA DRAGHICI, FRANCISC POPESCU AND GHEORGHE GHETIE   | <i>STATISTICAL ANALYSIS OF TEST RESULTS OBTAINED FROM INTERLABORATORY TEST</i>   |
| 7. MIHAELA GHICAJANU AND SABINA IRIMIE   | <i>THE ORGANIZING AND ACTIVITY OF THE MINING RESCUE SERVICE IN THE MINES IN THE JIU VALLEY</i>   |
| 8. TUDOR GOLDAN  | <i>ASPECTS REGARDING THE ENVIRONMENTAL IMPACT MITIGATION IN SALT EXTRACTION BY DISSOLUTION</i>   |
| 9. TUDOR GOLDAN AND ROLAND IOSIF MORARU  | <i>CONSIDERATIONS ON SOME PRIMAL PROBLEMS INDUCED BY LIGNITE OPEN-PIT MINING</i>   |
| 10. LUCIAN LUPU-DIMA, MONICA LEBA, ANDREEA C. IONICA AND EDUARD EDELHAUSER   | <i>INTELLIGENT DISPATCHING, A SOLUTION FOR INCREASING EFFICIENCY IN MINING</i>   |
| 11. DANIELA MANUC, STELUTA NISIPEANU, ANCA STOIAN, MARIA HAIDUCU, RUXANDRA CHIURTU, IULIANA SCARLAT AND ROXANA AVRAM | <i>CONTINUOUS PERFORMANCE IMPROVEMENT OF OCCUPATIONAL SAFETY AND HEALTH - KEY COMPONENT OF AN EFFICIENT PUBLIC HEALTH MANAGEMENT</i>   |
| 12. LUCIAN MOLDOVAN, MARTIN FRIEDMANN, MIHAI MAGYARI, LEONARD LUPU AND DRAGOȘ FOTĂU                                  | <i>USING AGILENT VEE PRO TO MEASURE EXPLOSION PRESSURE RESULTED DURING TESTS IN EXPLOSIVE MIXTURES FOR ELECTRICAL APPARATUS WITH THE TYPE OF PROTECTION FLAMEPROOF ENCLOSURE "D"</i> |
| 13. ROLAND IOSIF MORARU, GABRIEL BUJOR BABUT AND LUCIAN-IONEL CIOCA  | <i>LINKING RISK PREVENTION IN WORKING SYSTEMS TO OCCUPATIONAL ACCIDENT CAUSATION THEORIES</i>  |
| 14. OVIDIU TIBERIU NAGY  | <i>ACCIDENTS AT WORK A RELATIVELY CONSTANT PHENOMENON</i>  |

17:00 17:15

**BREAK**

## Parallel Session: Paper Presentations

Thursday, June 13<sup>th</sup>, 2013

17.15 – 19.00

Session A2

Room IM 323

### Academic Education and Management

Chairmen:

**CRISTINA MOHORA**  
**DANIELA PUȘCĂ**

- |    |  |   |
|----|--|---|
| 1. | ANCA-DIANA POPESCU, ANCA DRAGHICI AND IOAN DORIAN STEF | <i>INTERCULTURAL COMPETENCE FOR COLLABORATION IN MULTICULTURAL VIRTUAL TEAMS</i>  |
| 2. | DANIELA PUSCA  | <i>A BACKWARD DESIGN APPROACH FOR CURRICULUM DEVELOPMENT</i>  |
| 3. | SETHIK RATH, DUMITRAȘCU DANUT AND MIRICESCU DAN        | <i>THE COMPARATIVE STUDY ON HIGHER EDUCATION MANAGEMENT: A STUDY OF LUCIAN BLAGA UNIVERSITY OF SIBIU AND ROYAL UNIVERSITY OF PHNOM PENH</i> |
| 4. | PAOLO VITTORIA   | <i>THE FORUM THEATRE IN AESTHETIC AND DIALOGIC PEDAGOGY</i>   |

Session K

Room IM 222

### E-Learning, E-Design, E-Research

Chairmen:

**OANA DODUN**  
**SORIN BORZA**  
**CARMEN SIMION**

- |    |  |   |
|----|--|---|
| 1. | IULIANA DOBRE  | <i>TOMORROW BECOMING YESTERDAY – AN OVERVIEW OF MOBILE TECHNOLOGIES DEVELOPMENT</i>       |
| 2. | IULIANA DOBRE  | <i>AN OVERVIEW OF THE QUALITY DIMENSIONS IN HIGHER EDUCATION</i>                          |
| 3. | CARMEN DOBRIN AND CARMEN SIMION  | <i>RESEARCH IN ESTIMATING PRODUCTION PROCESS INDICATORS ON VIRTUAL TEACHING PLATFORMS</i> |
| 4. | LUCIAN LUPU-DIMA, MONICA LEBA, ANDREEA C. IONICA AND EDUARD EDELHAUSER | <i>CREATIVITY AND GAMIFICATION IN ELEARNING SYSTEMS</i>                                   |
| 5. | SORIN PARPUCEA   | <i>TRADITIONAL RESEARCH SOURCES OF INFORMATION COMPARED TO THE INTERNET</i>               |
| 6. | ALINA RADU, MONICA IZVERCIAN, FRANZ QUINT AND LARISA IVASCU            | <i>MODELLING HUMAN RESOURCES EDUCATION IN THE E-LEARNING AND E-TEACHING ERA</i>           |



## Agenda

Session L

Room IE 302

**Transport Engineering, Traffic Management****Chairmen:****ALEXANDRU BOROIU****ALEXANDRU RACOVITZĂ****MARCU FRATILĂ****MIRCEA BĂDESCU**

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|--|---|
| 1. MIRCEA BĂDESCU, MARINELA INȚĂ<br>AND CARMEN PURCAR                              | <i>SUSTAINABLE DEVELOPMENT OF URBAN PUBLIC TRANSPORT<br/>IN SIBIU CITY</i>  |
| 2. ALEXANDRU BOROIU, ANDREI-<br>ALEXANDRU BOROIU, ELENA NEAGU<br>AND SUSTER HELENE | <i>STUDY ON THE REGULATION OF ROAD TRAFFIC IN THE<br/>PITESTI AREA DURING THE REHABILITATION OF THE<br/>BRIDGES OVER THE ARGES AND DOAMNEI RIVERS</i> |
| 3. MARCU FRATILA   | <i>A SIMULATON MODEL FOR PEDESTRIAN PLUTON THROUGH<br/>WALKWAY</i>  |
| 4. LILIANA GEORGETA POPESCU, MIHAI<br>ZERBEȘ, RADU PASCU                           | <i>A SIMULATION ANALYSIS OF A LOGISTICS SUPPLY SYSTEM OF<br/>A WOOD MANUFACTORY ENTERPRISE</i>  |
| 5. CARMEN PURCAR, MIHAIL TITU,<br>MARINELA INȚĂ AND MIRCEA<br>BADESCU              | <i>STUDIES ON TRAFFIC CRASHES IN THE COUNTY OF SIBIU,<br/>ROMANIA</i>   |
| 6. ALEXANDRU RACOVITZA,<br>LAURENTIU FARA AND ANDREI<br>MORARU GALBEAZA            | <i>IN TERRITORY BIOMASS BIO-ETHANOL PRODUCTION AND ITS<br/>FURTHER AUTOMOTIVE USE</i>   |

Session C2

Room IM 202

## **Design, Manufacturing and Management of Technological Equipment and Systems**

Chairmen:

**GHEORGHE SINDILĂ****JOCHEN SCHLICK****DAN BRINDASU****ȘTEFAN BARBU**

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|--|---|
| 1. EMANUELA POP, RARES PETRUS, SILVIA FERENT-PIPAS AND CORNEL CIUPAN                                       | <i>PROGRAMME FOR SELECTING THE APPROPRIATE URBAN WIND TURBINE ACCORDING TO THE LOCATION</i>                         |
| 2. DOMINIC GORECKY, RICARDO CAMPOS, HARISH CHAKRAVARTHY, RÜDIGER DABELOW, JOCHEN SCHLICK AND DETLEF ZÜHLKE | <i>AUGMENTED ASSEMBLY - AN ASSISTENCE SYSTEM FOR HUMAN-CENTERED ASSEMBLY</i>  |
| 3. POPAN IOAN ALEXANDRU, NICOLAE BALC, ALEXANDRU CAREAN, ALINA LUCA AND ALIN VASILE MIRON                  | <i>RESEARCH TO IMPROVE THE SURFACE ROUGHNESS OF THE PARTS MADE BY WATER JET MILLING</i>                             |
| 4. STEFAN HODEK, NICOLAS MEIERER, JOCHEN SCHLICK AND DETLEF ZUEHLKE  | <i>DEVELOPMENT APPROACH FOR CYBER-PHYSICAL PRODUCTION COMPONENTS</i>  |
| 5. ILIE POPP   | <i>CONSIDERATION REGARDING THE ROLE OF SENSORS IN MANUFACTURING SYSTEMS</i>   |
| 6. RODICA ROHAN  | <i>THE MAIN FACTOR SWHICH LEAD TO INCREASED PERFORMANCE OF DECISION-MAKING MANAGEMENT IN THE PRODUCTION PROCESS</i> |

## Agenda

Session J2

Room Banatului 12

**Safety and Health at Work****Chairmen:****ELENA RADA****MOISE ACHIM****ROLAND IOSIF MORARU**

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|--|---|
| 1. OVIDIU TIBERIU NAGY   | <i>FACTORS THAT MAY INFLUENCE OCCUPATIONAL ACCIDENTS</i>                                    |
| 2. STELUTA NISIPEANU, MARIA HAIUCU, IULIANA SCARLAT, RUXANDRA CHIURTU AND ROXANA AVRAM   | <i>MODERN METHODS OF REDUCING BIOLOGICAL RISK FACTORS FROM CULTURAL HERITAGE DEPOSITS</i>   |
| 3. MARIA PRODAN, EMILIAN GHICIOI, ANDREI SZOLLOSI-MOTA, IRINA NALBOC AND MIHAELA PARAIAN | <i>THE DEVELOPMENT OF THE METHODS FOR DETERMINING AIR - FUEL GAS EXPLOSION PARAMETERS</i>   |
| 4. GILDA RUSU-ZAGAR, DORU DARABONT, CATALIN RUSU-ZAGAR AND ANDREI IORGA                  | <i>THE ROAD TRAFIC. SOURCE OF POLLUTION</i>   |
| 5. GILDA RUSU-ZAGAR, IONEL IORGA, CATALIN RUSU-ZAGAR AND OCTAVIAN IORGA                  | <i>TROPOSPHERIC OZONE, PM10 AND PM2,5 IN URBAN AND SUBURBAN ENVIRONMENT</i>                 |
| 6. IOAN STOICOVICI   | <i>INCREASING THE DEGREE OF SECURITY OF SURFACE INSTALLATIONS IN NATURAL GAS EXTRACTION</i> |
| 7. SORIN VATAVU AND NICULINA VATAVU  | <i>PRESSURE SOURCE FOR HYDRAULIC ACTUATIONS USED IN HAZARDOUS EXPLOSIVE ATMOSPHERES</i>     |

Thursday, June 13<sup>th</sup>, 2013

20.00

**BANQUET “ÎMPĂRATUL ROMANILOR” RESTAURANT**

**Friday, June 14th, 2013**

**09:30 – 11:30**

**Plenary Session**

**Avram Iancu Auditorium, 5-7  
Victoriei Blvd**

- ❖ Prof. Eng. **Belu Radian** Ph.D., Professor, Drexel University, College of Professional Studies, Philadelphia, Pennsylvania  
*SMART GRID RESEARCH AND EDUCATION – STATUS AND FUTURE DEVELOPMENTS*
- ❖ Prof. Eng. **Valeriu Dulgheru** Ph.D., Technical University of Moldova, Chişinău, Republic of Moldova  
*NON-CONVENTIONAL INNOVATIVE TECHNOLOGIES IN POWER ENGINEERING – ONE OF THE SOLUTIONS TO HUMANKIND'S GLOBAL PROBLEMS.*
- ❖ Prof. Eng. **Duşe Dan-Maniu** Ph.D., DHC, Prof. **Gabriel Octavian Negrea**, “Lucian Blaga” University of Sibiu, Romania; “Gheorghe Lazar” National College Sibiu, Romania.  
*WHERE DO GOOD ENGINEERS COME FROM?*
- ❖ Prof. Eng. **Kifor Claudiu** Ph.D. and As prof. **Lal Mohan Baral**, “Lucian Blaga” University of Sibiu, Romania; Ahsanullah University of Science and Technology, Bangladesh.  
*AN INTEGRATED DMAIC-KNOWLEDGE MANAGEMENT MODEL FOR SIX SIGMA QUALITY MANAGEMENT*
- ❖ Prof. **Ruxandra Vidu**, University of California David, SUA  
*NANOSTRUCTURES: SYNTHESIS AND ENERGETIC APPLICATIONS*
- ❖ Prof. Eng. **Gheorghe Jitianu**, EDMing SERV CONSULT SRL - Bucuresti  
*TECHNICAL SOLUTIONS USED IN DEVELOPING ROMANIAN EQUIPMENT FOR ELECTRO-DISCHARGE MACHINING*

Agenda

<b>11:30 - 12:00</b>	<b>Break</b>	
<b>12:00 - 14:00</b>	<b>Workshop: Education and the virtual world–AVITECH S.A. Company</b>	<b>Avram Iancu Auditorium, 5-7 Victoriei Blvd</b>
<b>14:00 - 15:30</b>	<b>Lunch</b>	<i>University's Restaurant, 31 Victoriei Blvd.</i>
<b>15:30 - 17:00</b>	<b>Workshop: Education and the virtual world–AVITECH S.A. Company</b>	<b>Avram Iancu Auditorium, 5-7 Victoriei Blvd</b>
<b>18:00</b>	<b>Meet Colleagues</b>	<b>Tulghes Inn (National Museum Complex "Astra"), No 16-20, Pădurea Dumbrava St.</b>

**Saturday, June 15th , 2013**

**09:30 – 11:30**

**Concluding remarks and  
closing of the conference**

**Avram Iancu Auditorium, 5-7  
Victoriei Blvd**

**Theatre Festival**