



# CoSME 2016

## CONFERENCE PROGRAM

**Under auspices of  
The Ministry of National Education and Scientific Research**

**November 3<sup>rd</sup> - 4<sup>th</sup> 2016  
Braşov, Romania**



TRANSILVANIA University of Brasov  
Faculty of Technological Engineering and Industrial Management  
Department of Manufacturing Engineering



The 4<sup>th</sup> International Conference on  
**Computing and Solutions**  
**in Manufacturing Engineering 2016**  
**CoSME'16**

**ORGANIZERS**

*Transilvania* University of Brasov  
Department of Manufacturing Engineering

Institute High Tech Products for Sustainable Development: PRO-DD  
Advanced Technologies and Manufacturing Systems Research Center

**UNDER AUSPICES OF**

The Ministry of National Education and Scientific Research  
Co-funded by National Authority for Scientific Research and Innovation (35M/16.08.2016)

Academic Association of Manufacturing Engineering

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## SECTIONS AND VENUE OF THE CONFERENCE

<b>Section</b>	<b>Name</b>	<b>Venue</b>	<b>Date Time</b>
<b>Plenary</b>	<b>Plenary session</b>	<b>Aula Magna</b>	<b>Nov. 3<sup>rd</sup> 9.30-13.00</b>
<b>S1</b>	<b>CAD/CAE/ CAPP/CAM/CAx Techniques</b>	<b>Room 1</b>	<b>Nov. 3<sup>rd</sup> 15.00-19.30</b>
<b>S2</b>	<b>Advanced Manufacturing Technologies</b>	<b>Room 2</b>	<b>Nov. 3<sup>rd</sup> 15.00-19.30</b>
<b>S3</b>	<b>Additive Manufacturing and Non-conventional Technologies</b>	<b>Room 1</b>	<b>Nov. 4<sup>th</sup> 9.00-13.30</b>
<b>S4</b>	<b>Quality Engineering and Reliability</b>	<b>Room 3</b>	<b>Nov. 3<sup>rd</sup> 15.00-19.30</b>
<b>S5</b>	<b>Solutions for Tools and Devices in Manufacturing Engineering</b>	<b>Room 3</b>	<b>Nov. 4<sup>th</sup> 11.30-13.30</b>
<b>S6</b>	<b>Industrial Management</b>	<b>Room 2</b>	<b>Nov. 4<sup>th</sup> 9.00-13.30</b>
<b>S7</b>	<b>Other Related Topics</b>	<b>Room 3</b>	<b>Nov. 4<sup>th</sup> 9.00-11.00</b>
	<b>AMaTUC Workshop</b>	<b>Room 1</b>	<b>Nov. 4<sup>th</sup> 15.30-17.30</b>

## SCHEDULE OF EVENTS

### WEDNESDAY November 2<sup>nd</sup>, 2016

- 17:30 – 18:30 Participants Registration  
18:30 – 20:00 Welcome Party

### THURSDAY November 3<sup>rd</sup>, 2016

- 08:00 – 09:00 Participants Registration  
09:00 – 09:30 Opening Ceremony  
09:30 – 11:00 **Plenary Session**  
11:00 – 11:30 Coffee Break  
11:30 – 13:00 **Plenary Session**  
13:00 – 15:00 Lunch  
15:00 – 17:00 **Parallel Sessions S1, S2 and S4**  
17:00 – 17:30 Coffee Break  
17:30 – 19:30 **Parallel Sessions S1, S2 and S4**  
20:00 - ... Gala Dinner

### FRIDAY November 4<sup>th</sup>, 2016

- 09:00 – 11:00 **Parallel Sessions S3, S6 and S7**  
11:00 – 11:30 Coffee Break  
11:30 – 13:30 **Parallel Sessions S3, S5 and S6**  
13:30 – 15:00 Lunch  
15:00 – 15:30 Closing Ceremony  
15:30 – 17:30 AMaTUC Workshop

### SATURDAY November 5<sup>th</sup>, 2016

- 9:00-17:00 Social Program (optional) - Excursion to Rasnov, and Bran, visit Rasnov Citadel, visit Bran Castle, Lunch

## DETAILED PROGRAM

### THURSDAY November 3<sup>rd</sup>, 2016

08:00 – 09:00 Participants Registration  
09:00 – 09:30 Opening Ceremony  
09:30 – 11:00 **Plenary Session**

1. **HYBRID SURFACE TREATMENTS: NEW PROCESSES COMBINING SEVERE PLASTIC DEFORMATION AND THERMAL SPRAY PROCESSES TO ACHIEVE IMPROVED MECHANICAL PROPERTIES**

*Cécile LANGLADE,*

*Université de Technologie Belfort-Montbéliard, France*

2. **LEAVING THE LABS BEHIND. AM IS HEADING FOR SERIES PRODUCTION**

*Andreas GEBHARDT,*

*University of Applied Sciences Aachen, Germany*

3. **CAD BASED MANUFACTURING**

*Panagiotis KYRATIS,*

*Western Macedonia University of Applied Sciences, Greece*

11:00 – 11:30 Coffee Break  
11:30 – 13:00 **Plenary Session**

**4. THE ZEISS METROLOGY - FACING NEW CHALLENGES**

*Michael BUJARA,*

*Regional Sales Manager – Sales EMEA, Carl Zeiss Industrielle Messtechnik GMBH, Germany*

**5. ON TECHNOLOGY CHOICE IN STANDARDIZATION: IMPLICATIONS FOR PATENT VALUATION**

*Tineke EGYEDI,*

*Delft Institute for Research on Standardization, Netherlands*

**6. DIFFERENTIATIONS OF THE INDUSTRIAL FINANCIAL CREDIT SYSTEM FROM THE PREINDUSTRIAL MODELS**

*Angelos ZACHARIADIS,*

*Union of Hellenes Scientists for Standardization and Prototyping (ENEPROT), Greece*

**7. FACULTY OF TECHNOLOGICAL ENGINEERING AND INDUSTRIAL MANAGEMENT: A HISTORY OF OVER 50 YEARS**

*Gheorghe OANCEA,*

*Transilvania University of Brasov, Romania*

13:00 – 15:00    Lunch



**THURSDAY, November 3<sup>rd</sup>, 2016**

**15:00 – 19:30**

**Session S1**

**Room 1**

**CAD/CAE/ CAPP/CAM/CAx Techniques**

**Chairmen:** *Panagiotis KYRATSIIS, Mircea-Viorel DRĂGOI, Oana DODUN, Lucia-Antoneta CHICOȘ*

**Secretary:** *Mihaela URDEA*

- 1. MOVEMENTS STRAIGHTNESS OF THE NUMERICALLY CONTROLLED MEASURING MACHINES**  
*Mirjana BOJANIĆ and Slobodan NAVALUŠIĆ*
- 2. CORRELATIVE ANALYSIS OF SHOE INSOLES ACTING IN MOIST AND COLD/WARM ENVIRONMENT**  
*Barbu BRAUN and Mihaela BARITZ*
- 3. FEM MODELLING OF SHOES INSOLES COMPONENTS FOR STANDING AND WALKING SIMULATION**  
*Barbu Braun and Mihaela Baritz*
- 4. DESIGN OF EQUIPMENT FOR TRAINING MACHINE TOOLS**  
*Miroslav CÍŠAR, Nadežda ČUBOŇOVÁ and Ivan KURIC*
- 5. DESIGNING PARTS FOR A ROBUST BEHAVIOUR AGAINST VIBRATIONS. A NEW CONCEPT**  
*Florin CORCIOVĂ and Mircea Viorel DRĂGOI*
- 6. ANALYSIS OF SHAPES FOR THE DEVELOPMENT OF ALGORITHMS FOR STRATEGIES OF MACHINING PROCESS IN THE CAM SYSTEM**  
*Tomáš DODOK, Nadežda ČUBOŇOVÁ and Anna RUDAWSKA*
- 7. FINITE-ELEMENT ANALYSIS OF SOME PNEUMATICALLY-ACTUATED WRIST-REHABILITATION EQUIPMENT**  
*Ovidiu FILIP and Tudor DEACONESCU*
- 8. MATHEMATICAL MODELLING OF A FIN RAY TYPE MECHANISM, USED IN THE CASE OF THE WRIST REHABILITATION EQUIPMENT**  
*Ovidiu FILIP and Tudor DEACONESCU*

9. **APPLICATION OF THE METHOD BASED ON TECHNOLOGICAL KNOWLEDGE AND EXPERTISE FOR ADDING THE DESIGN OF A TECHNOLOGICAL PROCESS**  
*Piotr OCIEPKA*
10. **GRAPHIC INTERFACE FOR NUMERICAL COMMANDS ON THE USB PORT OF PC COMPATIBLE COMPUTERS**  
*Elena POPA and Viorel POPA*
11. **DYNAMIC ANALYSIS OF SCRAPER CONVEYOR OPERATION WITH EXTERNAL LOADS**  
*Jerzy ŚWIDER, Krzysztof HERBUŚ and Kamil SZEWERDA*
12. **ANALYSIS OF IMPACT OF LONGITUDINAL INCLINATION OF A CHAIN CONVEYOR ON DYNAMICAL PHENOMENA DURING OPERATION**  
*Kamil SZEWERDA, Jerzy ŚWIDER and Krzysztof HERBUŚ*
13. **ENGINEERING APPLICATIONS USING CAD BASED APPLICATION PROGRAMMING INTERFACE**  
*Anastasios TZOTZIS, Cesar GARCIA-HERNANDEZ, Jose-Luis HUERTAS-TALON, Dimitrios TZETZIS and Panagiotis KYRATSIS*
14. **RESEARCH REGARDING REVERSE ENGINEERING FOR AIRCRAFT COMPONENTS**  
*Razvan UDROIU*
15. **STUDIES REGARDING THE PROCESSING OF SMALL THICKNESS CONTAINERS**  
*Mihaela URDEA*

**THURSDAY, November 3<sup>rd</sup>, 2016**

**15:00 – 19:30**

**Session S2**

**Room 2**

**Advanced Manufacturing Technologies**

**Chairmen:** *Cecile LANGLADE, Stanislaw LEGUTKO, Laurențiu SLĂTINEANU, Florin BLAGA*

**Secretary:** *Milena FOLEA*

- 1. ANALYSIS OF BEARINGS BEHAVIOUR WITH CYLINDRICAL ROLLERS WITH VARIABLE CENTER OF GRAVITY**  
*Sorin BARABAS and Adriana FLORESCU*
- 2. CADOPROSYS SOFTWARE. LOGISTICS**  
*Cătălin-Iulian CHIVU, Catrina CHIVU and Cristina GĂVRUȘ*
- 3. CADOPROSYS SOFTWARE. GENERAL STRUCTURE**  
*Catrina CHIVU, Cătălin-Iulian CHIVU and Magdalena BARBU*
- 4. INNOVATIVE ANALYSIS OF HS 6-5-2 DRILLS EDGES QUALITY**  
*Raluca DAICU and Valentin DIȚU*
- 5. RESEARCHES ON EVALUATION OF SMOOTH ENTRANCE IN CUTTING USING ELECTRICAL CURRENT. A CASE STUDY**  
*Valentin DIȚU, Gheorghe OANCEA and Raluca DAICU*
- 6. INFLUENCE OF FRICTION STIR PROCESS PARAMETERS ON SURFACE QUALITY OF ALUMINUM ALLOY A2017**  
*Cecile LANGLADE, Adriana ROMAN, Daniel Schlegel, Eric GETE, Patrice NOEL and Milena FOLEA*
- 7. CHARACTERISTICS OF GEOMETRIC STRUCTURE OF THE SURFACE AFTER GRINDING**  
*Stanislaw LEGUTKO, Krzysztof ZAK and Jan KUDLACEK*
- 8. TOOL LIFE OF CERAMIC WEDGES DURING PRECISE TURNING OF TUNGSTEN**  
*Stanislaw LEGUTKO, Piotr WINIARSKI, Tadeusz CHWALCZUK, Ludmila MARCINCINOVA-NOVAKOVA and Krzysztof ZAK*

**9. EXPERIMENTAL RESEARCH ABOUT POSITIONING CORRECTION OF CNC MACHINE WITH X-AXIS UP TO 12000 MILLIMETERS USING LASER MEASUREMENT EQUIPMENT**

*Ștefan Adrian MOLDOVAN, Marius COSMA and Vasile NĂȘUI*

**10. MODELLING OF THE ALUMINIUM ALLOY MACHINING PROCESS**

*Piotr PASZTA*

**11. ANALYSES OF PROCESS PARAMETERS INFLUENCE ON THE DRILLING PROCESS BY USING CARBIDE DRILLS FOR STEEL ST52-3**

*Ioan Alexandru POPAN, Alina Ioana POPAN, Sorin Cosmin COSMA and Alexandru CAREAN*

**12. INFLUENCE OF EXPLOSIVE WELDING PARAMETERS ON PROPERTIES OF BIMETAL TI-CARBON STEEL**

*Mariusz PRAZMOWSKI, Michał NAJWER, Henryk PAUL and Dariusz ANDRZEJEWSKI*

**13. DYNAMIC STUDY OF MILLING LOW DEPTH CHANNELS**

*Dorin Mircea ROSCA, Mircea Anton VASILONI and Milena FOLEA*

**14. INFLUENCE OF THE AMOUNT OF DEFORMATION ON THE CHANGE IN THE POROSITY OF SINTERS SUBJECTED TO FREE COLD UPSETTING**

*Mariusz ROSIAK and Jerzy NAPIÓRKOWSKI*

**15. STATE SPACE ANALYSIS OF FLEXIBLE MANUFACTURING CELL USING TIMED COLORED PETRI NETS**

*Sanjib Kumar SAREN and Florin BLAGA*

**16. EXPERIMENTAL AND NUMERICAL INVESTIGATIONS OF THE STEEL SHEETS FORMABILITY WITH HYDROFORMING**

*Radu VASILE, Sever-Gabriel RACZ and Octavian BOLOGA*

**17. CHANGES IN THE MECHANICAL PROPERTIES AND MICROSTRUCTURE OF ANISOTROPIC AUSTENITIC STAINLESS SHEET STEEL AFTER UNIAXIAL TENSILE TEST**

*Emil YANKOV and Maria NIKOLOVA*

**THURSDAY, November 3<sup>rd</sup>, 2016**

**15:00 – 19:30**

**Session S4**

**Room 3**

**Quality Engineering and Reliability**

**Chairmen:** *Max KLÖCKER, Ramona CLINCIU, Cristin-Olimpiu MORARIU, Nicolae EFTIMIE*

**Secretary:** *Laurențiu MIHAIL*

- 1. RISK REDUCTION IN DIMENSION INSPECTION OF THE PLASTIC INJECTION-MOLDED PARTS FROM MECHATRONIC DEVICES BY USING OPTICAL 3D MEASURING TECHNIQUES**  
*Ion Cristian BRAGA, Anisor NEDELCU and Razvan UDROIU*
- 2. STATISTICAL ANALYSIS OF THE MEASUREMENT ERRORS IN AN INSTALLATION OF WATER METERS. STUDY ON THE VOLUME OF THE WATER LOSS IN THE INSTALLATION**  
*Mihaela Rodica CLINCIU and Ramona CLINCIU*
- 3. METHOD FOR DETERMINING THE CALIBRATION LIFE OF MEASURING DEVICES. CASE STUDY – WATER METERS**  
*Mihaela Rodica CLINCIU and Ramona CLINCIU*
- 4. IDENTIFICATION AND ANALYSIS OF INCOMPATIBILITIES OCCURRING IN THE GRANITE SLABS MANUFACTURING**  
*Agnieszka CZAJKOWSKA and Renata STASIAK-BETLEJEWSKA*
- 5. METHOD OF USING OF THE BOX-COX TRANSFORMATION AT THE APPLICATION OF THE XBAR AND S CHART**  
*Nicolae EFTIMIE*
- 6. CHOICE AND ASSESSMENT OF IMPROVEMENT MEASURES CRITICAL FOR PROCESS OPERATION (IN REFERENCE TO THE REQUIREMENTS OF ISO 9001:2015)**  
*Adam GÓRNY*
- 7. INVESTIGATIONS OF FRICTION-RELEVANT PARAMETERS TO ENSURE RELIABLE BOLTED JOINTS**  
*Max KLÖCKER and Sebastian WESTPHAL*

**8. ROBUST DEVELOPMENT OF A CNC TURNING PROCESS**

*Laurentiu – Aurel MIHAIL*

**9. RELIABILITY ANALYSIS OF SCARIFYING TOOTH FOR TRAILED SCARIFIER**

*Cristin-Olimpiu MORARIU, Adela-Eliza DUMITRASCU and Doina Valentina CIOBANU*

**10. STATISTICAL INFERENCES FOR BEARINGS LIFE USING SUDDEN DEATH TEST**

*Cristin-Olimpiu MORARIU, Sebastian-Marian ZAHARIA*

**11. QUANTIFICATION OF THE QUALITY PROBLEMS IN THE CONSTRUCTION MACHINERY PRODUCTION**

*Renata STASIAK-BETLEJEWSKA and Agnieszka CZAJKOWSKA*

**12. COMPARISON OF THE METHODS FOR DETERMINATION OF CALIBRATION AND VERIFICATION INTERVALS OF MEASURING DEVICES**

*Pavlina TOTEVA-LYUTOVA, Stoyan SLAVOV and Dimka VASSILEVA*

**FRIDAY, November 4<sup>th</sup>, 2016**

**9:00 – 13:30**

**Session S3**

**Room 1**

**Additive Manufacturing and Non-conventional Technologies**

**Chairmen:** *Andreas GEBHARDT, Carol SCHNAKOVSKY,  
Nicolae BĂLC, Simina FULGA*

**Secretary:** *Camil LANCEA*

- 1. STUDY OF KERF GEOMETRY OF MULTILAYERS MATERIALS IN ABRASIVE WATER JET CUTTING PROCESS**  
*Bogdan BARABAS and Andrea DEACONESCU*
- 2. STUDY ON SLM MANUFACTURING OF TEETH USED FOR DENTAL TOOLS TESTING**  
*George Razvan BUICAN, Gheorghe OANCEA and Rui F. MARTINS*
- 3. EXPERIMENTAL RESEARCH ON THE MACHINABILITY OF HARDOX STEEL BY ABRASIVE WATERJET CUTTING**  
*Alexandru Catalin FILIP, Mircea Anton VASILONI and Laurentiu Aurel MIHAIL*
- 4. ADDITIVE MANUFACTURING – A SUSTAINABLE MANUFACTURING ROUTE**  
*Domnita FRĂȚILĂ and Horațiu ROTARU*
- 5. IDENTIFICATION OF IN-LINE DEFECTS AND FAILURES DURING ADDITIVE MANUFACTURING POWDER BED FUSION PROCESSES**  
*Simina FULGA, Arjana DAVIDESCU and Ira EFFENBERGER*
- 6. CONCEPTUAL APPROACH FOR AN IN-LINE QUALITY CONTROL SYSTEM IN ADDITIVE MANUFACTURING POWDER BED FUSION PROCESSES**  
*Simina FULGA, Arjana DAVIDESCU and Ira EFFENBERGER*
- 7. CONSIDERATIONS ON MATERIAL THICKNESS INFLUENCE ON THE AWJ PROCESSING QUALITY OF AN ALUMINIUM ALLOY**  
*Eugen HERGHELEGIU, Maria Crina RADU, Carol SCHNAKOVSKY and Catalin Nicolae TAMPU*

**8. BASIC RESEARCH ON LATTICE STRUCTURES FOCUSED ON THE RELIANCE OF THE CROSS SECTIONAL AREA AND ADDITIONAL COATINGS**

*Julia KESSLER, Nicolae BÂLC, Andreas GEBHARDT and Karim ABBAS*

**9. MICROSTRUCTURE AND MICRO-HARDNESS ANALYSES OF TITANIUM ALLOY TI-6AL-4V PARTS MANUFACTURED BY SELECTIVE LASER MELTING**

*Camil LANCEA, Lucia-Antoneta CHICOS, Sebastian Marian ZAHARIA and Mihai Alin POP*

**10. BENDING AND COMPRESSION TESTS FOR PA 2200 PARTS OBTAINED USING SELECTIVE LASER SINTERING METHOD**

*Cristina Stefana MIRON-BORZAN, Mircea Cristian DUDESCU and Petru BERCE*

**11. INFLUENCE OF PART ORIENTATION ON GEOMETRICAL AND DIMENSIONAL ACCURACY IN FUSED DEPOSITION MODELING METHOD**

*Ladislav MOROVIČ and Ján MILDE*

**12. EFFECT OF VACUUM OXY-NITROCARBURIZING ON THE MICROSTRUCTURE OF TOOL STEELS: AN EXPERIMENTAL AND MODELLING STUDY**

*Maria NIKOLOVA, Danail NIKOLOV, Bora DERIN and Emil YANKOV*

**13. RESEARCH ON THE MECHANICAL BEHAVIOUR OF AN AIRPLANE COMPONENT MADE BY SELECTIVE LASER MELTING TECHNOLOGY**

*Răzvan PĂCURAR, Ancuța PĂCURAR and Nicolae BÂLC*

**14. TOOL ELECTRODE WEAR IN ELECTRICAL DISCHARGE OF SMALL DIAMETER HOLES**

*Laurențiu SLĂTINEANU, Oana DODUN, Iulia CARP, Margareta COTEAȚĂ and Irina BEȘLIU*



FRIDAY, November 4<sup>th</sup>, 2016

9:00 – 13:30

Session S6

Room 2

### Industrial Management

**Chairmen:** *Marian GHEORGHE, Luminița PÂRV, Grzegorz ĆWIKŁA, Izabela GABRYELEWICZ*  
**Secretary:** *Flavia FECHETE*

- 1. ERP PROCESSES AUTOMATION IN CORPORATE ENVIRONMENTS**  
*Victor ANTONOAI, Adrian IRIMEȘ and Lucia-Antoneta CHICOȘ*
- 2. A MULTI-CRITERIA DECISION MAKING APPROACH FOR SUPPLIER SELECTION IN THE FLEXIBLE PACKAGING INDUSTRY**  
*Ciprian CRISTEA and Maria CRISTEA*
- 3. A MULTI-CRITERIA DECISION MAKING APPROACH FOR THE SELECTION OF A FLEXIBLE PACKAGING EQUIPMENT**  
*Ciprian CRISTEA and Maria CRISTEA*
- 4. PROBLEMS OF INTEGRATION OF A MANUFACTURING SYSTEM WITH THE BUSINESS AREA OF A COMPANY ON THE EXAMPLE OF THE INTEGRATED MANUFACTURING SYSTEMS LABORATOR**  
*Grzegorz ĆWIKŁA and Krzysztof FOIT*
- 5. ERP SYSTEM FOR 3D PRINTING INDUSTRY**  
*Bogdan DEAKY and Luminița PÂRV*
- 6. MODEL FOR DETERMINING AND OPTIMIZING DELIVERY PERFORMANCE IN INDUSTRIAL SYSTEMS**  
*Flavia FECHETE and Anișor NEDELUCU*
- 7. DECISION MODELS IN DESIGNING FLEXIBLE PRODUCTION SYSTEMS**  
*Adriana FLORESCU and Sorin Adrian BARABAȘ*
- 8. ONLINE MEASUREMENT OF WORK SAFETY CULTURE – STATEMENT OF RESEARCH**  
*Izabela GABRYELEWICZ, Patryk KRUPA, Joanna SADŁOWSKA – WRZESIŃSKA*

- 9. MANAGERIAL INSTRUMENT FOR DIDACTIC STAFF STRUCTURE OPTIMIZATION FOR DISTANCE LEARNING**  
*Cristina GĂVRUȘ and Georgiana LIMBĂȘAN*
- 10. A REAL OPTIONS AND JOINT VENTURES PERSPECTIVE FOR STRATEGIC DECISION-MAKING PROCESS IN THE CASE OF DYNAMIC INDUSTRIAL ENVIRONMENTS**  
*Ana - Maria GERMAN, Flavius Aurelian SÂRBU and Mircea BOȘCOIANU*
- 11. THE USE OF WORKING ENVIRONMENT FACTORS AS CRITERIA IN ASSESSING THE CAPACITY TO CARRY OUT PROCESSES**  
*Adam GÓRNY*
- 12. ESTIMATION OF THE RESOURCE BUFFERS IN THE ASSEMBLY PROCESS OF A SHEARER MACHINE IN THE CPPM METHOD**  
*Aleksander GWIAZDA, Iwona PAPROCKA and Magdalena BAÇZKOWICZ*
- 13. TOWARDS AN INFORMATION EXTRACTION AND KNOWLEDGE FORMATION FRAMEWORK BASED ON SHANNON ENTROPY**  
*Dragoș ILIESCU and Marian GHEORGHE*
- 14. PLANNING PRODUCTION PREPARATION PROCESSES USING THE CRITICAL CHAIN METHOD**  
*Iwona LAPUNKA, Iwona PISZ and Piotr WITTBRODT*
- 15. INVESTIGATIONS REGARDING THE LOWERING OF SPECIFIC INTELLECTUAL PROPERTY RISKS IDENTIFIED IN THE PRODUCTION PROCESS**  
*Ramona PAKOCS and Nouraș Barbu LUPULESCU*
- 16. SCHEDULING OF AN ASSEMBLY PROCESS OF A CHOSEN TECHNICAL MEAN USING THE CRITICAL CHAIN APPROACH**  
*Iwona PAPROCKA, Aleksander GWIAZDA and Magdalena BAÇZKOWICZ*
- 17. CONTINUOUS IMPROVEMENT PROCESSES USING LEAN MANAGEMENT TOOLS. A CASE STUDY**  
*Luminița PÂRV*
- 18. THE USE OF IT TOOLS FOR THE ANALYSIS AND EVALUATION OF PSYCHOMOTOR EFFICIENCY OF EMPLOYEES**  
*Joanna SADŁOWSKA – WRZESIŃSKA, Izabela GABRYELEWICZ and Patryk KRUPA*

FRIDAY, November 4<sup>th</sup>, 2016

9:00 – 11:00

Session S7

Room 3

**Other related topics**

**Chairmen:** *Eugen PĂMÎNȚAȘ, Rafał GOŁĘBSKI, Mihai BĂNICĂ*  
**Secretary:** *Simona Sofia DUICU*

1. **ANALYSIS HEAT TRANSFER IN ENGINEERING BARRIERS USED FEM AND EXPERIMENTAL METHOD**  
*Dariusz ANDRZEJEWSKI and Mariusz PRAZMOWSKI*
2. **RESEARCH EXPERIMENTAL OF HIPBONE ARTHROPLASTIES USING TENSOMETRIC MODELS**  
*Horatiu BULEA*
3. **LEADING THE CREATIVITY**  
*Simona Sofia DUICU*
4. **PARAMETRIC PROGRAMMING OF CNC MACHINE TOOLS**  
*Rafał GOŁĘBSKI*
5. **FULL FACTORIAL DOE TO DETERMINE THE INFLUENCE OF THE PROCESS PARAMETERS IN CLEANING WATER JETS USED IN SEWER CLEANING**  
*Nicolae MEDAN, Mircea LOBONȚIU and Mihai BĂNICĂ*
6. **AN ANALYSIS OF GEARING**  
*Tadeusz NIESZPOREK, Piotr BORAL and Rafał GOŁĘBSKI*
7. **EXAMINATION OF THE CYLINDRICAL WORM PROFILE**  
*Tadeusz NIESZPOREK and Piotr BORAL*
8. **THE PREPARATION FOR BEING A RESEARCHER IN ROMANIA TODAY**  
*Eugen PĂMÎNȚAȘ and Felicia Veronica BANCUI*
9. **IMPACT OF EMPLOYEE AGE ON THE SAFE PERFORMANCE OF PRODUCTION TASKS**  
*Małgorzata REMBIASZ*
10. **ELBOW JOINT REHABILITATION EQUIPMENT ACTUATED BY PNEUMATIC MUSCLES**  
*Georgiana VETRICE and Andrea DEACONESCU*

**FRIDAY, November 4<sup>th</sup>, 2016**

**11:30 – 13:30**

**Session S5**

**Room 3**

**Solutions for Tools and Devices in Manufacturing Engineering**

**Chairmen:** *Gabriel ANDREI, Grzegorz KRÓLCZYK, Karol VELÍŠEK*

**Secretary:** *Rodica PĂUNESCU*

- 1. AN APPROACH TO SUPPORT ENTRIES FOR A DESIGN FAILURE MODES AND EFFECTS ANALYSIS**  
*Felicia Veronica BANCIU*
  
- 2. THE CAD DRAWING AS A SOURCE OF DATA FOR ROBOT PROGRAMMING PURPOSES – A REVIEW**  
*Krzysztof FOIT, Grzegorz ĆWIKŁA*
  
- 3. PARTICULARITIES OF FULLY-PARALLEL MANIPULATORS IN 6-DOFS ROBOTS DESIGN: A REVIEW OF CRITICAL ASPECTS**  
*Lucian MILICA and Gabriel ANDREI*
  
- 4. AN ANALYSIS OF THE IMPACT OF SOIL MASS PH ON THE WEAR PROCESS OF STEEL**  
*Jerzy NAPIÓRKOWSKI, Magdalena LEMECHA, and Mariusz ROSIAK*
  
- 5. THE TOOL PROFILE AND THE LOCALIZATION OF THE REVOLUTION AXIS FOR IRREGULAR OUTLINE MILLING**  
*Eugen PĂMÎNȚAȘ*
  
- 6. ASSEMBLABILITY ANALYSIS THE OF MODULAR FIXTURING SYSTEMS WITH ACCURATE GRID PATTERN HOLES USING MONTE CARLO SIMULATION**  
*Tudor PĂUNESCU*
  
- 7. ACCURACY ANALYSIS OF THE MODULAR FIXTURING SYSTEMS WITH GRID PATTERN THREADED HOLES**  
*Tudor PĂUNESCU and Rodica PĂUNESCU*

**8. WEAR INVESTIGATION OF SOLID CARBIDE BALL NOSE END MILL DURING 3D ELEMENT MILLING**

*Piotr WITTBRODT, Iwona LAPUNKA and Iwona PISZ*

**9. DESIGN OF A ROBOTIZED WORKSTATION MAKING USE OF THE INTEGRATION OF CAD MODELS AND ROBOTIC SIMULATION SOFTWARE AS WAY OF PAIRING AND COMPARING REAL AND VIRTUAL ENVIRONMENTS**

*Karol VELÍŠEK, Radovan HOLUBEK, Daynier Rolando Delgado SOBRINO, Roman RUŽAROVSKÝ and Nina VETRÍKOVÁ*

13:30 – 15:00 Lunch

15:00 – 15:30 Closing Ceremony

**FRIDAY, November 4<sup>th</sup>, 2016**

**15:30 – 17:30**

**Room 1**

**AMaTUC Workshop**

Horizon 2020 Project *Boosting the scientific excellence and innovation capacity in Additive Manufacturing of the Technical University of Cluj-Napoca (AMaTUC)*

- 1. RAPID TOOLING FOR INDUSTRIAL APPLICATIONS**  
*Nicolae BĂLC*
- 2. CASE STUDIES: INDUSTRIAL APPLICATIONS OF AM**  
*Andreas GEBHARDT*
- 3. TRAINING ON AM AND PROMOTING AM**  
*Laura THURN*
- 4. AM AT TRANSILVANIA UNIVERSITY OF BRASOV.  
REMANUFACTURING OF PARTS**  
*Gheorghe OANCEA*
- 5. RAPID TOOLING FOR PLASTIC PARTS PRODUCTION**  
*Răzvan PĂCURAR*
- 6. COMPLEMENTARY CNC TECHNIQUES AND WJC MACHINING**  
*Alexandru POPAN*
- 7. RAPID METAL CASTING, USING AM PATTERNS**  
*Alina POPAN*

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# Computing and Solutions in Manufacturing Engineering 2016

Transilvania University of Brasov  
Department of Manufacturing Engineering  
Institute High Tech Products for Sustainable Development: PRO-DD  
Advanced Technologies and Manufacturing Systems Research Center

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**3-4 November 2016, BRAŞOV, ROMÂNIA**