

CONFERENCE PROGRAM

Time		Wednesday, May 23, 2012	Thursday, May 24, 2012	Friday, May 25, 2012	Saturday, May 26, 2012			
7 ⁰⁰	15'		Breakfast, Mara Hotel Restaurant	Breakfast, Mara Hotel Restaurant	Breakfast, Mara Hotel Restaurant			
	30'							
	45'							
	60'							
8 ⁰⁰	15'		Registration to ModTech 2012					
	30'							
	45'							
	60'							
9 ⁰⁰	15'		<p style="text-align: center;">Opening Ceremony, Welcome Addresses Magic View Room</p> <p style="text-align: center;">President of ModTech2012</p> <p>Professor Laurentiu Slatineanu, Ph.D., "Gheorghe Asachi" Technical University of Iasi, Romania</p> <p style="text-align: center;">Presidents:</p> <p>Research Prof.Olivera Milosevic, Ph.D. - Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Belgrade, Serbia</p> <p>Assoc. Prof. Sergiu Mazuru, Ph.D. - Technical University of Chisinau, Republic of Moldova</p> <p style="text-align: center;">Plenary Session</p> <p>Chairman, Prof. Dumitru Nedelcu, Ph.D., "Gheorghe Asachi" Technical University of Iasi, Romania</p> <p>-Development of Advanced Composite Materials and Novel Material Recycling by Particle Bonding Technology, Prof. Makio Naito, Ph.D., Smart Processing Research Center, Joining and Welding Research Institute Osaka University, Japan</p> <p>-Italian Research on New Materials for Aerospace: Shape Memory Epoxy Foams, Prof. Loredana Santo, Ph.D., Department of Industrial Engineering, "Tor Vergata" University of Rome, Italy</p> <p>-Performance and Cost Integration in Early Stages of Engineering Design, Prof. António Mourão, Ph.D., New University of Lisbon, Portugal</p> <p>-A Comparison of PZT and MFC piezoelectric transducers used as actuators in vibrating mechatronic systems, Dr. Marek Placzek, Silesian University of Technology, Gliwice, Poland</p> <p>-Innovation and Creativity in the Cooperation Between Universities and Industry, Prof. Marcel Sabin Popa, Ph.D., Technical University of Cluj-Napoca, Romania</p> <p style="text-align: center;">Coffee break</p> <p style="text-align: center;">Plenary Session</p> <p>Chairman, Prof. Dumitru Nedelcu, Ph.D., "Gheorghe Asachi" Technical University of Iasi, Romania</p>	Sections: 1, 3, 7 Wild Forrest Papers: 33-48	Section: 2 Green House Papers: 30-43	Sections: 4, 6, 8 Magic View Papers: 31-45	Section: 5 Meadow Room Papers: 22-32	Closing Ceremony Scientific Awards Ceremony
	30'			Coffee break	General Meeting of ModTech Professional Association Iasi-Romania			
	45'							
	60'							
10 ⁰⁰	15'	Sections: 1, 3, 7 Wild Forrest Room, Papers: 49-64		Section: 2 Green House Room, Papers: 44-55	Sections: 4, 6, 8 Magic View Room Papers: 46-60	Section: 5 Meadow Room Papers: 33-43	Visit the Peles and Pelisor Castles (Optional)	
	30'							
	45'							
	60'							
11 ⁰⁰	15'							
	30'							
	45'							
	60'							
12 ⁰⁰	15'							
	30'							

	45'		<p>-Nanoparticle Aggregation and Dispersion Behaviour Control for Material Processing, Prof. Hidehiro Kamiya, Ph.D., Institute of Engineering, Tokyo University, Japan</p> <p>-Optimization of Microwave synthesis: Sub-Micron Particles with Functional Properties Dr. Ignacio Barroso Benavente, University Carlos III, Madrid, Spain</p> <p>- Process Dynamics in Step Drilling, Prof. Johannes Rothmund, Ph.D., University of Stuttgart, Institute for Machine Tools, Germany</p> <p>- From Welding Engineering to Carbon Nanotubes, Prof. Laurentiu Ghenghea, Ph.D., "Gheorghe Asachi" Technical University of Iasi, Romania</p>								
	60'										
13 ⁰⁰	15'		<p>Lunch Break Mara Hotel, Restaurant</p>				<p>Lunch Break Mara Hotel, Restaurant</p>				
	30'										
	45'										
	60'										
14 ⁰⁰	15'										
	30'										
	45'										
	60'										
15 ⁰⁰	15'	<p>Sections: 1, 3, 7 Wild Forrest Room Papers: 1-16</p>	<p>Section: 2 Green House Room Papers: 1-14</p>	<p>Sections: 4, 6, 8 Magic View Room Papers: 1-15</p>	<p>Section: 5 Meadow Room Papers: 1-10</p>	<p>Sections: 1,3,7 Wild Forrest Papers: 65-77</p>	<p>Section: 2 Papers: 56-68</p>	<p>Sections: 4,6,8 Magic View Papers: 61-72</p>	<p>Section: 5 Meadow Room Papers: 44-53</p>		
	30'										
	45'										
	60'										
16 ⁰⁰	15'										
	30'										
	45'										
	60'										
17 ⁰⁰	15'	<p>Coffee Break</p>									
	30'	<p>Sections: 1, 3, 7 Wild Forrest Room Papers: 17-32</p>	<p>Section: 2 Green House Room Papers: 15-29</p>	<p>Sections: 4, 6, 8 Magic View Room Papers: 16-30</p>	<p>Section: 5 Meadow Room Papers: 11-21</p>	<p>Trip to Dracula Castle</p>					
	45'										
	60'										
60'											
18 ⁰⁰	15'										
	30'										
	45'										
	60'										
19 ⁰⁰	15'										
	30'										
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	60'										
20 ⁰⁰	15'										
	30'										
	45'										
	60'										
21 ⁰⁰	15'	<p>Dinner Mara Hotel Restaurant</p>									
	30'										
	45'										
	60'										
22 ⁰⁰	15'					<p>Gala Dinner Mara Hotel, Restaurant</p>					
	30'										
	45'										
	60'										

SECTION 1, SECTION 3 & SECTION 7 – Wild Forrest Room Micro and Nano Technologies & CAD/CAM/CAE/Cax

Section 1: President: Prof. Makio Naito, Ph.D.

Vice-Presidents: Prof. Tudor Deaconescu, Ph.D., Lecturer Ciprian Ciofu, Ph.D.

Section 3: President: Assoc. Prof. Andrzej Wrobel, Ph.D.

Vice-Presidents: Assoc.Prof. Lucian Butnar, Ph.D., Prof. Laurentiu Slatineanu, Ph.D.

Section 7: President: Prof. Pavel Topala

Vice-Presidents: Assoc. Prof. Tiberiu Marius Karnyanszky, Ph.D., Assoc. Prof. Viorel Cohal

Section 1

- 1. Dragos Andrioaia, Marius Pascu, Claudiu Obreja.** *Determining the geometry errors in a mechanism with Delta type parallel structure*
- 2. Mirel Balan, Dumitru Lavrente, Manuela Nechita, Andreea Muscalu, Costel Iulian Mocanu.** *The plate shape influence over the stress variation under the impact loads*
- 3. Ignacio Barroso, Luz Stela Gomez, Olivera Milosevic, María Eugenia Rabanal.** *Optimization of microwave synthesis: sub-micron particles with functional properties*
- 4. Katarzyna Bialas.** *Application of mechanical and electric elements as implementation of active reduction of vibration*
- 5. Nicanor Cimpoesu, Silviu Octavian Gurlui, Sergiu Stanciu, Iulian Cimpoesu, Carmen Nejneru, Titiana Constantin.** *Microstructural 2D and 3D analyze of a shape memory alloy in different solicitation conditions*
- 6. Tudor Chereches, Paul Lixandru, Sorin Gheorghian.** *Advanced technology for manufacture by plastic deformation of the cartridge case with two pressure chambers*
- 7. Dragoş–Florin Chitariu, Nicolae Gherghel.** *Research on determination of contact deformation between clamping element and workpiece*
- 8. Tudor Deaconescu, Andrea Deaconescu.** *Bionic medical recovery system of the wrist*
- 9. Tudor Deaconescu, Andrea Deaconescu.** *Selfadaptive mobilization and medical recovery system of the upper limb muscles*
- 10. Valeriu Drăgan.** *Contributions regarding the design of a self super circulated rotary wing*
- 11. Mariana Drişcu.** *A study about creating 3D irregular shapes using the parametrically bicubic B-spline curves*
- 12. Alexandru Floca, Aurelian Vişan, Nicolae Ionescu, Alexandru Savin, Mihai Trifănescu.** *Design of a micro-EDM milling machine*
- 13. Marian Funaru, Claudiu Obreja, Lucian Mihaila.** *High speed kinematic feed chain used on CNC machine tools*
- 14. Hidehiro Kamiya, Murino Kobayakawa, Motoyuki Iijima, Esko Kauppinen.** *Nanoparticle aggregation and dispersion behavior control for material processing*
- 15. Andrei Mihăilescu, Florica Doroftei, Emil Ghiocel Ioanid, Camelia Mihăilescu.** *Surface properties of surgical materials*
- 16. Makio Naito, Hiroya Abe, Akira Kondo.** *Development of advanced composite materials and novel material recycling by particle bonding technology*
- 17. Marek Placzek.** *A comparison of PZT and MFC piezoelectric transducers used as actuators in vibrating mechatronic systems*
- 18. Cristian Pirghie, Ana-Camelia Pirghie, Ilie Musca.** *On the nanolubrication as a function of load and speed wall*
- 19. Cristian Pirghie, Ana-Camelia Pirghie, Ilie Musca.** *The lubricant behavior in nanotribological systems*
- 20. Elena Mioara Radu, Gheorghe Brabie.** *Material thickness influence on FLC level in the case of thin metal sheets*
- 21. Elena Mioara Radu, Gheorghe Brabie.** *Sheet thickness variations during milli drawing cylindrical parts*
- 22. Cristian Toma, Nicolai Paşca, Aurel-Valentin Bîrdeanu, Octavian Oancă, Cristian Ciucă.** *Ultrasonic microjoints for nonferrous materials Al-Cu*
- 23. Ion-Dragos Utu, Viorel-Aurel Serban.** *Optimization of the eb-remelting parameters on the oxidation behavior of MCrAlY sprayed coatings*
- 24. Narcisa Vrinceanu, Claudia-Mihaela Hristodor, Diana Tanasa, Eveline Popovici, Florin Brinza, Stefan Toma, Diana Coman, Andreea Cirmsariu, Gianina Broasca.** *Approach regarding the potential of different nanophotocatalysts onto a model textile dye*

Section 3

25. **Lucian Butnar, Horia Cioban.** *Researches concerning the influence of friction on the roughness of tube pieces inverse extruded*
26. **Horia Cioban, Lucian Butnar.** *Diferent simulation methods of robotic mechanisms for automotive industry using multi-CAD environment*
27. **Ana-Ramona Ciobanu, Raul Fangueiro, Luminita Ciobanu, Costea Budulan.** *Mechanical behaviour of aramid sandwich weft knitted fabrics*
28. **Elisabeta Mihaela Ciortea.** *How to optimize flexible manufacturing systems*
29. **Mariana Lupchian.** *Determination of optimum operating regime for a naval power plant based on minimum fuel consumption*
30. **Lucian Mihaila, Marian Funaru, Claudiu Obreja.** *Pallet positioning and clamp/ unclamp mechanism used on machining centre table*
31. **Florin-Marius Militaru, Marian Truță, Alin Puncioiu.** *Experimental research on the impact of technical condition of Lambda sensors on engine vehicles emissions*
32. **Dumitru Nicoara.** *Linearization of nonlinear dynamical systems by optimization method*
33. **Răzvan Răceu, Cosmina Pöllner.** *New equatorial spherical hypocycloid automatic machine with more satellites*
34. **Răzvan Răceu.** *About multitude of equatorial spherical hypocycloid automatic machine*
35. **Valeria Vacarescu, Cella-Flavia Buciuman.** *Modeling the positioning and orientation errors into a robotic flexible manufacturing cell*
36. **Valeria Vacarescu, Cella-Flavia Buciuman.** *Experimental research on the performance of positioning and orientation of the components of a robotic cell*
37. **Irina-Adriana Vieriu, Ciprian Ciofu, Daniel Mîndru.** *Failure mode and effect analysis for automatic milling process*

Section 7

38. **Cătălin Bîrsan, Tudor Sajin, Sorin-Gabriel Vernica.** *Modeling and experimental analysis of fluid motion in a new type of plasma generator*
39. **Traian Buidoș, Florin-Sandu Blaga, Iulian Stănăsel, Mircea-Petru Ursu.** *Studies and experimental research about the processing of slots by means of electrical discharge machining*
40. **Vasile Bulancea, Diana Antonia Gheorghiu, Bogdan Lucian Gavrilă, Gheorghe Buluc.** *Cryogenic treated tools*
41. **Vlad Andrei Ciubotariu.** *Weld-line behaviour in the case of deformed TWBs using formability tests*
42. **Marius Ioan Chirileanu, Diana Antonia Gheorghiu, Giorgiana Donac, Marius Cornel Năstase.** *Researches about changes on fracture surface aspect in resistance spot welding process*
43. **Viorel Cohal.** *Friction stir welding using industrial ABB robots*
44. **Margareta Coteață, Octavian Lupescu, Ovidiu Sava, Irina Grigoraș Beșliu.** *Electrochemical discharge machining of metallic carbide ISO P25*
45. **Constantin Diaconescu, Dan Nanu.** *Experimental pulse generator to study the influence of divided pulses on the breakdown of dielectric liquids in EDM*
46. **Oana-Mirela Dobrot, Costel Iulian Mocanu.** *Study of the stress state around a crack in welding link between tubular beams*
47. **Dan Dobrotă, Cătălin Iancu.** *Research on ultrasonic energy applied in jointing rubber products*
48. **Dan Dobrotă, Cătălin Iancu.** *Researches on corrosion cracking phenomenon that occurs on welded mining equipment*
49. **Oana Dodun, Carmen Ema Panaite.** *Thermal modelling of tool electrode wear at electrical discharge machining*
50. **Valeriu Drăgan.** *The effect of a thin jet over a concave surface-the development of a new high altitude rocket nozzle*
51. **Nicuser Ene, Elena Scutelnicu.** *Improving quality and efficiency of onsite rails repair applying various welding processes*
52. **Bogdan Lucian Gavrilă, Mihai Susan, Elena Chirilă, Viorel Iliescu, Oreste Cristodulo.** *About the relative rate of drawing during the metals processing in ultrasound field*
53. **Eugen Herghelegiu, Carol Shnakovszky, Miroslav Radovanovic, Crinel Ionel Raveica.** *Comparative study on the dimensional accuracy and surface quality of plates cut through unconventional methods*
54. **Tiberiu Mariu Karnyanszky.** *Stainless steel optimal debiting using the complex erosion*
55. **Ciprian Melian.** *Observation of craters shape influenced by laser beam processing parameters on glass material*
56. **Dănuț Mihăilescu, Octavian Frîncu.** *Mechanized MAG-M welding with standard and ecological metal powders cored wire*
57. **Traian Mihordea, Costică Bejinariu, Diana Antonia Gheorghiu, Dorin Luca, Sorin Mihordea.** *Mechanical characteristics of TIG/MIG welded joints on 4XXX cast aluminum alloys*
58. **Traian Mihordea, Costică Bejinariu, Diana Antonia Gheorghiu, Ștefan Toma, Sorin Mihordea.** *Microstructural changes in tig/mig welded joints on 4XXX cast aluminum alloys*
59. **Nicoleta - Maria Mihuț, Cătălina Ianăși.** *A noninvasive method for determining the discharge of belt conveyed materials, using ultrasonic sensors*
60. **Maciej Mischczak, Waldemar Świdorski.** *A novel method on visualization of temperature fields by pyrolytic graphite sensors and IR detection systems*
61. **Giorgiana Nistoroschi, Marius Chirileanu, Teodor Ionuț Tilică.** *Material removal at the laser beam machining process*

62. **Manuela-Cristina Perju, Carmen Nejneru, Petrică Vizureanu, Roxana-Gabriela Stefanică.** *XPS chemical analysis for the multilayer deposition WC/TiC/W on gray cast iron using electric impulse discharge method*
63. **Marius Pop-Calimanu, Traian Fleser.** *A thermomechanical analysis of composite materials based on aluminium at ultrasonic welding*
64. **Marius Pop-Calimanu, Traian Fleser, Ioana-Monica Pop-Calimanu.** *A fully coupled thermomechanical modeling of jointing process by ultrasonic welding of aluminium-based composite materials*
65. **Ivan Rushica, Yurii Morgunov, Boris Saushkin, Ghenadii Saushkin, Ion Stingaci.** *Electrodischarge machining of surface microrecesses*
66. **Stefan Rusu, Dan-Gelu Găluscă, Aurelian Buzăianu.** *The in-depth analysis of laser marking on the Nimonic 86 superalloy for aeronautical applications*
67. **Stefan Rusu, Dan-Gelu Găluscă, Ioan Rusu.** *Neural network model for the output prediction of traceability laser marking processes*
68. **Vasile Simon, Marcel Popa, Andrei Ioan Oltean, Ioan Badiu.** *Considerations of metal welding using the Nd: YAG laser*
69. **Laurențiu Slătineanu, Margareta Coteață, Irina Beșliu, Antonio Mourao, Miroslav Radovanovic, Lorelei Gherman.** *Behaviour of metallic materials under the action of the laser beam*
70. **Daniel Stan, Iancu Șerban, Alin Sîrbu, Aurel Tulcan.** *Study on the resonant frequency gliding in the ultrasonic systems loaded with variable axial compression force*
71. **Iulian Stănășel, Traian Buidos, Flavius Ardelean, Bogdan Tataru.** *Finite element analysis of ultrasonic horn*
72. **Mihai Susan, Viorel Iliescu, Elena Chirilă, Bogdan Lucian Gavrilă, Oreste Cristodulo.** *Ultrasonics drawing of the steel wires used for the pull cables*
73. **Teodor Ionut Tilică, Raluca Elena Tanase, Laurentiu Slătineanu, Mihaela Anton, Claudiu Burian.** *Considerations regarding the necessary device in obtaining a constant pressure in ultrasonic processing*
74. **Pavel Topala, Vitalie Besliu, Petru Stoicev, Alexandr Ojegov.** *Application of electric discharges in impulse in micro and nano-technology*
75. **Cristian-Gheorghe Turc, Dorian Stef, Mihai Nica.** *An approach on ultrasonic assisted machining*
76. **Liliana Georgeta Tulcan.** *Qualitative analysis of abrasive grain wear by ultrasonic aided plane lapping*
77. **Dumitru Uliuliuc.** *Some aspects of the processing by electrical discharge machining the holes with the axis arc of a circle shape*

SECTION 2 – Green House Room Manufacturing & Automation and Flexible Technologies

Section 2: President: Prof. Alexei Toca, Ph.D.

Vice-Presidents: Prof. Viorel Paunoiu, Ph.D., Prof. Octavian Pruteanu, Ph.D.

Section 2

1. **Daniela Amaritei (Bogdan), Nicolae Gherghel.** *Contributions on the applications of statistical control in grinding processes*
2. **Mihai Axinte, Carmen Nejneru, Maricel Agop, Ion Hopulele.** *Study regarding parameters comparison for low pressure grid plasma discharge in nitrogen and argon atmosphere*
3. **Mircea Bădescu, Marinela Ință, Delia Bădescu, Bogdan Pîrvu.** *Ankle-foot orthoses virtual modelling using reverse engineering*
4. **Mihai Baiceanu, Paulo Flores, Cezar Oprisan, Dumitru Olaru.** *Effects of considering the existence of clearance at revolute joints on the response of mechanical systems*
5. **Liviu Balan, Ana Tufescu, Dumitru Olaru.** *Lubrication regimes in a spur gear transmission*
6. **Mihaela Rodica Bălan, Dumitru Olaru.** *New methodology to evaluate rolling friction torque in dry and mixed lubrication regimes*
7. **Nicușor Baroiu, Virgil Teodor, Silviu Berbinschi, Nicolae Oancea.** *The methodology to generate a helical flute for drill with curved cutting edge, using SV& Toolbox environment*
8. **Florin- Sandu Blaga, Iulian Stanasel, Traian Buidos, Ioan- Eugen Radu, Alin Pop.** *Parametric design integrated system for a stamping die*
9. **Ovidiu Blăjiniță, Vlad Darie, Ruxandra Bălan.** *Mathematical relationship of the surface roughness at turning of the stainless steel X2CrNiMo18-14-3*
10. **Mihai Boca, Gheorghe Nagiț, Cătălin Dumitraș.** *Aspects concerning the real profile of a cylindrical workpiece obtained in the turning process*
11. **Ana-Maria Bogza, Paul-Cristian Bogza, Ionel Simion, Ioana-Cătălina Enache.** *Studies on the influence of subdivision surface used in geometric modelling*
12. **Ioan Bondrea, Radu Emanuil Petrus.** *Augmented reality used for quality assurance in assembly processes*
13. **Ion Bostan, Valeriu Dulgheru.** *Technological aspects of precessional gears manufacturing by sintering of metal powders*
14. **Viorel Bostan, Marin Gutu.** *Determination of structural properties of glass/polyester composite for 10 kW wind turbine blades*
15. **Viorel Bostan, Radu Crudu.** *Hawt rotor performance with untwisted aerodynamic blades on rated operating regime*

16. Florin Catalin Braescu, Lavinia Ferariu. *Multi-domain CAN gateway for complex manufacturing environments*
17. Traian Buidos, Mircea-Petru Ursu, Constantin Bungău, Dan Crăciun. *Processing of the active parts of moulds for the injection of thermoplastic small-module gears*
18. Constantin Carausu, Octavian Pruteanu, Cristian Antohi, Traian Gramescu. *The influence of certain technological factors on the roughness of surfaces polished with vibrating abrasive belt*
19. Constantin Cărăușu, Lăcrămioara Iftode, Marian Mocan, George Belgiu. *Manufacturing plant design and optimization*
20. Vlad Andrei Ciubotariu. *Analysis of stress distribution on the drawn U channel parts made from TWB as a function of blank holder force*
21. Gheorghe Crețu. *The precise determination of theoretical deviations resulted in worm processing type Zn2*
22. Ioan Dan. *Shorter C-frame for the crank mechanical press. Study of the stress and strain state*
23. Luiza Daschievici, Daniela Ghelase. *Order earning power assessment of make-to-order manufacturing system*
24. Valerii Domin, Valeriy Kovalenko, Pavel Navka, Lidiya Khristoforova. *Effective methods of thermal cutting*
25. Iosif Dumitrescu, Bogdan Cozma, Vilhelm Itu. *Constructive improvements of cable tensioning mechanism for DEC devices*
26. Claudiu Filipoaia, Nicolae Gherghel. *Comparative study on relations for calculation the driving force on devices with elastic membranes*
27. Constantin Alin Gavriluță, Ana Cornelia Rotaru. *Using functional modelling for a better understanding of industrial system*
28. Lorelei Gherman, Ionuț Palaghia, Laurențiu Slătineanu. *Taguchi modelling of experimental results for brass drilling at constant feed force*
29. Roman Grubka, Alexandr Mikhailov, Irina Petryaeva, Olga Kulbida. *Setting parameters of gear- hobbing machine by processing of teeth of hub of gear clutch with spatial geometry*
30. Vasile Huian, Doru Calarasu, Bogdan Vaceanu, Vasile Nenerica. *Results obtained by numerical simulation for a hydraulic system with secondary regulation*
31. Cornelia Ionescu Luca, Răzvan Mocanu. *Obtaining versatile cavities in moulds used for forming prefabricated soles*
32. Cornelia Ionescu Luca, Răzvan Mocanu. *Achieving versatile cavities in moulds for forming soles directly on the footwear*
33. Monica Iordache, Eduard Nițu, Doina Iacomi, Ion Ungureanu, Gérard Ferron. *FE-modelling of radial cold rolling of the circular trapezoidal grooves*
34. Mihai Tiberiu Lates, Radu Velicu. *Stresses distributions in bush chains*
35. Marius Gheorghe Marian, Tudor Sajin, Dragoș Iulian Nedelcu, Catalin Birsan, Constantin Narcis, Ostahie, Iulian Florescu, Gheorghe Pintilie, Roxana Grigore. *Study of water flow through a conical stator and runner steps of a hydraulic turbine with gravitational vortex*
36. Alberto Martinho, António Mourao. *Relationships between cost and aspect ratio in the design of pressure vessels*
37. Mihaela Matei, Carol Csatlos. *Experimental research to control the variable parameters during thermic treatment*
38. Sergiu Mazuru, Vitali Metelski. *Constructive methods to ensure the accuracy of technological-quality indicators gears*
39. Monica Mirea, Cristina Otilia Voicu. *Tests for vertical and horizontal loads on foundation piles on a location in Timișoara – Romania*
40. Valeriu Mironescu. *Optimization of the clearances and frictions for needle bearings*
41. Valeriu Mironescu. *Bearings for high speed*
42. Achim Muntean, Marinela Ință. *Input data aquisition and conditioning for monitoring of cutting tools state*
43. Neculai Nanu, Gheorghe Brabie. *Influence of stresses distribution on the springback parameters in the case of U bending process*
44. Ion Neagoe, Alexandru Filip, Mircea Vasiloni. *Experimental research about the incremental sheet forming on a CNC lathe*
45. Claudiu Obreja, Lucian Mihaila, Dragoș Andrioaia. *Modular tool changing system with high storage capacity for CNC milling centers*
46. Adrian Olaru, Doru Călărășu, Mihai Afrăsinei. *The control of the force acting on a spool slide valve using the properties of the magnetorheological fluids with applications to the servo-elements*
47. Ioan Pasca. *Experimental research about variation of surface roughness for different inclination angle in ball end milling of C45 material*
48. Ioan Pasca. *Mathematical modelling of surface roughness by the experimental design methodology in ball end milling of C45 material*
49. Eugen Pămîntaş. *Qualified support for technological setting activities at flat form turning*
50. Eugen Pămîntaş. *Attempt to predict wear of flat form cutting tool at form turning*
51. Cosmina Pöllner, Răzvan Răceu. *Stages of designing mechanical vulcanizing presses*
52. Cosmina Pöllner. *Mechanical vulcanizing press with numerical control*
53. Nicolae Pop, Margareta Coteata. *3D parametric modeling of involute gears in Pro Engineer Wildfire 4*
54. Crina Radu, Ion Cristea. *Evaluation of the quality of parts processed by SPIF*
55. Crina Radu. *Influence of the process parameters on the surface roughness of SPIFed parts*
56. Radu Alexandru Roșu, Nicușor Alin Sîrbu, Mihaela Popescu, Sorin Drăgoi. *Reconditioning of rods hammer forge by CMT method*

57. **Ana Rotaru.** *Comparison between two pull control systems: Kanban and Base stock*
58. **Sergiu Spinu, Dorin Gradinaru.** *Effect of a tangential force in elastic partial slip contact*
59. **Daniel Stan, Iancu Șerban, Cristian Cioană, Cristian Cosma.** *Study on the influence of the processing parameters in the ultrasonic activated injection and extrusion*
60. **Gheorghe Stan, Marius Pascu.** *System for increasing the rigidity of the ram hydrostatic guideways of the boring and milling machines*
61. **Alexei Toca, Ion Stingaci, Ion Rushica.** *The effects of error's compensation in machining*
62. **Florentina Tocu, Costel Iulian Mocanu.** *Study on the layer strain state in delaminations*
63. **Aurel Tulcan, Cristian Cioană, Daniel Stan, Cristian Cosma.** *Coordinate measuring machine variations for different probe configurations*
64. **Gheorghe Ursanu, Cristina Diaconescu, Gheorghe Baluta, Radu Obreja.** *Position control of direct current servomotors with microcontroller development board*
65. **Sorin-Gabriel Vernica, Tudor Sajin, Cătălin Bîrsan.** *The exergetic optimization of the experimental regimes for a gas turbine plant*
66. **Alina Vintilescu, Claudiu-Florinel Bîtu, Raynald Laheurte, Philippe Darnis, Miron Zapciu, Eugen Străjescu.** *Three-direction procedure analysis for a machine tool dynamic characterization*
67. **Dănuț Zahariea.** *Structural analysis of a conical shrink fitting*
68. **Dănuț Zahariea.** *Structural analysis of a key coupling*

SECTION 4, SECTION 6 & SECTION 8 – Magic View Room

Section 4: President: Prof. Antonio Mourao, Ph.D.

Vice-Presidents: Asist.Prof. Felicia Banciu, Ph.D., Prof. Gavril Musca, Ph.D.

Section 6: President: Prof. George Draghici, Ph.D.

Vice-Presidents: Prof. Alexandru Epureanu, Ph.D., Assoc. Prof. Oana Dodun, Ph.D.

Section 8: President: Prof. Hidehiro Kamiya, Ph.D.

Vice-Presidents: Prof. Aurelian Vlase, Ph.D., Prof. Octavian Lupescu, Ph.D.

Section 4

1. **Mihail Aignătoaie.** *CAD-FEA study on the possibility of improving the Grodzinski method*
2. **Mihail Aignătoaie.** *FEA study on the elastic deformation process bimetal strip subjected to temperature load*
3. **Felicia Banciu, George Draghici.** *Product functional decomposition in axiomatic and systematic design*
4. **Felicia Banciu, George Draghici.** *A new functional approach to support FMEA method in product conceptual design*
5. **Ionel Batog.** *Designing a CAD training unit: programming an interactive design task*
6. **Leonard Domnisoru, Dumitru Dragomir, Alexandru Ioan.** *The CAD/CAE-FEM design of a composite material ROV underwater vehicle*
7. **Leonard Domnisoru, Alexandru Ioan, Dumitru Dragomir.** *Computer assisted design of inert gas fire extinguishing ship systems*
8. **Iosif Dumitrescu, Vilhelm Itu, Bogdan Cozma.** *Study of safety catch devices of extraction vessels using CAD/CAE software*
9. **Stelian-Cornel Florica, Dorian Stef, George Drăghici, Cosmina-Carmen Aldea.** *About PLM and platforms for integrated design and manufacturing process*
10. **Adrian Mihai Goanta.** *Method for cloning, computer assisted, a sequential mechanism gear project*
11. **Alexandru Manolescu, Adriana Fota, Gheorghe Oancea.** *Parametric part in Proengineer obtained from a scanned model*
12. **Iulia Mirciu, Ionica Rubanenco, Leonard Domnisoru.** *Numerical CAD/CAE-FEM modelling for cargo tank hatch displacements analysis*
13. **Iulia Mirciu, Ionica Rubanenco, Leonard Domnisoru.** *The raft davit support structure analysis, based on 3D CAD/CAE-FEM numerical models*
14. **Cosmin Mihai Mirițoiu, Dan Ilincioiu.** *Combined analytical and finite element methods used for strength analysis of a hyperstatic metallic structure*
15. **Cosmin Mihai Mirițoiu, Dan Ilincioiu.** *A stress analysis of a hyperstatic structure using finite element method and strain gauge measurement*
16. **Gavril Muscă, Elena Muscă, Iulian Filip.** *Increasing performance in training of team working for implementation of management data products*

17. Alexandru Perescu, Liviu Bereteu. *Analysis of quarter passive suspension system with 1-DOF and 2-DOF using Simulink*
18. Alexandru Perescu, Liviu Bereteu. *Analysis of quarter passive suspension system using Simulink*
19. Roxana Pescaru, Gheorghe Oancea, Alexandru Manolescu. *Parametrization of CATIA surfaces with complex shape starting from clouds of points*
20. Ioana Petre. *Researches regarding rehabilitation equipment behavior using WinPISA software*
21. Nicoleta-Gabriela Rodicichin, Viorel Andrei. *Program for calculating the velocity and pressure distribution around a ship's hull*
22. Nicoleta-Gabriela Rodicichin, Viorel Andrei. *Numerical study of resistance for a ship's hull*
23. Ionica Rubanenco, Iulia Mirciu, Leonard Domnisoru. *On the 3D CAD/CAE local models for fatigue assessment of an optimized container ship structure*
24. Ionica Rubanenco, Iulia Mirciu, Leonard Domnisoru. *The strength analysis for an optimized container ship structure, based on 3D CAD/CAE two cargo-holds model*
25. Nuno Sarafana, António M. Goncalves-Coelho, António Mourao. *Appraisal of CAD/CAE systems for the conceptual design of stamping tools – part I: the software functionalities*
26. Nuno Sarafana, António M. Goncalves-Coelho, António Mourao. *Appraisal of CAD/CAE systems for the conceptual design of stamping tools – part II: case studies*
27. Sergiu Spinu, Dorin Gradinaru. *Numerical simulation of transient elastic partial slip contact*
28. Iulian Stănășel, Florin Blaga. *Parametric design of cylindrical gear*
29. Mihaela Urdea. *CAD software package, for designing and assembling heating pipes*

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30. Gabriel Bădescu, Ovidiu Ștefan, Petru Hreniuc, Marcel Dârja, Mircea Ortelecan, Nicolae Pop, Rodica Bădescu, Tudor Sălăgean. *Studies and research on the use of photogrammetry and remote sensing within project management*
31. George Belgiu, Constantin Cărăușu, Lăcrămioara Iftode. *Designing key indicators for performance measurement in production management*
32. Nadia Belu, Emil Militaru, Nicoleta Rachieru, Daniel – Constantin Anghel. *Failure mode and effects analysis: a useful tool for risk identification and injury prevention in product development*
33. Paul Dan Brîndasu, Radu Emanuil Petruse, Daniela Cărutasu, Livia Dana Beju. *Product lifecycle management for a military maintenance vehicle*
34. Rachid Chaib, Ion Verzea, Irina Cozminca. *Management of an activity difficult to identify, locate and quantify. Case study: carrying dangerous contents*
35. Florin Chichernea. *Industrial equipment modeling in redesign using value engineering*
36. Iwona Chuchnowska, Agnieszka Sękala. *The concept of innovative system for interactive rehabilitation of children's lower limbs*
37. Anca Draghici, Claudiu-Tiberiu Albușescu, Cristian Olariu, George Draghici. *Improving business process management in manufacturing – a certification and qualification model*
38. Adela-Eliza Dumitrascu, Valentina Ciobanu, Catalin Tudosoiu. *Quality management system implementation for superficial plastic deformation process*
39. Petronela Simona Epure, Luminita Mihaela Lupu, Ionut Viorel Herghiligiu. *Research concerning the organizational structure types in conjunction with characteristics of the organization*
40. Florina-Cristina Filip, Vladimir Marascu-Klein. *Description of continuous improvement process for efficient management of production systems*
41. Florina-Cristina Filip. *Returns analysis, benchmarking and field analysis in development*
42. Iulian Filip, Radu Gaiginschi, Daniel Teodor Mîndru. *Car to car communication*
43. Adriana Fota, Gavrilă Calefariu, Sorin Barabas, Nadia Stoian, Florin-Catalin Olteanu. *Methods and techniques of analysis and management of flexible production systems*
44. Paula Fuiuagă (Băsu), Alexandru Ionut Pohontu. *Management versus leadership. Meanings, models*
45. Ionuț Viorel Herghiligiu, Mihaela Luminița Lupu, Simona Petronela Epure. *Contributions to environmental decision making by developing environmental adaptive decision models*
46. Petru N. Hreniuc, Gabriel Bădescu, Ovidiu Ștefan, Iosif Pasca. *Mathematical and economic analysis of stockpiling costs for mining processes*
47. Monica Izvercianu, Alina Radu. *Increasing human resources competitiveness through learning management systems*
48. Monica Izvercianu, Sabina Alina Șeran. *A content analysis of virtual engineering collaboration tools*
49. Daniel Manolea, Cristian Petrianu. *Rules of defining sketches in Pro/Engineer Wildfire / Creo / Creo Parametric*
50. Bogdan-Sorin Neagoe. *Cost-based risk assessment methodology for the failure mode and effects analysis*
51. Lavinia Nicoleta Neagoe, Vladimir Marascu Klein, Luciana Cristina Stan. *Quality cost analysis for a product family value stream*
52. Dumitru Nedelcu, Ciprian Ciofu, Gheorghe Cretu. *Economic efficiency analysis of investments in machine manufacturing industry*
53. Costica Nituca, Magdalena Iorga. *The importance of training trainers using education soft and technologies*
54. Florin-Cătălin Olteanu, Gavrilă Calefariu, Adriana Fota, Nicolae Bârsan-Pipu. *Aspects regarding the decisional process in the insurance of industrial businesses*
55. Ana-Maria Onu, Miron Zapciu, Eugen Strajescu, Dana Tilina, Mihai Ungureanu. *Research on innovation capacity diagnosis on SMEs and new model for business support*

56. **Alexandru-Ionuț Pohonțu, Paula Fuiogă (Băsu).** *Capability to innovate through the knowledge sharing: a case study in learning organizations*
57. **Monica Elena Pop, Jeni Pralea, Tiberiu Viorel Pop.** *The relationship between semiotic object and industrial product design*
58. **Iuliana Laura Taranovschi Ferariu, Antonio Messeni Petruzzelli.** *A study about exploration and exploitation in a team structure*
59. **Cătălin Ungureanu.** *About effectiveness of quality improvement actions*
60. **Carmen Zaharia.** *Fundamentals of production water management for an industrial productive unit*
61. **Carmen Zaharia.** *Application of a physico-chemical treatment based on adsorption for industrial effluents. A case study*

Section 8

62. **Aurelian Albut, Vlad Ciubotariu, Crina Radu, Ionel Olaru.** *Optimization of the forming process in case of a square shaped part made from tailor welded blanks*
63. **Gina Boicea, Ion Ungureanu, Monica Iordache, Eduard Nițu, Doina Iacomî, Mădălin Tudor.** *Experimental research on the quality of profiles obtained by form tapping*
64. **Ion Dobrescu, Ilarion Banu.** *Research concerning the forming forces at cold toothing by intermittent blow*
65. **Alexandru Epureanu, Viorel Paunoiu.** *A new approach for springback compensation control in sheet metal forming*
66. **Dorina Isopescu, Calin Corduban, Nicolae Taranu, Oana Stanila.** *Implementation of folded wooden structures in construction*
67. **Octavian Lupescu, Ovidiu Sava, Margareta Coteață, Mihai Boca.** *Some considerations regarding the rolling process*
68. **Eduard Nițu, Monica Iordache, Ion Ungureanu, Doina Iacomî, Gina Boicea.** *Study on the experimental characterization of the deformed layer by radial cold rolling of profiles*
69. **Viorel Paunoiu, Alexandru Epureanu.** *Application of the optimized springback compensation approach to multipoint forming*
70. **Ioan Popa, Virgil Geamăn.** *Equal channel angular extrusion with back-pressure as a new alternative technique of severe plastic deformation*
71. **Nicolae Trifan.** *Determination of blank size manufacturing by plastic deformation analysis*
72. **Mădălin Tudor, Ion Ungureanu, Doina Iacomî, Monica Iordache, Eduard Nițu, Ștefan Tabacu.** *Experimental research on the quality of profiles obtained by rolling with wedge tools*

SECTION 5 – Meadow Room

Materials, processes and innovative technologies & Welding and Non-Conventional Technologies

Section 5: President: Prof. Loredana Santo, Ph.D.

Vice-Presidents: Assoc. Prof. Constantin Carausu, Ph.D., Lecturer Margareta Coteata, Ph.D.

Section 5

1. **Dragoș Cristian Achiței, Petrica Vizureanu, Dan Gelu Galusca, Mihai Axinte.** *Thermomechanical fatigue behaviour of shape memory alloy $Cu_{75.4}Zn_{18.6}Al_{5.85}$*
2. **Cosmina Carmen Aldea, Anca Draghici.** *Some considerations about trust in virtual teams through the ICT tools used*
3. **Mihaela Amarandei, Karla Berdich, Izabella Szigyarto, Liviu Marsavina.** *Nondestructive evaluation of polyurethane materials using transient thermography*
4. **Gheorghe Amza, Gabriel Dan Tască, Zoia Apostolescu.** *Research regarding non contact examination of composite materials*
5. **Gheorghe Amza, Oana Elena Amza, Zoia Apostolescu.** *Contributions to the state of stress and strain occurring during endodontic treatment with ultrasound*
6. **Biljana Babić, Dušan Bučevac, Marija Prekajski, Jelena Pantić, Jelena Gulicovski, Miroslav Miljković, Branko Matović.** *Synthesis and characterization of biomorphic CeO_2 obtained by using egg shell membrane as template*
7. **Ilarion Banu, Ion Dobrescu.** *Contributions to the quality study of the parts made of malleable iron (Fgn 700-2), 52-54 HRC hardened, used for manufacturing crankshafts*
8. **Ovidiu Blăjiniță, Adriana Damian, Aurelian Vlase.** *Mathematical relation of the force at widening a 36% glass fiber reinforced polymeric composite material*
9. **Crina Buhai, Ramona Ciobanu, Bogdan Sarghie, Costea Budulan.** *Mechanical properties of multi-layer knitted fabrics made from microfiber*
10. **Ana-Ramona Ciobanu, Raul Fanguero, Luminita Ciobanu, Costea Budulan.** *Specific mechanical properties for composite knitted reinforcements with natural fibers*
11. **Violeta Elena Copcia, Claudia Mihaela Hristodor, Simona Dunca, Ion Sandu.** *Study of the bactericidal activity of nanoparticles of silver in natural microporous materials*
12. **Milena Ćosić, Zagorka Aćimović-Pavlović, Anja Terzić, Marina Dojčinović, Ljubica Pavlović.** *The possibility of obtaining composite $AL18Wt\%Si/SiC$ by compocasting process*
13. **Daniela Domnisoru, Mirela Praisler, Leonard Domnisoru.** *Principal components analysis applied on experimental spectra series for ceramic materials characterization*
14. **Dana Dragoș, Petrică Vizureanu, Ramona Cimpoșu.** *Techniques and materials used in braze-welding processes*
15. **Nikolay Dubinin.** *Non-diagonal coupling between d electrons in the transition-metal binary alloys*

16. **Dan Ghenghea.** *Elastic features of own manufactured metallic bellows*
17. **Adrian Grecu, Petrică Vizureanu, Cristian-Ioan Baban, Carmen Nejneru, Mihai Axinte.** *Thermal fatigue influence on carboxymethylcellulose synthetic quenching environments*
18. **Jelena Gulicovski, Jelena Bajat, Vesna Mišković-Stanković, Bojan Jokić, Vladimir Panić, Slobodan Milonjić.** *Cerium oxide as conversion coating for the corrosion protection of aluminum*
19. **Claudia-Mihaela Hristodor, Narcisa Vrinceanu, Aurel Pui, Florin Brinza, Violeta Elena Copcia, Diana Tanasa, Eveline Popovici.** *Study of nanosized clay- SnO₂ compounds used in degradation of Eosin Y dye*
20. **Aurora-Cătălina Ianăși, Minodora-Maria Pasăre.** *A method for applying technology of composite materials in reinforcement of wood beams*
21. **Aurora-Cătălina Ianăși, Nicoleta-Maria Mihuț.** *Some experimental aspects concerning a method of study the composites materials with epoxy matrix*
22. **Daniela Ionescu, Maria Kovaci.** *Method for calculating the electrical parameters evolution in a ferroelectric liquid crystal phase*
23. **Daniela Ionescu, Maria Kovaci.** *Study of the speed for data transfer in the doped permalloy included in the grid racetrack memories*
24. **Savin Dorin Ionesi, Raul Fanguero, Luminita Ciobanu, Costea Budulan.** *Practical aspects regarding the production of composite materials with 3D textile reinforcements*
25. **Branko Matovic, Biljana Babic, Dusan Bucevac, Maria Cebela, Vesna Maksimovic, Tamara Minovic, Miroslav Miljkovic.** *Low-temperature synthetic route for hafnium carbide powder*
26. **Georgiana Melcioiu, Viorel-Aurel Șerban, Cosmin Codrean, Florin Marian Cornea, Dragoș Buzdugan.** *Obtaining solder nanoalloys from Sn-Cu-P-Ni family in ribbon form for electronic components soldering*
27. **Aleksandr Mikhaylov, Aleksandr Nedashkovskiy, Dmitriy Mikhaylov, Anna Dolgikh.** *General approach to development of machine building composition technologies*
28. **Ioan Milosan.** *The behaviour to the low temperatures of a chromium-nickel-copper S.G. cast iron*
29. **Ioan Milosan.** *Heat treatment optimization for the bearing rings fabrication*
30. **Leonard Mitu, Dana Motoc Luca, Gheorghe Bejinaru-Mihoc, Virgil Geamăn.** *Drilling precision analysis of the polymeric composite materials*
31. **Leonard Mitu, Dana Motoc Luca.** *Assesing the main influencing factors on the thermal properties of the polymeric composite materials*
32. **Carmen Nejneru, Manuela-Cristina Perju, Petrică Vizureanu, Mihai Axinte.** *Comparative study on the single layer deposition of Ti on gray cast iron and low alloy steel matrix using electrospark deposition method*
33. **Simona Oancea, Diana Coman, Narcisa Vrinceanu.** *Eco-friendly process of dyeing materials using bilberry anthocyanin extract*
34. **Ioana Petre.** *Concerning the pneumatic muscle behavior under different loads*
35. **Mihai Alin Pop, Vlad Monescu, Alexandru Constantinescu.** *Modelling and optimizing the resistance to bending of reinforced resin type composite materials*
36. **Mihai Alin Pop, Vlad Monescu, Alexandru Constantinescu.** *Modelling and optimizing the resistance to traction of reinforced resin type composite materials*
37. **Octavian Popescu, Aurelia Grigoriu.** *Method for production of silver/MCT- β -CD inclusion complex grafted on cotton*
38. **Jeni Pralea, Elena Șoltuz, Monica Elena Pop.** *The recognition of a creativity stimulation method that is specific to design*
39. **Marija Prekajski, Nadezda Stanković, Maria Čebela, Tamara Minović, Aleksandar Kremenović, Branko Matović.** *Thermal stability of CeO₂ - Bi₂O₃ solid solution*
40. **Aurel Prstić, Zagorka Aćimović-Pavlović, Milutin Đuričić, Anja Terzić, Ljubica Pavlović, Zorica Tanasković.** *Linings based chromite for application in foundry*
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42. **Mihai Adrian Rusu.** *Friction behaviour of the polymeric gels*
43. **Ionuț Tudor Soare, Gheorghe Alexandru Radu, Horia Abaitancei, Sebastian Radu, Aron Adrian Petric, Ruxandra Dica (Stanescu).** *Hydraulic hybrid vehicle with pneumatic energy storage solution*
44. **Patrick Ștefănescu.** *Advantages and disadvantages using validation system in public transport vehicles*
45. **Iuliana Laura Taranovschi Ferariu, Petru Dușa, Marius Ionuț Rîpanu.** *The methodology for innovative model application on the punching process*
46. **Florentina Tocu, Costel Iulian Mocanu, Ovidiu-Alexandru Donu.** *The determination of the cumulative deterioration factor in the composite materials fatigue strain*
47. **Cristian-Gheorghe Turc, Dorian Ștef, Lacramioara Iftode, Constantin Carausu.** *Fuzzy logic application on parts type bushing manufacturing*
48. **Miloš Vasić, Zagorka Radojević.** *Determination of the optimal drying condition during drying of green masonry products*
49. **Luminita Vlad, Stan Mitu, Florin Vlad.** *The integration of the Peltier cells in new types of clothes structures to ensure the state of comfort*
50. **Luminita Vlad, Stan Mitu, Florin Vlad.** *Bioclimatic chamber used to test the comfort influence parameters related to the quality of clothing*
51. **Irina-Adriana Vieriu, Erik Tønning, Hans-Henrik Friis-Pedersen.** *Determining the effects of heating circulator parameters on hardening of fibreglass polyester matrix*
52. **Aurelian Vlase, Adriana Damian, Ovidiu Blăjiniă.** *Relation of the cutting tool wear at drilling a 24% glass fiber reinforced polymeric composite material*
53. **Andrzej Wróbel.** *Model of piezoelectrics including material damping*