

PROGRAM

Thursday, October 10th, 2019

08:30-09:00	Registration of Participants, Faculty of Industrial Engineering and Robotics, Hall CD
09:00-09:30	OPENING CEREMONY of the three conferences of Production Engineering Department, dedicated to its 65 th anniversary: The 20 th ICNcT, The 10 th ICAMAT, The 5 th POLCOM Hall CD 016
09:30-10:00	The unveiling of commemorative plate of Professor Nicolae Ion MARINESCU, Hall CF 015
10:00-13:30	Plenary Session of the 20 th ICNcT, Hall A 3.2, Library Moderator: Prof. Daniel Ghiculescu, Prof. Laurențiu Slătineanu, Prof. Dumitru Mnerie, Prof. Aurel - Mihail Țițu
10:00-10:30	1. Nonconventional technologies continue – Arguments. In memory of Prof. DHC, Dr. Doc. Aurel Nanu, Prof. dr. eng. Dan Nanu, Prof. dr. eng. Nicolae Ion Marinescu, Prof. dr. eng. Gheorghe Obaciu Prof. Dumitru Mnerie, Polytechnic University of Timișoara Prof. Aurel - Mihail Țițu, Lucian Blaga University of Sibiu Prof. Daniel Ghiculescu, Polytechnic University of Bucharest Prof. Laurentiu Slătineanu, “Gheorghe Asachi” Technical University of Iași Prof. Cristian Pisarciuc, “Transilvania” University of Brasov Eng. Gheorghe Jitianu, Creator of Romanian Electrical Discharge Generators
10:30-11:00	2. Nonconventional Composites for Space Applications Prof. Loredana SANTO, University Tor Vergata of Rome, Italy
11:00-11:30	3. Solar Thermal Systems: Current Situation And Ambitious Goals Prof. Nikolaos TAOUSANIDIS, University of Western Macedonia, Greece.
11:30-11.45	<i>Coffee Break</i>
11:45-12:15	4. A Non-conventional Methodology for interior product

	design using conceptual design principles and parametric tools Prof. Panagiotis Kyratsis et al., University of Western Macedonia, Greece
12:15-12:45	5. Biomedical applications of Microfluidics and Nanotechnology - Review Dr. Marioara Avram, National Institute for Research and Development in Microtechnologies - IMT Bucharest
12:45-13:15	6. Advanced, Nanostructured and Bio Materials Prof. Anton Fikai, Polytechnic University of Bucharest
13:30-14.30	<i>Lunch, Hall CO</i>
14:30-16.45	ICNcT 2019 Papers on Sections, Halls CB 015, CB 017, CB 007, CF 015 (Sections Program is detailed below)
16:30-16:45	<i>Coffee Break</i>
17:00-19.00	ICNcT 2019 Papers on Sections (detailed Sections' Program)
20:00-23.00	Conference Banquet

Friday, October 11th, 2019

08:30-9:30	ARTN General Assembly Hall CF 015
9:30-12:30	Visit of the new building Aula Magna of Polytechnic University of Bucharest, and Laboratories of Faculty of Industrial Engineering and Robotics; Discussions on future cooperation
12:30-13:00	Conference closing Hall CF 015
15:00-19:00	Conference Trip - Tour of some historic and charming places of Bucharest

SECTIONS PROGRAM

SECTION S1

NONCONVENTIONAL MACHINING AND EQUIPMENT

Hall CB 015, 14:30-19:00

Moderators:	Prof. Laurențiu Slătineanu, “Gheorghe Asachi” Technical University of Iași Prof. Aurel - Mihail Țițu, “Lucian Blaga” University of Sibiu
Secretaries:	Students: Catalina Valu, Alexandru Mihalcea
	1. Predictability of process parameters for oxygen assisted laser cutting of steels in industrial applications, Richard Herman, Remus Boboescu Polytechnic University of Timișoara
	2. Contributions to the optimization of dimensional processing technology through electric erosion with contact breaking with electrode-tool – the metal band, Viorel Bucur and Aurel Mihail Țițu, “Lucian Blaga” University of Sibiu
	3. Behavior of the transfer object on the dynamic loads during the working process, Viorel Bucur, Aurel Mihail Țițu and Galaftion Sofonea, “Lucian Blaga” University of Sibiu
	4. Establishing conditions for wire electrical discharge cutting using grey relational analysis, Oana Dodun ¹ , Margareta Coteață ¹ , Gheorghe Bosoancă ¹ , Laurențiu Slătineanu ¹ , Adelina Hrițuc ¹ , and Irina Beșliu-Băncescu ² , ¹ “Gheorghe Asachi” Technical University of Iași, ² “Ștefan cel Mare” University of Suceava
16:30-16.45	<i>Coffee Break</i>
	5. Obtaining external cylindrical surfaces by electrical discharge machining using plate type tool electrode, Oana Dodun ¹ , Ștefan Stoica ¹ , Margareta Coteață ¹ , Gheorghe Nagiț ¹ , Laurențiu Slătineanu ¹ , Adelina Hrițuc ¹ , Irina Beșliu-Băncescu ² ¹ “Gheorghe Asachi” Technical University of Iași, ² “Ștefan cel Mare” University of Suceava

	<p>6. Influence of the inorganic solutions on the current efficiency for iron dissolution at the electrochemical machining, Mihaela Botis, Polytechnic University of Timisoara</p>
	<p>7. Review of wire electrical discharge machining of the aluminum extrusion die, Gheorghe Ioan Pop¹, Mihai Dragomir², Aurel Mihail Țițu³ and Vlad Ciprian Cupșan¹, ¹SC Universal Alloy Corporation Europe SRL, ²Tehnicla University of Cluj-Napoca, ³“Lucian Blaga” University of Sibiu</p>
	<p>8. Preliminary research on thin ribbons made of copper and aluminum welded through ultrasonic micro vibrations in order to develop laminated composites used in battery applications, Emilia Florina Binchiciu¹, Gabriela-Victoria Mnerie¹, Mircea Nicolaescu², Dumitru Mnerie², ¹National Institute in Welding and Material Testing - ISIM Timisoara, ² Polytechnic University Timisoara</p>
	<p>9. Considerations regarding efficient use of abrasive material in water jet cutting, Aurel Perianu¹, Dumitru Mnerie², Dan Ionescu ¹ National Institute in Welding and Material Testing - ISIM Timisoara, ²Polytechnic University of Timisoara</p>
	<p>10. Significant enhance of the indirect microwave heating yield in the foaming process of glass waste, Lucian Paunescu¹, Marius Florin Dragoescu¹, Sorin Mircea Axinte² and Ana Casandra Sebe³ ¹ Daily Sourcing & Research SRL Bucharest, ² Polytechnic University of Bucharest, ³Cosfel Actual SRL Bucharest</p>

SECTION S2

MICRO AND NANOTECHNOLOGIES,

ADVANCED, NANOSTRUCTURED AND BIO MATERIALS

Hall CB 017, 14:30-19:00

Moderators:	Assoc. Prof. Elena Lacatus, Prof. Daniel Ghiculescu, Polytechnic University of Bucharest
Secretaries:	Students: Robert Nicoara, Ovidiu Soagher

	<p>1. Simulation of ps laser pulses induced absorption phenomena in materials, Dan Savastru, Roxana Savastru, Sorin Miclos, Ion I. Lancranjan, National Institute of R&D for Optoelectronics – INOE 2000, Bucharest</p>
	<p>2. Non-conventional contact-less method for measurement of materials thermal diffusivity coefficient, Aurelian Popescu, Dan Savastru, Sorin Miclos, Laurentiu Baschir, Marina Tautan, National Institute of R&D for Optoelectronics – INOE 2000, Bucharest</p>
	<p>3. Some technological solutions for ultrasonic aiding of micro-electrical discharge machining, Bogdan-Ionuț Cristea, Daniel Ghiculescu, Polytechnic University of Bucharest</p>
	<p>4. Lithographic technologies for submicronic patterns design applied in microsensors domain, Liliana-Laura Badita, Gheorghe Gheorghe, Valentin Gornoava, Aurel Zapciu, National Institute of Research and Development for Mechatronics and Measurement Technique</p>
	<p>5. Study of electrochemical behavior and smoothing of advanced alloy Ti6Al4V with ultrasonic waves, Andrei Gheorghe, Dana Lepădatu, Daniel Ghiculescu Alexandra Banu, Polytechnic University of Bucharest</p>
16:30-16.45	<i>Coffee Break</i>
	<p>6. Comparative study of structures temperature monitoring using FBG array and distributed sensing in real time, Marian Ghena¹, Andrei Stăncălie², Elena Lăcătuș¹, ¹ Polytechnic University of Bucharest, ²CETAL, NILPRP</p>
	<p>7. Carbon-based materials for healthcare micro-devices, Roxana Marinescu, Bogdan-Catalin Serban, Nicolae Dumbravescu, Viorel Avramescu, Cornel Cobianu, Octavian Buiu, National Institute for Research and Development in Microtechnologies - IMT Bucharest</p>
	<p>8. The importance of optimization of lattice structures for biomedical applications, Luciana Laura (Dinca) Shamieh, Nicoleta Mirela Popa, Nichita Larisa Milodin, Doina Gheorghiu Stanca Comsa,</p>

	National Institute of Research and Development in Mechatronics and Measurement Technique, Bucharest
	9. Electrolyte flow simulation for an equipment of electrochemical deburring, Gabriela Ene, Alexandra Cotofana, Daniel Ghiculescu Polytechnic University of Bucharest
	10. Study of vibrations propagation on a u-shaped bar finding the resonant frequencies, Razvan Marian Mihalcea ¹ , Andrei Stăncălie ² , Elena Lăcătuș ¹ Polytechnic University of Bucharest, ² CETAL, NILPRP
	11. Aspects regarding the Romanian wool fibres manufacturing, in order to obtain insulation materials for buildings and to valorize this valuable raw material, Pyerina Carmen Ghituleasa ¹ , Angela Dorogan ¹ , Eftalea Carpus ¹ , Cezar Bulacu ² , Ana Enciu ³ , ¹ INCDTP, ² SC MINET SA, ³ ICPCOC PALAS

SECTION S3

NONCONVENTIONAL FORMS OF ENERGY AND ENVIRONMENTAL IMPACT

Hall CB 007, 14:30-19:00

Moderators:	Prof. Alexandra Banu, Polytechnic University of Bucharest Prof. Oana Dodun-des-Perrieres, "Gheorghe Asachi" Technical University of Iași
Secretaries:	Students: Mihnea Georgescu, Sebastian Bostan
	1. Finite element modeling and experiments regarding ultrasonic transducers used in air filters, Dan Nițoi ¹ , Gheorghe Amza, ¹ Polytechnic University of Bucharest
	2. Aspects concerning the requirements of environmental impact in cement industry from Romania, Constantin C. Deopale, Daniel Ghiculescu, Polytechnic University of Bucharest
	3. Experimental research of ecological dielectric liquid in electrical discharge machining, Marian-Ionuț Dragomir, Oana-Cornelia Popescu, Alexandra Banu, Daniel Ghiculescu, Polytechnic University of Bucharest

	4. Researches on the behavior of ecological dielectric liquids at classic and ultrasonically aided EDM, Anamaria Liliana Marcu, Oana-Cornelia Popescu, Daniel Ghiculescu, Alexandra Banu, Polytechnic University of Bucharest
16:30-16.45	<i>Coffee Break</i>
	5. Rosemary-loaded microcapsules on textile materials for skincare, Denisa-Maria Radulescu, Alina Popescu, Laura Chirila, Diana-Elena Radulescu, Cristina-Gabriela Constantinescu, The National Research-Development Institute for Textile and Leather, Bucharest
	6. Hydrogen production by non-conventional biomass pyrolysis process and environmental impact, Adrian Armeanu ¹ , Elena David ¹ , Roxana Marinescu ² , Viorel Badescu ³ , ¹ National Research Institute for Cryogenic & Isotopic Technologies, ICSI Rm.Valcea, ² National Institute for Research and Development in Microtechnologies –IMT Bucharest, ³ Polytechnic University of Bucharest
	7. Reuse of glass fiber waste in the circular economy, Ana Violeta Filip ¹ , Mihai Alexandru Eftimie ² ¹ National Institute for Laser, Plasma and Radiation Physics ² Polytechnic University of Bucharest

**SECTION S4
OTHER PROCESSES RELATED TO NONCONVENTIONAL
MACHINING AND EQUIPMENT,
MANAGEMENT IN NONCONVENTIONAL TECHNOLOGIES**

Hall CF 015, 14:30-19:00

Moderators:	Prof. Dumitru Mnerie, Polytechnic University of Timisoara, Assoc. prof. Ovidiu Alupeii, Polytechnic University of Bucharest
Secretaries:	Students: Radu Tronea, Dan Pancu
	1. Influence of technological parameters on the structure and deformation of flat or round parts generated by DLP 3D printing, Mircea Dorin Vasilescu, Polytechnic University Timisoara

	<p>2. Comparative study between the generations of 3D printed parts by thermoplastic or optical polymerization, Mircea Dorin Vasilescu¹, Aurel Mihail Țițu², ¹Polytechnic University of Timisoara, ²”Lucian Blaga” University of Sibiu</p>
	<p>3. Flexible robotic line for the processing of car rims and product improvement using finite element simulation, Andrei Komjaty, Elena Stela Muncut, Geza Mihai Erdodi, University “Aurel Vlaicu” of Arad</p>
	<p>4. CNC2CNC automatic translation in CIM based organizations for steel profile processing, Ovidiu Alupei-Cojocariu, Liviu Daniel Ghiculescu, Polytechnic University of Bucharest</p>
16:30-16.45	<i>Coffee Break</i>
	<p>5. Aspects concerning the intangible resources in machines building industry, Davidescu Victor, Daniel Ghiculescu, Polytechnic University of Bucharest</p>
	<p>6. The unconventional technologies reflected in web of science, Claudiu Pirnau¹, Maria Roxana Marinescu², Liviu Daniel Ghiculescu¹ and Mironela Pirnau³ ¹Polytechnic University of Bucharest, ²National Institute for Research and Development in Microtechnologies - IMT Bucharest, ³”Titu Maiorescu” University of Bucharest</p>
	<p>7. The nonconventional surgical system <i>Da Vinci</i>, Gheorghe Tolu, Daniel Ghiculescu, Miron Zapciu Polytechnic University of Bucharest</p>
	<p>8. Information system in organizations implementing the nonconventional technologies, Aurel Mihail Țițu¹, Radu Moisescu², Iuliana Moisescu³ ¹”Lucian Blaga” University of Sibiu, ² State Office for Inventions and Trademarks, ³Ministry of Culture and National Identity</p>

SECTION S5 - POSTERS SECTION

ACHIEVEMENTS AND INVENTIONS IN NONCONVENTIONAL TECHNOLOGIES,

Hall CD of the Faculty of Industrial Engineering and Robotics

Moderators:	Dr.Eng. Claudiu Pirnau, M.Sc. Gabriela Ene
Secretaries:	Students: Nicusor-Bogdan Nitu, Razvan-Adrian Dragoi

1.	<p>EQUIPMENT FOR MACHINING HELICOIDAL SURFACES TROUGH ULTRASONICALLY AIDED ELECTRICAL DISCHARGE MACHINING</p> <p><u>Niculae Ion MARINESCU</u>, Liviu Daniel GHICULESCU, Ovidiu ALUPEI and Liliana POPA, Polytechnic University of Bucharest</p>
2.	<p>EQUIPMENT FOR MACHINING CURVED HOLES AND MICRO-HOLES THROUGH ULTRASONICALLY ELECTRICAL DISCHARGE MACHINING</p> <p>Liviu Daniel GHICULESCU, <u>Niculae Ion MARINESCU</u>, Ovidiu ALUPEI and Liliana POPA, Polytechnic University of Bucharest</p>
3.	<p>EQUIPMENT FOR ULTRASONICALLY AIDED ELECTROCHEMICAL MACHINING</p> <p><u>Niculae Ion MARINESCU</u>, Liviu Daniel GHICULESCU, Alexandra BANU, Cristian TARBĂ and Cristina JUGĂNARU, Polytechnic University of Bucharest</p>
4.	<p>ROTARY HEAD FOR ULTRASONICALLY AIDED ELECTRICAL DISCHARGE MACHINING</p> <p>Liviu Daniel GHICULESCU, <u>Niculae Ion MARINESCU</u>, Ovidiu ALUPEI and Nicoleta CĂRUȚAȘU, Polytechnic University of Bucharest</p>
5.	<p>EQUIPMENT FOR SIMULTANEOUS MACHINING STRUCTURES OF HOLES AND MICRO-HOLES BY ELECTRICAL DISCHARGE MACHINING AIDED BY ULTRASONICS</p> <p><u>Niculae Ion MARINESCU</u>, Liviu Daniel GHICULESCU,</p>

	Ovidiu ALUPEI and Nicoleta CĂRUȚAȘU, Polytechnic University of Bucharest
6.	PROCESS FOR PREPARING COMPOSITE MULTI-PURPOSE MATERIALS WITH POSSIBLE APPLICABILITY IN THE TREATMENT OF BONE CANCER Anton FICAI, Ecaterina ANDRONESCU, Cristina Daniela GHITULICA, Denisa FICAI, Georgeta VOICU and Mădălina Georgiana ALBU, Polytechnic University of Bucharest
7.	FUNCTIONALIZED MAGNETIC SYSTEMS FOR ENVIRONMENTAL APPLICATIONS Denisa FICAI, Anton FICAI, Cornelia GURAN and Ecaterina ANDRONESCU, Polytechnic University of Bucharest
8.	MAGNETITE/THIOACIDS@AG OR AU MULTIFUNCTIONAL SYSTEMS USED FOR DIAGNOSIS AND TARGETED DELIVERY IN CANCER Denisa FICAI, Ecaterina ANDRONESCU, Maria SONMEZ, Anton FICAI, Ovidiu OPREA and Bogdan Stefan VASILE, Polytechnic University of Bucharest
9.	VESICLES AND POLYMERIC TUBES AND TECHNOLOGY FOR OBTAINING THEM Denisa FICAI; Andreea ILIEV; Anton FICAI; Violeta Georgeta TRUSCA; Anca Violeta GAFENCU; Sanda-Maria BUCATARIU; Gheorghe FUNDUEANU-CONSTANTIN; Maya SIMIONESCU and Ecaterina ANDRONESCU, Polytechnic University of Bucharest
10.	(ELECTRO)MAGNETIC VERTICAL SEPARATOR OF ISOMAGNETIC NANOPARTICLES Denisa FICAI, Ioana ARDELEAN, Cornelia ILIE, Manuela CĂLIN, Elena-Valeria FUIOR, Adrian FIFERE, Mariana PINTEALĂ, Gheorghe FUNDUEANU-CONSTANTIN, Anton FICAI, Maya SIMIONESCU and Ecaterina ANDRONESCU, Polytechnic University of Bucharest
11.	OSTEOCONDUCTIVE AND OSTEOINDUCTIVE BONE GRAFTS Anton FICAI, Ecaterina ANDRONESCU, Madalina Georgiana ALBU, Denisa FICAI and Maria SONMEZ, Polytechnic University of Bucharest
12.	REAGENT BASED ON GOLD NANOPARTICLES, RECIPE FOR

	<p>ITS PREPARATION AND ITS USE FOR MAPPING OF TUMOR TISSUE ARCHITECTURE Marioara AVRAM, Ina Ruxandra PETRESCU, Andrei Marius AVRAM and Antonio Marian RĂDOI, National Institute for Research and Development in Microtechnologies - IMT Bucharest</p>
13.	<p>PROCEDURE FOR REALIZATION OF THE DIELECTROPHORETIC DEVICE FOR ELECTRICAL IMPEDANCE SPECTROSCOPIC STUDY OF SELF-ASSEMBLED TUMOR CELLS IN THE MICROFLUIDIC CHANNELS Marioara AVRAM, Antonio RADOI, Andrei AVRAM, Catalin BALAN and Catalin MARCULESCU, National Institute for Research and Development in Microtechnologies - IMT Bucharest</p>
14.	<p>MICROFLUIDIC SYSTEM WITH TYPE "Y" AND TYPE "T" JUNCTIONS FOR THE ASSEMBLY OF BACTERIAL CELLS IN DROP OF CONTROLLED DIMENSIONS Marioara AVRAM, Antonio RADOI, Andrei AVRAM, Catalin BALAN and Catalin MARCULESCU, National Institute for Research and Development in Microtechnologies - IMT Bucharest</p>
15.	<p>METHOD OF TRANSFERRING CVD GRAPHENE ONTO ELECTROCHEMICAL BIOSENSORS ELECTRODES FOR MOLECULAR DIAGNOSIS OF TUMOUR CELLS Vasilica ȚUCUREANU, Marioara AVRAM, Alina MATEI, Bianca Cătălina ȚÎNCU, Marius Andrei AVRAM, Cătălin Valentin MĂRCULESCU and Tiberiu Alecu BURINARU, National Institute for Research and Development in Microtechnologies - IMT Bucharest</p>