



BraMat 2026

14TH INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE & ENGINEERING

Braşov - ROMANIA
March 04 - 06, 2026

PROGRAM OVERVIEW

Conference's Partners:

Namicon, Standard Service, Struers, Presi, Apellaser, Global Source



Organized by

**Materials Science and Engineering Faculty
Transilvania University of Brasov, Romania**

and

**Technical Sciences Academy of Romania – ASTR
Romanian Foundry Technical Association – ATTR
Romanian Welding Society - ASR**

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Mihai Alin POP

Simona Corina RADU

Ionuţ Claudiu ROATĂ

Adrian SURDU

Elena Manuela STANCIU

Maria STOICĂNESCU

Daniel TOFAN

Ionuţ UNCU

Conference Sections

- I. Metallic materials and composites
- II. Functional materials and nanotechnology
- III. Energy and environmental materials
- IV. Engineering applications

Hall A = main aula

Hall B = room U I 6

Hall C = room U I 3

Hall D = room U I 7

Hall E = room U I 2

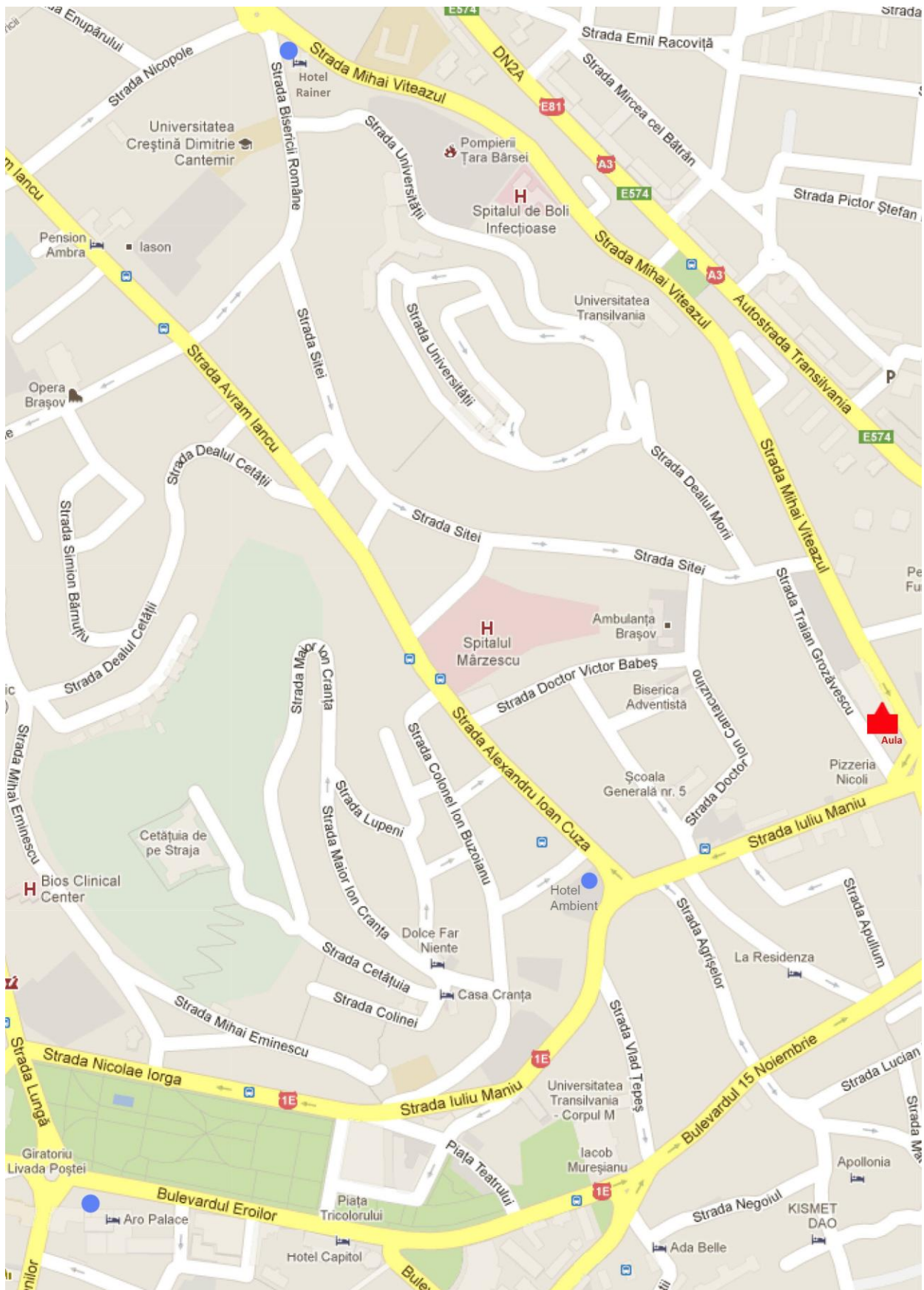
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Yuhou WU, Shenyang Jianzhu University, China

Conference Venue

Brașov is situated in the central part of the country being considered the second most important town in Romania. Located 160 km from Bucharest (Romania's capital), Brașov is surrounded by the Carpathian Mountains, being in the middle of the country at the crossroads of the Eastern Carpathian and the Southern Carpathians. Across the mountains to the South and East there are Wallachia and Moldavia, to the West the Banat region and to the North the rolling hills of Northern Transylvania.

The 14th International Conference of Materials Science and Engineering – BraMat 2026, will be held in halls within Sergiu T. Chiriacescu Aula, 41A Iuliu Maniu Str., Braşov, ROMANIA.



Program (Outline)

Wednesday, 04.03.2026

- 18.00: Registration (Hall H)**
- 19.00: Welcome cocktail (Hall H)**

Thursday, 05.03.2026

- 08.30: Registration (Hall H)**
- 09.00: Opening ceremony (Main Hall A)**
- 09.20: Plenary lectures 1 (Main Hall A)**
- 10.40: Coffee break (Hall H)**
- 11.00: Plenary lectures 2 (Main Hall A)**
- 12.20: Lunch (Hall H)**
- 13.40: Oral Presentation 1 (Hall C)**
- 13.40: Oral Presentation 2 (Hall D)**
- 15.15: Coffee break (Hall H)**
- 15.30: Oral Presentation 3 (Hall C)**
- 15.30: Oral Presentation 4 (Hall D)**
- 15.30: CNATDCU meeting (Hall B)**
- 15.30 – 17.30: Poster presentation (Hall H)**
- 09.30 – 17.30: Presentations by participating companies (Hall G)**
- 19.00: Gala dinner (ARO PALACE Hotel)**

Friday, 06.03.2026

- 09.30: Plenary lectures 3 (Main Hall A)**
- 10.45: Coffee break (Hall H)**
- 11.00: Workshop Circularity and Responsibility in Plastics Use (Hall B)**
- 11.00: Oral Presentation 5 (Hall C)**
- 11.00: Oral Presentation 6 (Hall D)**
- 11.00: Oral Presentation 7 (Hall E)**
- 13.00: Lunch (Hall H)**
- 14.00: Workshop Smart Healthcare engineering (Hall E)**
- 11.00 – 13.00: Poster presentation (Hall H)**
- 09.30 – 15.00: Presentations by participating companies (Hall G)**
- 15.00: Closing ceremony (Main Hall A)**

Program (detailed)

Wednesday, 04.03.2026

18.00: Registration

19.00: Welcome cocktail (Hall H)

Thursday, 05.03.2026

8.30: Registration

Main Hall A

9.00: Opening Ceremony

9.00: Welcome messages

Professor Dr. Eng. **Daniel MUNTEANU**, Vice-Rector of Transilvania University of Braşov, ROMANIA

Professor Dr. Eng. **Alexandru PASCU**, BraMat Conference Chairman

9.15: Companies introduction

9.20: Plenary Lectures 1

Chairperson: Daniel MUNTEANU, Transilvania University of Braşov, ROMANIA

9.20: **P.01. The effect of cardiovascular stenting in hematological, hemorheological and hemodynamic parameters**

J. A. ANAYIOTOS, Cyprus University of Technology, CYPRUS

10.00: **P.02. Electrical and thermal properties of thin films: The influence of composition, microstructure and growth design**

F. VAZ, Minho University, PORTUGAL; Transilvania University of Brasov, ROMANIA

10.40: Coffee Break (Hall H)

11.00: Plenary Lectures 2 (Main Hall A)

Chairperson: Alexandru PASCU, Transilvania University of Braşov, ROMANIA

11.00: **P.03. Characterize, understand, innovate: Advancing new materials development**

D. BEITELSCHMIDT, NETZSCH Gerätebau GmbH, Germany

11.40: **P.04. Multi-criteria optimization of titanium endosseous implants**

C. POPA, Technical University of Cluj-Napoca, ROMANIA

12.20: Lunch (Hall H)

13.40: Oral presentations 1 (Hall C)

Chairpersons: Andrei Victor SANDU, Gheorghe Asachi Technical University of Iaşi, ROMANIA

Camelia GABOR, Transilvania University of Brasov, ROMANIA

13.40: II.K.01 Smart materials for wastewater treatment technologies

I.C. COVALIU-MIERLA, G. PARASCHIV, National University for Science and Technology Politehnica Bucharest, ROMANIA

14.00: II.O.01. Tribological characteristics of advanced chemical conversion coatings suitable to enhance the surface properties of Ti₆Al₄V

D.P. BURDUHOS-NERGIS, N.-M. LOHAN, E. MATCOVSCHI, G. BADARAU, C. BEJINARIU, N. CIMPOESU, Faculty of Material Science and Engineering, Gheorghe Asachi Technical University of Iasi, ROMANIA
M. BENCHEA, F.C. LUPU, Faculty of Mechanical Engineering, Gheorghe Asachi Technical University of Iasi, ROMANIA

14.15: II.O.02 Evaluation of the adhesion behaviour of thin films by a custom-made pull-off test

J.C. ARAÚJO, Federal do Rio Grande do Norte University, Department of Physics, BRAZIL; Transilvania University of Brasov, Materials Science Department, ROMANIA
K. SANTOS CEDEÑO, Universidad de Oriente, Faculty of Chemical Engineering and Agronomy, Santiago de Cuba, CUBA; Transilvania University of Brasov, Materials Science and Engineering Faculty, ROMANIA
M.A. POP, C. GABOR, A. PASCU, D. MUNTEANU, Materials Science and Engineering Faculty, Transilvania University of Brasov, ROMANIA
F. BOHN, Federal do Rio Grande do Norte University, Department of Physics, BRAZIL
M.A. CORREA, Federal do Rio Grande do Norte University, Department of Physics, BRAZIL; University of Minho, Physics Centre of Minho and Porto Universities, Braga, PORTUGAL
A. FERREIRA, University of Minho, Physics Centre of Minho and Porto Universities, Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL
F. VAZ, Materials Science and Engineering Faculty, Transilvania University of Brasov, ROMANIA; University of Minho, Physics Centre of Minho and Porto Universities; Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL

14.30: II.O.03 Plasma cleaning investigations of mirrors surfaces exposed to carbon contaminated during high power laser irradiations

V. CRACIUN, National Institute for Laser, Plasma and Radiation Physics; Extreme Light Infrastructure, and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Bucharest-Magurele, ROMANIA
A.V. SATULU, C. STANCU, C. CONSTANTIN, A. BONCIU, V. ION, D. CRACIUN, P. GAROI, S.A. IRIMICIUC, G. DINESCU, National Institute for Laser, Plasma and Radiation Physics, Măgurele, ROMANIA
R. UDREA, Apelaser, Mogosoaia, ROMANIA
G. BLEOTU, F. AL-ABEDI, E. MATACHE, S. DAS, D. SANDU, D. CRACANA, T. JITSUNO, D. URSESCU, M.D. MIHAI, D. IANCU, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, ROMANIA

14.45: II.O.04 Biogenic zinc oxide synthesized via ovalbumin from free-range chicken eggs for antibacterial activity

A.E. VIJAN, D. ISTRATE, National University of Science and Technology POLITEHNICA, Doctoral School Materials Science and Engineering, Bucharest, ROMANIA
E.M. MODAN, S.G. MOGA, D.A. NEGREA, National University of Science and Technology POLITEHNICA Bucharest, Pitesti University Centre, Regional Center of Research & Development for Materials, Processes and Inovative Products Dedicated to the Automotive Industry (CRCD-AUTO), ROMANIA

15.00: II.O.05 Effect of combined ultrasound and microwave processing on the structural and colloidal properties of NiO nanoparticles

D. ISTRATE, National University of Science and Technology Politehnica Bucharest, Doctoral School Materials Science And Engineering, Bucharest, ROMANIA
E.M. MODAN, D.A. NEGREA, S.G. MOGA, G. CÎRSTEA, National University Of Science And Technology Politehnica Bucharest, Pitesti University Centre, Regional Center Of Research & Development For Materials, Processes And Innovative Products Dedicated To The Automotive Industry (CRCD-AUTO), ROMANIA
C. ASSAMADI, Cadi Ayyad University, Faculty Of Sciences Semlalia, Laboratory Of Physical Chemistry Of Materials And Environment, Department Of Chemistry, MOROCCO
A.G. SCHIOPU, National University Of Science And Technology Politehnica Bucharest, Faculty Of Mechanics And Technology, Pitesti University Centre, Pitesti, ROMANIA

13.40: Oral presentations 2 (Hall D)

Chairpersons: **Nicanor CIMPOESU**, Gheorghe Asachi Technical University of Iași, ROMANIA
Mihai Alin POP, Transilvania University of Brasov, ROMANIA

13.40: IV.K.01 Ultra-Low-Density carbon films synthesized by pulsed laser deposition as targets to enhance Fs-laser-plasma coupling

V. CRĂCIUN, National Institute for Laser, Plasma and Radiation Physics, Măgurele, Romania, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, ROMANIA

A. MĂGUREANU, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, Romania

R. UDREA, National Institute for Laser, Plasma and Radiation Physics, Măgurele, Romania, Apel Laser, ROMANIA

A. ZUBAREV, National Institute for Laser, Plasma and Radiation Physics, Măgurele, Romania, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, ROMANIA

P.G. BLEOTU, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, Romania

G. DORCIOMAN, P. GAROI, D. CRĂCIUN, S. A. IRIMICIUC, National Institute for Laser, Plasma and Radiation Physics, Măgurele, ROMANIA

D. URSESCU, D.M. MIHAI, D. IANCU, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, ROMANIA

C.M. TICOS, Extreme Light Infrastructure (ELI-NP), and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest-Magurele, Romania, Engineering and Applications of Lasers and Accelerators Doctoral School (SDIALA), National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

14.00: IV.O.01. Quality management in integrated healthcare systems: Connecting intellectual property with engineering principles

D.T. ANDRONIC, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

Bacău County Emergency Hospital, Department of Neurosurgery, Bacău, ROMANIA,

S. TITU, Department of Surgical Oncology, The Oncology Institute “Prof. Dr. Ion Chiricuta”, Cluj-Napoca, ROMANIA,

Faculty of Medicine, “Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, ROMANIA

A. SEMENESCU, Engineering and Management Department, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA of Bucharest, Bucharest, ROMANIA, Academy of Romanian Scientists, Bucharest, ROMANIA

A.M. TITU, Academy of Romanian Scientists, Bucharest, ROMANIA. Industrial Engineering and Management Department, Faculty of Engineering, “Lucian Blaga” University of Sibiu, Sibiu, ROMANIA

14.15: IV.O.02 Scaling up complexity in metallic parts fabricated by laser powder directed energy deposition (LP-DED)

E. SANTECCHIA, A. SANTONI, Department of Industrial Engineering and Mathematical Sciences (DIISM), Polytechnic University of Marche, Ancona, ITALY

B. LASCU, M. NEDELICU, C. VRÎNCEANU, S.A.B. Aerospace Srl., Mogoșoia, ROMANIA

V. LATINI, S. BOMPADRE, S.A.B. Aerospace Srl, Ancona, ITALY

14.30: IV.O.03. The impact of nanotechnology in the management of cranio-cerebral trauma: A retrospective review of diagnostic and treatment strategies, with implementation prospects at the university emergency hospital

D.T. ANDRONIC, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

Bacău County Emergency Hospital, Department of Neurosurgery, Bacău, ROMANIA

S. TITU, Department of Surgical Oncology, The Oncology Institute “Prof. Dr. Ion Chiricuta”, Cluj-Napoca, ROMANIA, Faculty of Medicine, “Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, ROMANIA

PROGRAM

A. *SEMENESCU*, Engineering and Management Department, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA of Bucharest, Bucharest, ROMANIA, Academy of Romanian Scientists, Bucharest, ROMANIA

A.M. *TITU*, Academy of Romanian Scientists, Bucharest, ROMANIA. Industrial Engineering and Management Department, Faculty of Engineering, “Lucian Blaga” University of Sibiu, ROMANIA

14.45: IV.O.04. Surface integrity and coating performance of metallic components in automotive electronics: a supplier-oriented quality approach

C.A. COVACI, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

A.M. *TITU*, Industrial Engineering and Management Department, Faculty of Engineering, “Lucian Blaga” University of Sibiu, Sibiu, ROMANIA, Academy of Romanian Scientists, Bucharest, ROMANIA

15.00: IV.O.05. Recent research on materials used for personal protective equipment—short review

C.S. BUNDUC, A.M. *CAZAC*, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Department of Materials Engineering and Industrial Safety, Iasi, ROMANIA

C. *BEJINARIU*, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Department of Materials Engineering and Industrial Safety, Iasi, ROMANIA. Academy of Romanian Scientists, Bucharest, ROMANIA

15.15: Coffee break (Hall H)

15.30: Oral presentations 3 (Hall C)

Chairpersons: **Bogdan NEAMȚU** Technical University of Cluj-Napoca, ROMANIA, EUT+ Institute of Nanomaterials and Nanotechnologies-EUTINN

Daniel TOFAN, Transilvania University of Brasov, ROMANIA

15.30: III.K.01. Overview of hydrogen degradation: The challenges to a hydrogen economy and the main routes for hydrogen storage

D. *ELIEZER*, Ben-Gurion University of the Negev, Department of Materials Engineering, Beer Sheva, Israel

15.50: III.O.01 Discrimination and prediction of natural polymers sources

M. BREBU, E. *STOLERU*, “Petru Poni” Institute of Macromolecular Chemistry, Iași, ROMANIA

S.F. *SIM*, Faculty of Resource Science and Technology, University Malaysia Sarawak, MALAYSIA

16.05: III.O.02 Design of fibre-based soft magnetic composites using cold sintering

B.V. NEAMȚU, T.F. *MARINCA*, F. *POPA*, C.V. *PRICA*, I. *CHICINAȘ*, Materials Science and Engineering Department, Technical University of Cluj-Napoca, ROMANIA; EUT+ Institute of Nanomaterials and Nanotechnologies-EUTINN, European University of Technology, European Union

M. *NASUI*, Center for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, ROMANIA

N. *LUPU*, National Institute of Research & Development for Technical Physics, Iași, ROMANIA

16.20: III.O.03 Photocatalytic Composite Beads for Advanced Wastewater Treatment

M. COVEI, I. *TISMANAR*, C. *BOGATU*, A. *DUTA*, Department of Product Design, Mechatronics and Environment, Transilvania University of Brașov, ROMANIA

H. *STROESCU*, M. *NICOLESCU*, J.M. *CALDERON MORENO*, I. *ATKINSON*, V. *BRATAN*, M. *GARTNER*, “Ilie Murgulescu” Institute of Chemical Physics, Bucharest, ROMANIA

16.35: III.O.04 Double-network cationic cryogels as advanced sorbents for water purification

M.V. DINU, M.M. *LAZAR*, E.S. *DRAGAN*, Department of Functional Polymers, “Petru Poni” Institute of Macromolecular Chemistry, Iași, ROMANIA

D. *HUMELNICU*, Faculty of Chemistry, “Al. I. Cuza” University of Iași, ROMANIA

16.50: III.O.05 A Material circularity indicator implementation for lithium-ion automotive batteries

M. DRAGOMIR, A. *ZINVELI*, E.B. *NEGOMIREANU*, M. *SIMIIDEAN*, Technical University of Cluj-Napoca, ROMANIA

17.05: III.O.06 Capillary array hydrogen storage: Coupling high strength-to-weight materials with space efficient geometries

A. RATOJ, C. MUNTEANU, "Gheorghe Asachi" Technical University of Iași, Department of Mechatronics & Robotics, Iași, ROMANIA

D. ELIEZER, Ben-Gurion University of the Negev, Department of Material Engineering, Beer-Sheva, ISRAEL

17.20: III.O.07 Recent development of geopolymers: processing and characterization

A.C. PERUC, D.D. BURDUHOS-NERGIS, C.P. M.S. BALATU, D.C. ACHIȚEI, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iasi, ROMANIA

P. VIZUREANU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iasi, ROMANIA; Academy of Romanian Scientists (AORS), Romania; Technical Sciences Academy of Romania, ROMANIA

A.V. SANDU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iasi, ROMANIA; Academy of Romanian Scientists (AORS), Romania; Romanian Inventors Forum, Iași, ROMANIA

17.35: III.O.08 Valorisation of end-of-life products as components in mortars and concrete for circular economy applications

B.S. VASILE, National University for Science and Technology Politehnica Bucharest, Research Center for Advanced Materials, Products and Processes, Bucharest, ROMANIA; National Research Center for Micro and Nanomaterials, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

A.I. NICOARA, I.A. NEACSU, R. TRUSCA, C. UNCU (CHIRCOV), I. BOEARASU, National Research Center for Micro and Nanomaterials, Politehnica University of Bucharest, ROMANIA

17.50: III.O.09 Leaching of smartphone screen E-waste Using DES

M.C. GİRGİN, F. NAZLI, B. Z. GÖKOĞLU, M.Ş. SÖNMEZ, Department of Metallurgical and Materials Engineering, Istanbul Technical University, Istanbul, TURKEY

G. AYGÜN, Department of Nano Science and Nano Engineering, Istanbul Technical University, Istanbul, TURKEY

B.T. KAYA, Department of Geological Engineering, Istanbul Technical University, Istanbul, TURKEY

O.M. ŞENER, S. YORULMAZ, Samsung Electronics Elektronik Sanayi ve Ticaret, Tekirdağ, TURKEY

B.Z. GÖKOĞLU, Prof. Dr. Dincer Topacık National Membrane Technologies Research Center (MEM-TEK), Istanbul Technical University, Istanbul, TURKEY

15.30: Oral presentations 4 (Hall D)

Chairpersons: **Rodica Mariana ION**, "Valahia" University of Târgoviște, ICECHIM, ROMANIA

Cătălin CROITORU, Transilvania University of Brasov, ROMANIA

15.30: II.K.02 Materials sustainability in roman military architecture – integrated archaeometric analysis and 3D reconstruction –

R.M. ION, Valahia University of Târgoviște, Doctoral School Of Materials Engineering, Târgoviște, ROMANIA; Icechim, Research Group "Evaluation And Conservation Of Cultural Heritage", Bucharest, ROMANIA

15.50: II.O.06 Anthocyanin-enriched xanthan cryogels as multifunctional biomaterials for intelligent freshness sensing

I.E. RĂȘCHIP, M.V. DINU, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, ROMANIA

16.05: II.O.07 Design and evaluation of the properties of Ti-Mo-Nb-Sn alloys for biomedical applications

A. PRUTEANU, M.S. BĂLȚATU, M.C. PERJU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMANIA

A.V. SANDU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iași; Academy of Romanian Scientists, Bucharest; Romanian Investor Forum, Iași, ROMANIA

P. VIZUREANU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, România; Academy of Romanian Scientists, Bucharest; Technical Sciences Academy of Romania, Bucharest, ROMANIA

16.20: II.O.08 Effect of ZnO surface functionalization on the photocatalytic degradation of methylene blue in geopolymer matrices

S. MIRA, D. ISTRATE, National University of Science and Technology POLITEHNICA, Doctoral School Materials Science and Engineering, Bucharest, ROMANIA

A.G. SCHIOPU, National University of Science and Technology POLITEHNICA, Doctoral School Materials Science and Engineering, Bucharest, ROMANIA; National University of Science and Technology POLITEHNICA Bucharest, Faculty of Mechanics and Technology, Pitesti University Centre, ROMANIA

M. OPROESCU, National University of Science and Technology POLITEHNICA Bucharest, Pitesti University Centre, Faculty of Electronics, Communication and Computers, Pitesti, ROMANIA

A. BEREVOIANU, Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Magurele, ROMANIA; Faculty of Physics, University of Bucharest, Bucharest, ROMANIA

16.35: II.O.09 Soft magnetic composite obtained from double-coated Al-permalloy (Ni_{71.25}Fe_{23.75}Al₅) by reaction spark plasma sintering

T.F. MARINCA, B.V. NEAMȚU, F. POPA, V.C. PRICĂ, Materials Science and Engineering Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania; EUT+ Institute of Nanomaterials and Nanotechnologies-EUTINN, European University of Technology, EUROPEAN UNION

16.50: II.O.10 Photophysical properties of conjugated rare earth nanoparticles with zinc phthalocyanine derivatives

A. AIRINEI, R. TIGOIANU, C. GHERASIM, Laboratory Physical Chemistry of Polymers, Institute of Macromolecular Chemistry "Petru Poni" Iasi, ROMANIA

T. POTLOG, I. LUNGU, V. SUMAN, Laboratory of Organic/Inorganic Materials for Optoelectronics, Institute of Applied Physics, Moldova State University, Chisinau, REPUBLIC OF MOLDOVA.

17.05: II.O.11 Protein-based multicomponent systems nanostructured by electrospinning

R.P. DUMITRIU, M. BREBU, E. STOLERU, "Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department, Iasi, ROMANIA

17.20: III.O.09 Application of catalytic ozonation process for paracetamol removal from aqueous solutions using ferrites composites

A.V. NICA, Faculty of Biotechnical Systems Engineering, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

R. PAZIK, Faculty of Biotechnology, Collegium Medicum, University of Rzeszow, POLAND

R. FIERASCU, I. FIERASCU, National Institute for R&D in Chemistry and Petrochemistry-ICECHIM, Bucharest, ROMANIA

E. MATEI, Faculty of Materials Science and Engineering, National University of Science and Technology Politehnica Bucharest, ROMANIA

S.M. AVRAMESCU, Faculty of Animal Productions Engineering and Management, University of Agronomic Sciences and Veterinary Medicine of Bucharest, ROMANIA

15.30 – 17.30: Poster presentations (Hall H)**I.P.01. Frequency variations and barkhausen noise in C60 steel after heat treatment and thermochemical oxidation**

I.TUDORACHE (NISTOR), C. SAMOILA, D. URSUTIU, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

I.P.02. Synthesis and development of innovative biodegradable materials for plant pots incorporating NPK fertilizers

D.N. AIRINEJ, A.M. DĂNCILĂ, O.D. ORBULEȚ, S. CĂPRĂRESCU, C. MODROGAN, Faculty of Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA, Bucharest, ROMANIA

I.P.03. Synthesis of a methoxy-substituted indolo[2,3-e] benzazocine tridentate ligand for tubulin-targeting metal complexes

M.A. TROFIN, Petru Poni Institute of Macromolecular Chemistry, Polyaddition and Photochemistry Department, Iasi, ROMANIA

PROGRAM

I. KUZNETCOVA, Petru Poni Institute of Macromolecular Chemistry, Inorganic Polymers, Iasi, ROMANIA

I.A. IFTIMIE, M. BALAN-PORCĂRAȘU, Petru Poni Institute of Macromolecular Chemistry, Polycondensation and Thermostable Polymers, Iasi, ROMANIA

M. DASCĂLU, G. ROMAN, M. CAZACU, V. ARION, Petru Poni Institute of Macromolecular Chemistry, Inorganic Polymers, Iasi, ROMANIA

I.P.04. Metallic surgical bone screws as used in implantology – comparison between mechanical tests and simulations

M.A. POP, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

L. FLOROIAN, Transilvania University of Brasov, Automation and Information Technology Department, Brasov, ROMANIA

T. BEDO, D. CRISTEA, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

I.P.05. The effect of nickel addition on the structural and mechanical properties of Ti/(TiB+TiC) composites obtained by reactive sintering

A.N. SECHEL, C.V. PRICĂ, F. POPA, T.F. MARINCA, B.V. NEAMȚU, Technical University of Cluj-Napoca, Department of Materials Science and Engineering, Cluj-Napoca, ROMANIA; EUT+ Institute of Nanomaterials and Nanotechnologies-EUTINN, European University of Technology, European Union, Cluj-Napoca, ROMANIA
R.M. KAITAR, Technical University of Cluj-Napoca, Department of Materials Science and Engineering, Cluj-Napoca, ROMANIA

G. THALMAIER, Technical University of Cluj-Napoca, Department of Materials Science and Engineering, Cluj-Napoca, ROMANIA; EUT+ Institute of Nanomaterials and Nanotechnologies-EUTINN, European University of Technology, European Union, Cluj-Napoca, ROMANIA

M.C. DUDESCU, Technical University of Cluj-Napoca, Department of Mechanical Engineering, Cluj-Napoca, ROMANIA

I.P.06. Characterization of metal-ceramic layers fabricated by laser cladding using alumina-enhanced powders

Ș. CRĂCIUN, M.D. TURCANU, I. VOICULESCU, The National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

I.P.07. Research on the structural characteristics of phosphorus-alloyed hypereutectic grey cast irons cast in thin-walled components

F.M. DAJULESCU (ARTENE), M. CHISAMERA, S. STAN, D.E. ANCA, National University of Science and Technology POLITEHNICA of Bucharest, Department of Metallic Materials Processing and Environmental Engineering, ROMANIA

I.P.08. Pore size effect on low-frequency acoustic performance of open-cell AlSi foams

C.C. ANDREI, C.S. STAN, I. STAN, National University of Science and Technology POLITEHNICA of Bucharest, Department of Metallic Materials Processing and Environmental Engineering, ROMANIA

M. DEACONU, National Research and Development Institute for Gas Turbines — COMOTI, Bucharest, ROMANIA

I.P.09. Effect of zirconium alloying on the salt spray corrosion behavior of 17-4 PH martensitic stainless steel

A.E. ONICI, Dept. of Engineering and Management of Metallic Materials Obtaining, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA, Bucharest, ROMANIA

A.M. TUDOR, Dept. of Quality Engineering and Industrial Technology, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Robotics and Industrial Engineering, Romania

E. IONESCU, S.C. TURBOMECHANICA S.A., Bucharest, ROMANIA

I. VOICULESCU, Dept. of Quality Engineering and Industrial Technology, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Robotics and Industrial Engineering, ROMANIA

R. ȘTEFĂNOIU, V. GEANTĂ, Dept. of Engineering and Management of Metallic Materials Obtaining, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA, Bucharest, ROMANIA

II.P.01 Eco-friendly approach for the synthesis of yttrium-based fluorescent labels doped with erbium ions
V. TUCUREANU, I. MIHALACHE, O. BRÎNCOVEANU, C. ROMANIȚAN, A. MATEI, National Institute for Research and Development in Microtechnologies, IMT-Bucharest, ROMANIA

II.P.02 Development of binary ZnO–Y₂O₃ nanostructures through a versatile and scalable method
A. MATEI, O. BRÎNCOVEANU, C. ROMANIȚAN, V. TUCUREANU, National Institute for Research and Development in Microtechnologies, IMT-Bucharest, ROMANIA

II.P.03 Screening of bioactive compounds based on essential and vegetable oils for incorporation into natural polymeric matrix
E. BUTNARU, M. BREBU, E. STOLERU, “Petru Poni” Institute of Macromolecular Chemistry, Iasi, ROMANIA

II.P.04 Biocompatible FDM filaments from extruded PLA reinforced with biogenic hydroxyapatite and graphene nanoplatelets
A.E. CONSTANTINESCU, F. MICULESCU, A.C. MOCANU, E.S. DONDEA, P.G. STOICA, C. PREDA, D. MANOLE, M. MICULESCU, National University of Science and Technology Politehnica Bucharest, Metallic Materials Science Department, Bucharest, ROMANIA

II.P.05 Design of alginate derivatives using multicomponent ugi chemistry
R.E. AVRAM, G.L. ALIESEI, M.M. LAZĂR, M.V. DINU, Petru Poni Institute of Macromolecular Chemistry, Functional Polymers Department, Iasi, ROMANIA

II.P.06 Mechanical and tribological properties of TiN thin films using oblique angle deposition.
A.C. BREBEANU, C. GABOR, M.A. POP, D. MUNTEANU, Materials Science and Engineering Faculty, Transilvania University of Brasov, ROMANIA
F. VAZ, Materials Science and Engineering Faculty, Transilvania University of Brasov, ROMANIA; University of Minho, Physics Centre of Minho and Porto Universities; Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL

II.P.07 MOCVD growth of TiO₂ nanostructures on cobalt templates patterned by electron beam lithography
A. CRISBĂȘAN, Material Science Department, Transilvania University of Brasov, ROMANIA
D. CHAUMONT, Y. LACROUTE, R. CHASSAGNON, Laboratoire Interdisciplinaire Carnot De Bourgogne (ICB), CNRS-Université De Bourgogne, FRANCE

II.P.08 Microstructural and functional characterization of Cu-doped Zr and Nb oxynitride thin films deposited by magnetron sputtering
A. CRISBĂȘAN, M.A. TUDOR, M. STAN, C.I. MUNTEAN, V.A. SURDU, D. CRISTEA, Material Science Department, Transilvania University of Brasov, ROMANIA

II.P.09 Anthocyanin fluorophores encapsulated in α -cyclodextrin for pH monitoring of natural oils
M.F. RADULY, V. RADITOIU, A. RADITOIU, C.A. NICOLAE, INCDCP-ICECHIM Bucharest, Bucharest, ROMANIA

II.P.10 Conventional and emerging metallic materials for orthopedic applications
M. TOFAN, M.S. BĂLȚATU, A. PRUTEANU, D.D. BURDUHOS-NERGIȘ, M.G. MINCIUNĂ, “Gheorghe Asachi” Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMANIA
A.V. SANDU, „Gheorghe Asachi” Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMÂNIA; Academy of Romanian Scientists, Bucharest, ROMÂNIA; Romanian Investor Forum, Iași, ROMANIA
P. VIZUREANU, “Gheorghe Asachi” Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMÂNIA, Academy of Romanian Scientists, Bucharest, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

II.P.11 The effect of molybdenum, zirconium, tantalum and niobium on the structure and properties of titanium alloys
I. GHICULESCU, M.S. BĂLȚATU, A. PRUTEANU, M. PERJU, “Gheorghe Asachi” Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMANIA
A.V. SANDU, „Gheorghe Asachi” Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMÂNIA; Academy of Romanian Scientists, Bucharest, ROMÂNIA; Romanian Investor Forum, Iași, ROMANIA

P. VIZUREANU, "Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Iași, ROMÂNIA, Academy of Romanian Scientists, Bucharest, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

II.P.12 Comparative study on the mechanical properties of ASA, ASA/TPU/ASA, and SEBS/ASA polymer systems

I.A. DANALACHE, M. POPA, N.M. LOHAN, R. CIMPOEȘU, R. BACIU, Faculty of Materials Science, "Gheorghe Asachi" Technical University of Iași, ROMANIA

L. ANDRUȘCA, Faculty of Mechanics, "Gheorghe Asachi" Technical University of Iași, ROMANIA

V. ERMOLAI, Faculty of Machine Manufacturing and Industrial Management, "Gheorghe Asachi" Technical University of Iași, ROMANIA

II.P.13 Influence of rare earth ion substitution of Fe³⁺ ions in mixed MnZn spinel ferrites

R. PACURARU, IEFA Department, Transilvania University of Brasov, ROMANIA

II.P.14 Effect of tantalum content on the microstructure, hardness and corrosion resistance of Ti–Mo–Zr alloys in simulated body fluid

C. JIMÉNEZ-MARCOS, University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Gran Canaria, SPAIN

J.C. MIRZA-ROSCA, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA; University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Gran Canaria, SPAIN

M.S. BALTATU, P. VIZUREANU, Gheorghe Asachi Technical University of Iasi, Department of Technologies and Equipment for Materials Processing, Iasi, ROMANIA

II.P.15 Degradation behavior of different magnesium alloys for temporary implants: role of alloying elements, microstructure, and testing media

E. PIEPTEA (POPESCU), A. ANTONIAC, I. CORNESCHI, National University of Science and Technology POLITEHNICA Bucharest, Materials Science and Engineering Faculty, ROMANIA

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A. FRATILA, Faculty of Medicine, Lucian Blaga University of Sibiu, ROMANIA

II.P.16 New perspectives in surface engineering: Cu–steel composite coatings produced by electric arc spraying

C.D. CÎRLAN, T. USATÎ, A.A. MUNCILĂ, E. MATCOVSCHI, S.L. TOMA, Gheorghe Asachi Technical University of Iasi, Department of Materials Engineering and Industrial Safety, Iasi, ROMANIA

D.L. CHICET, Gheorghe Asachi Technical University of Iasi, Department of Materials Science and Engineering, Iasi, ROMANIA

C. MUNTEANU, Gheorghe Asachi Technical University of Iasi, Mechanical Engineering Department, Iasi, ROMANIA; Technical Sciences Academy of Romania, Bucharest, ROMANIA

II.P.17 Ellipsometric characterization of CuPc films deposited on passivated Si(111) substrates

A. BEZERGHEANU, Electrical Engineering and Applied Physics Department, Transilvania University of Brasov, Brasov, ROMANIA

II.P.18 The stages of the chemical conversion process and their role in the morphology of phosphate layers

A. CAZAC, D.P. BURDUHOS-NERGIS, A.M. CAZAC, C. BEJINARIU, Materials Science and Engineering Faculty, Gheorghe Asachi Technical University of Iasi, Iasi, ROMANIA

II.P.19 Use of the gaussian mixture model (GMM) method to estimate the number of zones of different hardness in Mg alloys

F.M. SÁNCHEZ SOSA, University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Gran Canaria, SPAIN

PROGRAM

J.C. MIRZA-ROSCA, University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Gran Canaria, SPAIN; Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

I. VOICULESCU, National University of Science and Technology POLITEHNICA Bucharest, Quality Engineering and Industrial Technology Department, Bucharest, ROMANIA

II.P.20 Mechanical and electrochemical characterization of stainless-steel and titanium alloy samples for implants

C. GALBAU, Transilvania University of Brasov, Medicine Faculty, Brasov, ROMANIA

L. FLOROIAN, Transilvania University of Brasov, Automation and Information Technology Department, Brasov, ROMANIA

D. CRISTEA, M.A. POP, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

N. MIHAILESCU, National Institute for Laser, Plasma & Radiation Physics, Bucharest, ROMANIA

II.P.21 From nanoscale to biofunctionality: New methodologies for teaching materials engineering at ULPGC

E.V. LUCERO BALDEVENITES, University of Las Palmas de Gran Canaria, Mechanical Engineering Department, Las Palmas de Gran Canaria, Canary Islands, SPAIN

III.P.01 Valorization of plant biomass for the adsorption of heavy metals by atomic absorption spectrometry

R.E. POPESCU, C.V. CHIRIȚĂ, E. MATEI, Biotechnical Systems Engineering Doctoral School; Faculty of Materials Science and Engineering, Politehnica University of Bucharest, ROMANIA

M. RĂPĂ, Faculty of Materials Science and Engineering, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

III.P.02 Synthetic textile-derived microfibers from the washing of sportswear

F.A. DINCĂ, A.G. STANCU, Biotechnical Systems Engineering Doctoral School; Faculty of Materials Science and Engineering, Politehnica University of Bucharest, ROMANIA

M. RĂPĂ, National University of Science and Technology POLITEHNICA Bucharest, Faculty of Materials Science and Engineering, Bucharest, ROMANIA

C. GAIDĂU, The National Research & Development Institute for Textiles and Leather-Division Leather and Footwear Research Institute, Bucharest, ROMANIA

III.P.03 Removal of chloramines from treated water by sorption on activated carbon modified with thyme extract

A. SCARLAT (MATEI), M. BOȘOMOIU, O.D. ORBULEȚ, A.M. DĂNCILĂ, M. CIȘMAȘU (ENACHE), M. DANCIU (ENACHE), C. MODROGAN, Department of Analytical Chemistry and Environmental Engineering, Politehnica University of Bucharest, ROMANIA

III.P.04 Development of xanthan-based nanocomposite hydrogels for environmental applications: The role of transition metal oxides nanoparticles in dye absorption properties

N. FIFERE, M.M. LAZAR, I.E. RASCHIP, M.V. DINU, Department of Functional Polymers, "Petru Poni" Institute of Macromolecular Chemistry, Iași, ROMANIA

III.P.05 Chemical composition and biological activities of essential oils from baccaurea species

B.A. SAMLING, Chemistry Section, School of Distance Education, Universiti Sains Malaysia, 11800 Penang, MALAYSIA; Faculty of Resource Science & Technology, Universiti Malaysia Sarawak, MALAYSIA

S.F. SIM, Faculty of Resource Science & Technology, Universiti Malaysia Sarawak, MALAYSIA

M. BREBU, "Petru Poni" Institute of Macromolecular Chemistry, Iași, ROMANIA

V. LIM, Advanced Medical and Dental Institute, Universiti Sains Malaysia, Penang, MALAYSIA

W.N. TAN, Chemistry Section, School of Distance Education, Universiti Sains Malaysia, 11800 Penang, MALAYSIA

III.P.06 Adsorption of chrome azurol S from aqueous solution using chitosan-zeolite based nanocomposite cryogels

M.M. LAZAR, M.V. DINU, Department of Functional Polymers, "Petru Poni" Institute of Macromolecular Chemistry, Iași, ROMANIA

III.P.07 Anaerobic dark fermentation of pretreated kitchen waste

P. SFIRLOAGA, I. BALCU, C. MACARIE, D. BUZATU, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timișoara, ROMANIA

D. CHAKRABORTY, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timișoara, ROMANIA; Gandhi Institute of Technology and Management (GITAM), Visakhapatnam, INDIA

M. GHANGREKAR, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timișoara, ROMANIA; Indian Institute of Technology, Kharagpur, INDIA

N. DUTEANU, National Institute for Research and Development in Electrochemistry and Condensed Matter, Timișoara, ROMANIA; Faculty of Chemical Engineering, Biotechnologies and Environmental Protection, Politehnic University of Timișoara, ROMANIA

III.P.08 From waste to worth: Material flows for circular and sustainable materials in municipal waste systems

I.C. BENGA, C. CAZAN, Faculty of Product Design, Mechatronics and Environment Department, Transilvania University of Brașov, ROMANIA

III.P.09 TiO₂-Cu₂S photocatalytic dispersions for self-decontamination fabrics

C. BOGATU, D. PERNIU, M. COVEI, I. MANCIULEA, L. ISAC, I. TISMANAR, A. DUTA, R&D Centre for Renewable Energy Systems and Recycling, Transilvania University of Brașov, ROMANIA

O. IORGA, CBRN Defence and Ecology Research and Innovation Center, Bucharest, ROMANIA

III.P.10 Cold sintered porous ceramics from recycled brick waste

N. COBIRZAN, Faculty of Civil Engineering/Buildings and Management Department, Technical University of Cluj-Napoca, ROMANIA; Institute of Nanomaterials and Nanotechnologies - Eutinn, European University of Technology, European Union

G. THALMAIER, N.A. SECHEL, T.F. MARINCA, C. PRICA, Faculty of Materials and Environmental Engineering/Material Science and Engineering, Technical University of Cluj-Napoca, ROMANIA; Institute of Nanomaterials and Nanotechnologies - Eutinn, European University of Technology, European Union

III.P.11 Evaluation of the efficiency of rice husk-derived biochar as an adsorbent for the removal of lead from contaminated water

E.R. CARJILĂ, C. MODROGAN, A.M. DĂNCILĂ, O.D. ORBULEȚ, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

L. POPESCU, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA; National Institute for R&D in Electrical Engineering ICPE-CA, Bucharest, ROMANIA

IV.P.01 Degradation under UV light on the HDPE-PLA-TiO₂ 3D printed parts

D. CRĂCIUN, Doctoral School of I.O.S.U.D., George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures, Târgu Mures, Romania

M.A. POP, Materials Science Department, Transilvania University of Brasov, Brasov, Romania

I. PETER, George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures Faculty of Engineering and Information Technology, Department of Industrial Engineering and Management Târgu Mureș, ROMANIA

IV.P.02 Effect of niobium addition on the microstructure and performance of NiCrBSi coatings fabricated by pulsed laser cladding

I. HULKA, Politehnica University Timișoara, Research Institute for Renewable Energy, Timisoara, Romania

C.A. MARIAN, Politehnica University Timișoara, Research Institute for Renewable Energy, Timisoara, Romania

A. PASCU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, Romania

D.C. CUCULEA, Transilvania University of Brasov, Materials Engineering and Welding Department Brasov, ROMANIA

IV.P.03 Comparison of occupational health and safety (OHS) risk assessment for the local police job depending on the way the analysis stages are structured

H.M. NITESCU, C.G. AMZA, M. GHEORGHE, National University of Science and Technology Politehnica Bucharest, Quality Engineering and Industrial Technologies Department, Bucuresti, ROMANIA

IV.P.04 Research on the qualification of a welded joint between a tubesheet and an austenitic stainless steel box using the micro-plasma welding process

P.A. STRĂJERU, A. OANCEA, C. RONTESCU, D.T. CICIC, A.M. BOGATU, National University of Science and Technology Politehnica Bucharest, Quality Engineering and Industrial Technologies Department, Bucuresti, ROMANIA

IV.P.05 Risk analysis and optimization of the 3D laser cutting process using the FMEA method, with digital support for action priority (AP) assessment

A.V. OANCEA, P.A. STRĂJERU, C. RONTESCU, A.M. BOGATU, D.T. CICIC, Doctoral School, Faculty of Industrial Engineering and Robotic, National University of Science and Technology Politehnica Bucharest, Bucharest, ROMANIA

IV.P.06 Evaluation of Cr₂O₃-Y₂O₃-ZrO₂ composed coatings on corrosion resistance and thermal exposure

R. CIMPOEȘU, D.L. CHICET, A.M. ROMAN, G. BADARAU, N. CIMPOEȘU, Faculty of Materials Science and Engineering, "Gheorghe Asachi" Technical University of Iasi, Iasi, ROMANIA

B. ISTRATE, C. MUNTEANU, Faculty of Mechanical Engineering, "Gheorghe Asachi" Technical University of Iasi, Iasi, ROMANIA

A. HAEUSSLER, Processes, Materials and Solar Energy Laboratory, PROMES-CNRS, Font-Romeu, FRANCE

IV.P.07 Evaluation of thermal spray Cr₂O₃-based ceramic coatings hardness

D. CRISTIȘOR, B. ISTRATE, A.C. DUMITRAȘCU, Gheorghe Asachi Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA

C. MUNTEANU, Gheorghe Asachi Technical University of Iasi, Department of Mechanical Engineering, Iasi, Romania, Technical Sciences Academy of Romania, Bucharest, ROMANIA

D.L. CHICET, Gheorghe Asachi Technical University of Iasi, Department of Materials Science and Engineering, Iasi, ROMANIA

IV.P.08 Incorporation of ceramic particles via superficial melting: a new approach to polymer's surface engineering

M. FARCAȘ, F.C. LUPU, B. ISTRATE, Gheorghe Asachi Technical University of Iasi, Department of Mechanical Engineering, Iasi, ROMANIA

C. MUNTEANU, Gheorghe Asachi Technical University of Iasi, Department of Mechanical Engineering, Iasi, Romania, Technical Sciences Academy of Romania, Bucharest, ROMANIA

D.L. CHICET, Gheorghe Asachi Technical University of Iasi, Department of Materials Science and Engineering, Iasi, ROMANIA

IV.P.09 Microstructure analysis of dissimilar weld joint between 2205 duplex and S275J2 steels

A.M. TUDOR, A.M. BOGATU, D.T. CICIC, C. RONTESCU, V. GEANTĂ, I. VOICULESCU, National University of Science and Technology Politehnica Bucharest, Faculty of Industrial Engineering and Robotics, Bucharest, ROMANIA

IV.P.10 The evolution of research on phosphate chemical conversion coatings – bibliometric analysis

V.D. BUNDUC, D.P. BURDUHOS-NERGIS, A. BRIE, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Department of Materials Engineering and Industrial Safety, Iasi, Romania

C. BEJINARIU, Gheorghe Asachi Technical University of Iasi, Faculty of Materials Science and Engineering, Department of Materials Engineering and Industrial Safety, Iasi, Romania, Academy of Romanian Scientists, Bucharest, ROMANIA

IV.P.11 Proactive maintenance strategies and daily engineering routes to increase performance and saving in healthcare facilities engineering

A.D. RICO-CANO, Universidad de Las Palmas de Gran Canaria, Dpto. de Ingeniería Mecánica, Las Palmas de Gran Canaria, SPAIN

PROGRAM

J.C. MIRZA-ROSCA, Universidad de Las Palmas de Gran Canaria, Dpto. de Ingeniería Mecánica, Las Palmas de Gran Canaria, SPAIN

Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.P.12 Correlating GFRP composite properties with technological and economic risks in the RTM process

J.C. MUNTEAN, *A. CRISBĂȘAN*, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

IV.P.13 The influence of surface texturing on adhesion and corrosion resistance

S. MATEI, *A. ILIE*, *I. GHEORGHITĂ*, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

IV.P.14 Overview on the properties of chromium, molybdenum, and vanadium nitrides as thin solid films

B.V. CATARGIU, *D. CRISTEA*, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA

IV.P.15 influence of growth geometry on the electrochemical behavior of Ti thin films for medical applications

J.C. LOZANO-MEDINA, *C.J. SANCHEZ-MORALES*, Process Engineering Department, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, SPAIN

J.C. MIRZA-ROSCA, Mechanical Engineering Department, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, SPAIN

Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

M. BERTAPELLE, Mechanical Engineering Department, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, SPAIN

F. VAZ, Physics Centre of Minho and Porto Universities (CF-UM-UP), University of Minho, Braga, PORTUGAL; LaPMET—Laboratory of Physics for Materials and Emergent Technologies, University of Minho, Braga, PORTUGAL

Dept. of Material Science, Transilvania University, Brasov, ROMANIA

IV.P.16 Controlling clad layer properties through specific laser pulse shapes

D.C. CUCULEA, *G.L. ARDELEAN*, *C. IATAN*, *E.M. STANCIU*, *A. PASCU*, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

IV.P.17 Improvement of titanium laser welding by shaping the Argon gas flow

G.L. ARDELEAN, *D.C. CUCULEA*, *C. IATAN*, *A. PASCU*, *M.A. POP* Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

J.C. MIRZA-ROSCA, Mechanical Engineering Department, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, SPAIN

IV.P.18 Improving the corrosion resistance of AISI 316L steel grade through oxidation

M. BRÂNZEI, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania, ASTR – Section IX-Academy of Technical Sciences from Romania, Bucharest, ROMANIA

A. BIBIȘ, COMOTI – Romanian Research&Development Institute for Gas Turbines, Bucharest, ROMANIA

A. STREZA, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

IV.P.19 Overview of the laser surface texturing used for medical devices

C. MAREȘ, *L.S. BALTEȘ*, *E.R. MOLDOVAN*, *E.M. STANCIU*, *M.H. ȚIEREAN*, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

9.30 – 17.30: Presentations by participating companies (Hall G)

19.00: Gala dinner (ARO PALACE HOTEL – Restaurant 8th floor)

Friday, 06.03.2026

Main Hall A

09.30: Plenary Lectures 3

Chairperson: **Mircea Horia Tierean**, Transilvania University of Braşov, ROMANIA

09.30: P.05. Corrosion behavior of new industrial materials

J.C. MIRZA-ROSCA, Las Palmas de Gran Canaria University, Las Palmas, SPAIN; Transilvania University of Brasov, ROMANIA

10.05: P.06. Magnesium-based alloys as implant materials: The stony path from research ambition to clinical implementation

I. ANTONIAC, University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA

10.45: Coffee break (Hall H)

11.00: Workshop on Circularity and Responsibility in Plastics Use (Hall B)

11.00: Oral presentations 5 (Hall C)

Chairpersons: **Valentin CRĂCIUN**, National Institute for Laser, Plasma and Radiation Physics, Măgurele, Romania

Daniel CRISTEA, Transilvania University of Brasov, ROMANIA

11.00: IV.O.06. Study of condensate patterns using thermoelectric cells

C.J. SÁNCHEZ MORALES, A.R. MARTÍN, J.C. LOZANO MEDINA, C.M. PINO, University of Las Palmas de Gran Canaria, Processes Engineering Department, Las Palmas de Gran Canaria, SPAIN

11.15: IV.O.07 Metal additive manufacturing in the automotive sector: A review of materials and applications

J. ORTIZ-CAÑAVATE, Universitat Politècnica de València, Research Institute for Materials Technology, Alcoy, SPAIN

Manufacturing Strategy & Advanced Planning, Lean Manufacturing Europe, Ford España S.L., Valencia, SPAIN.

A. REPONOVICI, Department of Product Design, Mechatronics and Environment, Transylvania University of Brasov, Brasov, ROMANIA

C. BLOEM, New Manufacturing Processes Department, AIDIMME, Valencia, SPAIN

S. FERRANDIZ, Universitat Politècnica de València, Research Institute for Materials Technology, Alcoy, SPAIN

11.30: IV.O.08 Effect of copper addition on 316L stainless steel manufactured by LPBF

A. M. SCHIAVONE, G. BARUCCA, Polytechnic University of Marche, Department of Science and Engineering of Matter, Environment and Urban Planning (SIMAU), Ancona, ITALY

M.L. GATTO, A. SANTONI, G. GRIMA, K. SLEEM, M. CABIBBO, Polytechnic University of Marche, Department of Industrial Engineering and Mathematical Sciences (DIISM), Ancona, ITALY

11.45: IV.O.09 Experimental and numerical study of porosity and effect of heat treatments on a Fe-Mn-Si Shape Memory Alloy

G. VIRGILI, E. SANTECCHIA, A. SANTONI, G. GRIMA, M. CABBIBO, K. SLEEM, S. SPIGARELLI, Department of Industrial Engineering and Mathematical Sciences (DIISM), Polytechnic University of Marche, Ancona, ITALY

M.L. GATTO, Università degli Studi eCampus, Novedrate (CO), ITALY

12.00: IV.O.10 Removal-oriented lattice-based support strategies for Inconel 718 Laser powder bed fusion geometries

A. SANTONI, M. CABIBBO, M. MANDOLINI, E. SANTECCHIA, S. SPIGARELLI, Department of Industrial Engineering and Mathematical Sciences (DIISM), Polytechnic University of Marche, Ancona, ITALY

12.15: IV.O.11. Reconditioning of marine propulsion components through laser cladding methodology

G.C. IATAN, D. CUCULEA, A. PASCU, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

12.30: IV.O.12 Hardness, adhesion, and wear behavior of magnetron sputtered zirconium chromium nitride coatings

M.B. DUMAN, D. CRISTEA, Transilvania University of Brasov, Material Science Department, Brasov, ROMANIA
A.I. SCĂRLĂTESCU, Faculty of Physics, University of Bucharest, Măgurele, ROMANIA
G.E. STAN, L. LEONAT, National Institute of Materials Physics, Măgurele, ROMANIA

12.45: IV.O.17. Current state of research on laser microstructuring of functional surfaces used for hybrid joints

P.S. BUTISEACĂ, L.S. BALTEȘ, E.R. MOLDOVAN, A. PASCU, M.H. ȚIEREAN, Transilvania University of Brasov, Materials Engineering and Welding Department, Brasov, ROMANIA

11.00: Oral presentations 6 (Hall D)

Chairpersons: **Liana BALTEȘ**, Transilvania University of Brasov, ROMANIA
Cătălin CROITORU, Transilvania University of Brasov, ROMANIA

11.00: II.O.12 High Mn deficit influence on the phase formation in Ni₅₀Mn₁₀Sn₄₀ Heusler type alloy obtained by mechanosynthesis

F. POPA, T.F. MARINCA, N.A. SECHEL, B.V. NEAMȚU, I. CHICINAȘ, Department of Materials Science and Engineering, Technical University of Cluj-Napoca, Cluj-Napoca, ROMANIA; EUT+ Institute of Nanomaterials & Nanotechnologies-EUTINN, European University of Technology, EUROPEAN UNION
A.T.A. MAN, Department of Materials Science and Engineering, Technical University of Cluj-Napoca, Cluj-Napoca, ROMANIA;
D. BENEĂ, R. HIRIAN, Faculty of Physics, Babes-Bolyai University Cluj-Napoca, ROMANIA

11.20: II.O.13 Catalytic ozonation of diclofenac from aqueous solution in presence of TiO₂ composite catalysts

S. M. AVRAMESCU, Faculty of Animal Productions Engineering and Management, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Bucharest, ROMANIA
C. E. ENASCUTA, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, ROMANIA
E.E. SIRBU, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, ROMANIA; Petroleum-Gas University of Ploiești, Ploiești, ROMANIA
G. PSENOVSCHI, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, ROMANIA; National University of Science and Technology Politehnica Bucharest, Bucharest, ROMANIA
I. FIERASCU, Faculty of Animal Productions Engineering and Management, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Bucharest, ROMANIA; National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, ROMANIA
R. C. FIERASCU, National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, ROMANIA; National University of Science and Technology Politehnica Bucharest, Bucharest, ROMANIA, Academy of Romanian Scientists, Bucharest, ROMANIA

11.35: II.O.14 In vitro study on dental surgical guide fabricated by various 3-D printing techniques: accuracy and structural evaluation

A. ILEANA, L. POPESCU, R. CIOCOIU, I. CORNESCHI, I. ANTONIAC, National University of Science and Technology POLITEHNICA Bucharest, Materials Science and Engineering Faculty, ROMANIA
I.S. VOICU, A.M. PANDELE, National University of Science and Technology POLITEHNICA Bucharest, Chemical Engineering and Biotechnology Faculty, ROMANIA

PROGRAM

11.50: II.O.15 Evolution of electrical, optical and thermal properties of transition metal nitrides

K. SANTOS CEDEÑO, Universidad de Oriente, Faculty of Chemical Engineering and Agronomy, Santiago de Cuba, CUBA; Transilvania University of Brasov, Materials Science and Engineering Faculty, ROMANIA

J.C. ARAÚJO, Federal do Rio Grande do Norte University, Department of Physics, BRAZIL; Transilvania University of Brasov, Materials Science Department, ROMANIA

C. GABOR, M.A. POP, A. PASCU, D. MUNTEANU, Materials Science and Engineering Faculty, Transilvania University of Brasov, ROMANIA

F. MACEDO, A. FERREIRA, University of Minho, Physics Centre of Minho and Porto Universities, Laboratory of Physics for Materials and Emergent Technologies, Braga, PORTUGAL

12.05: II.O.16 Influence of shot peening treatment on the microstructure and wear resistance of ZnCu and ZnCuTi biodegradable alloys

T. ȘUTIC, G. BĂDĂRĂU, A. NEAGU, N. CIMPOEȘU, Gheorghe Asachi Technical University of Iași, Material Science and Engineering Faculty, Iași, ROMANIA

I.F. PARIENTE, B.M. PERAL, Universidad De Oviedo, Oviedo, SPAIN

V. PALEU, Gheorghe Asachi Technical University of Iași, Mechanical Engineering Faculty, Iași, ROMANIA

I. TAMAȘAG, Automotive and Robotics, „Ștefan cel Mare” University of Suceava, Faculty of Mechanical Engineering, Suceava, ROMANIA

12.20: II.O.17. Effect of anodization voltage on Ti₆Al₄V nanotube formation and drug incorporation considerations

A.B. KACSÓ, Doctoral School of I.O.S.U.D., George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș, ROMANIA

C. CROITORU, Department of materials engineering and welding, Transilvania University of Brasov, ROMANIA

I. PETER, Department of Industrial Engineering and Management, G. E. Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș, ROMANIA

12.35: II.O.18 Process optimization for mechanically resistant resorcinol-formaldehyde aerogels

S.M. PETRIȘOR, N.D. BATALU, National University of Science and Technology POLITEHNICA Bucharest, Materials Science and Engineering Faculty, Bucharest, ROMANIA

P. BĂDICĂ, I.D. VLAICU, A. KUNCSE, M. GRIGOROȘCUȚĂ, C. BARTHA, National Institute of Materials Physics, Magurele, ROMANIA

12.50: II.O.19 Enhanced antioxidant performance of polymeric hydrogels by *Baccaurea* powder incorporation

E. BUTNARU, D. PAMFIL, M. BREBU, E. STOLERU, “Petru Poni” Institute of Macromolecular Chemistry, Iași, ROMANIA

B. SAMLING, S. B. SEMAWI, S. S. FONG, University Malaysia Sarawak, Faculty of Resource Science & Technology, Sarawak, MALAYSIA

11.00: Oral presentations 7 (Hall E)

Chairpersons: **Iosiv HULKA**, Politehnica University Timișoara, Timișoara, ROMANIA

Adrian SURDU, Transilvania University of Brasov, ROMANIA

11.00: I.K.01. Microstructural characterization of aluminum samples fabricated by the molten metal deposition additive manufacturing technology

E. SANTECCHIA, G. GRIMA, DIISM, Università Politecnica delle Marche, ITALY

A.M. SCHIAVONE, SIMAU, Università Politecnica delle Marche, ITALY

A. SANTONI, K. SLEEM, DIISM, Università Politecnica delle Marche, ITALY

J. GALLE, C. ELANGESWARAN, ValCUN, Ghent, BELGIUM

11.20: I.O.01. Improving the properties of materials used in cement separators through thermal deposition

A. IONCICA, “Gheorghe Asachi” Technical University of Iasi-Romania, Faculty of Mechanical Engineering, Iasi, ROMANIA

PROGRAM

C. MUNTEANU, “Gheorghe Asachi” Technical University of Iasi-Romania, Faculty of Mechanical Engineering, Iasi, ROMANIA; Technical Sciences Academy of Romania, ROMANIA

B. ISTRATE, F.C. LUPU, M. BENCHEA, “Gheorghe Asachi” Technical University of Iasi-Romania, Faculty of Mechanical Engineering, Iasi, ROMANIA

11.35: I.O.02. An Integrated System Design for Spectroscopy

E. C. KARSU ASAL, H. GOKOZAN, Manisa Celal Bayar University, Turgutlu Vocational School, Electric Department, Turgutlu, Manisa, TÜRKIYE

M. TAŞTAN, Manisa Celal Bayar University, Turgutlu Vocational School, Electronic and Automation Department, Turgutlu, Manisa, TÜRKIYE

11.50: II.O.20 Characterization of protein based hydrogel films obtained by UV light-induced crosslinking

D. PAMFIL, R.P. DUMITRIU, M. BREBU, E. STOLERU, Petru Poni Institute of Macromolecular Chemistry, Romanian Academy, Iasi, ROMANIA

12.05: IV.O.13. Structural assessment of a transport aircraft wing box based on damage-tolerance and fem simulation

I.C. Enache, Faculty of Aerospace Engineering, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

C.O. Roxana, A. Iacob, A. Bibiş, D. Niţoi, Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest, ROMANIA

12.20: IV.O.14. Study on methods for controlling the stability of biped robots

D. M. POPESCU, C.G. AMZA, L.M. UNGUREANU, G.D. TASCĂ, National University of Science and Technology Politehnica Bucharest, Quality Engineering and Industrial Technologies Department, Bucuresti, Romania

12.35: IV.O.15. Algorithmic horizons in safety engineering: integrating advanced engineering applications into vast industrial portfolio management through the lens of artificial intelligence

A.S. GOGA, Transilvania University of Braşov, ITMI – SDI , Romania, Braşov

12.50: IV.O.16 Tailorable flexural response of FFF printed PETG, PETG-CF and ABS honeycomb structures for automotive lightweight applications

B.I. NITULEASA, S. COLESSA, D.L. MOŢOC, Transilvania University of Brasov, Automotive and Transport Engineering Department, Brasov, Romania

13.00: Lunch (Hall H)

14.00: Workshop on Smart Healthcare Engineering (Hall E)

11.00 – 13.00: Poster presentations (Hall H)

09.30 – 15.00: Presentations by participating companies (Hall G)

15.00: Closing ceremony