

# WELCOME

Dear Colleagues and Friends,

I have the pleasure to announce the 10th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BIOMMEDD’2024 which will be held in Bucharest, Romania, October 10-12<sup>th</sup>, 2024.

The aim of this event is to bring together scientists from biomaterials, medical devices, and tissue engineering research with clinicians from medical fields who use in clinical practice the implants and prostheses made from various biomaterials. Clinicians from different specialties (dentistry, orthopedics, neurosurgery, cardiovascular, and other surgery) will be here to present their results on the clinical performance of current medical devices and debates on the translation of biomaterials and tissue engineering research into clinical practice. The choice of keynote speakers will bring on stage home some of the best scientists from the field of biomaterials, tissue engineering, and medical devices.

Round table discussions intended to promote interdisciplinary research projects will be organized and a technical exhibition will run in parallel with the scientific sessions.

The conference will also host a Young Scientists Forum which could promote new ways of communicating and thinking on the research and educational aspects, and the General Assembly of the Romanian Society for Biomaterials.

We look forward to seeing you all in Bucharest!

Yours sincerely,

Antoniac Iulian  
BIOMMEDD 2024 Conference President



# BiomMedD' 2024

## ORGANIZER



## PARTNERS



## STEERING COMMITTEE



**Mihnea COSTOIU**  
Rector of the National University of Science and  
Technology POLITEHNICA Bucharest, Romania



**Viorel JINGA**  
Rector of the "Carol Davila" University of  
Medicine and Pharmacy in Bucharest, Romania  
Vice-President of the Academy of Romanian Scientist



**Doina BANCIU**  
President of the  
Academy of Romanian Scientist



**Adrian Alexandru BADEA**  
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**Anton HADAR**  
Vice-President of the  
Academy of Romanian Scientist



**Iulian ANTONIAC**  
President of the BIOMMEDO Conference  
President of the Romanian Society for Biomaterials



**Nicholas Peppas (USA)**  
President of the BIOMMEDO  
International Scientific Committee



Universitatea Națională  
de Știință și Tehnologie  
POLITEHNICA BUCUREȘTI

# **INTERNATIONAL SCIENTIFIC COMMITTEE**

Nicholas Peppas (USA) – *president of the International Scientific Committee*

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Mauro Alini (Switzerland)

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Stefan Voicu (Romania)

Yufeng Zheng (China)

## **BIOMMEDD CONFERENCES**

<u>Year</u>	<u>Conference President</u>	<u>Site</u>
2004	Ecaterina Andronescu	Bucharest, Romania
2006	Ion Poeta	Iasi, Romania
2008	Ecaterina Andronescu	Bucharest, Romania
2010	Horia Iovu	Sinaia, Romania
2012	Iulian Antoniac	Constanta, Romania
2014	Iulian Antoniac	Constanta, Romania
2016	Iulian Antoniac	Constanta, Romania
2018	Iulian Antoniac	Cluj-Napoca, Romania
2022	Iulian Antoniac, Horațiu Moldovan	Bucharest, Romania
2024	Iulian Antoniac	Bucharest, Romania

# **BIOMMEDD 2024 - CONFERENCE INFORMATION**

## **Topics**

- Biomaterials
- Tissue engineering
- Clinical applications of biomaterials, medical devices, and their performance in cardiovascular surgery
- Clinical applications of biomaterials, medical devices, and their performance in orthopedic surgery
- Clinical applications of biomaterials, medical devices, and their performance in neurosurgery
- Clinical applications of biomaterials, medical devices, and their performance in dentistry
- Biomechanics
- Surface engineering
- Scaffolds
- Pharmacology and drug delivery
- Biocompatibility
- Nanotechnology
- Regenerative medicine
- Biofabrication

## **Venue**



The conference will hold at Central Library from National University of Science and Technology POLITEHNICA Bucharest, Romania, Splaiul Independentei nr. 313, sector 6.

**National University of Science and Technology POLITEHNICA Bucharest,** Romania is the largest and the oldest technical university in the country and among the most prestigious universities in Romania. The tradition of our institution, developed in over 190 years through the effort of the most important nation's schoolmasters and of the generations of students, is not the only convincing reason. Today, the National University of Science and Technology POLITEHNICA Bucharest is undergoing a continuous modernization process, being involved in a permanent dialogue with great universities in Europe and all over the world. The mission of National University of Science and Technology POLITEHNICA Bucharest has been thought over as a blend of education, research and innovation, which represents a key towards a knowledge-based society and economy. Creating knowledge mainly by scientific research, giving it out by education and professional training, disseminating it by information technologies, as well as the use of technological innovation are elements that define the university distinctive profile.

**Bucharest** is Romania's capital and largest city, as well as the most important industrial and commercial centre of the country. With more than 2.4 million in the urban area, Bucharest is one of the important cities in Europe and a booming city with many large infrastructure projects changing the old face of the city.



Known in the past as "The Little Paris," Bucharest has changed a lot lately, and today it has become a very interesting mix of old and new that has little to do with its initial reputation. Bucharest offers some excellent attractions. Also, it has cultivated a sophisticated, trendy, and modern sensibility that many have come to expect from a European capital.

10th International Conference  
Biomaterials, Tissue Engineering & Medical Devices



**BiomMedD'2024**

# PROGRAM



# PROGRAM DETAILS

Thursday, October 10<sup>th</sup>

**NUST POLITEHNICA, Rectorate Building, “Radu Voinea” Amphitheatre AN 010**

## **10:00-10:30 Opening Ceremony**

*Steering committee:*

<b><i>COSTOIU Mihnea</i></b>	Rector of the National University of Science and Technology POLITEHNICA Bucharest, Romania
<b><i>JINGA Viorel</i></b>	Rector of the “Carol Davila” University of Medicine and Pharmacy in Bucharest, Romania; Vice–President of the Academy of Romanian Scientist
<b><i>BANCIU Doina</i></b>	President of the Academy of Romanian Scientist
<b><i>BADEA Adrian Alexandru</i></b>	Honorary President of the Academy of Romanian Scientist
<b><i>HADAR Anton</i></b>	Vice–President of the Academy of Romanian Scientist
<b><i>ANTONIAC Iulian</i></b>	President of the BIOMMEDD Conference; President of the Romanian Society for Biomaterials

## **10:30-13:30 Plenary Session 1**

*Chairs: ANTONIAC Iulian, AMBROSIO Luigi*

- 10:30-11:00** ***COSTOIU Mihnea*** - Evolving the purpose of universities: shaping a new institutional paradigm
- 11:00-11:30** ***AMBROSIO Luigi*** - Functional Biomaterials as theragenerative platform for bone tissue
- 11:30-12:00** ***GOLLER Gultekin*** - Biologically Derived HA and Its Composites for Biomaterials Applications
- 12:00-12:30** ***KUMAR Ashok*** - Engineering the Future: Biomaterials Driving Breakthroughs in Biomedical Research
- 12:30-13:00** ***PARK Ki Dong*** - Therapeutic Platforms based on Injectable Hydrogels
- 13:00-13:30** ***ANTONIAC Iulian*** - Biodegradable Metals: From Materials Engineering to Medical Devices

**13:30-14:30 Lunch Break – NUST POLITEHNICA Rectorate Building**



## **14:30-15:50 Keynote Session 1**

*Chairs: MICULESCU Marian, MONZON Mario*

- 14:30-14:50** **BALASZI Csaba** - Ceramic biomaterials: from traditional technologies to novel applications
- 14:50-15:10** **DOBRE Oana** - 3D Biomimetic piezoelectric scaffolds-based therapeutic approach for volumetric muscle loss repair
- 15:10-15:30** **VOICU Ștefan Ioan** - Biocompatible and bioresorbable green polymers-based membranes for improved osseointegration
- 15:30-15:50** **LICIU Eduard** - The Role of 3D Printing in Custom Surgical Solutions

## **15:50-16:00 Coffee Break – NUST POLITEHNICA Rectorate Building**

## **16:00-18:20 Keynote Session 2**

*Chairs: GRUIONU Lucian, COTRUT Cosmin*

- 16:00-16:20** **BENEA Horea** - Innovative Technologies in Orthopedic Surgery
- 16:20-16:40** **FLEACA Radu** - Graft Fixation in ACLR
- 16:40-17:00** **SACELEANU Vicentiu** - Bridging Technology and Neurosurgery: The BrainIT Initiative
- 17:00-17:20** **CACCIOTTI Ilaria** – Additive Manufacturing Approach in the Biomedical Sector: Current State and Future Perspectives
- 17:20-17:40** **BALTATU Madalina Simona** - The latest research on titanium alloys suitable for medical applications
- 17:40-18:00** **ENE Răzvan** - Calcium Sulphate as a Biodegradable Antibiotic Carrier used in Osteomyelitis and Septic Arthritis Treatment

## **18:00-20:00 Break**

## **20:00-22:00 Traditional Romanian Dinner at “Caru cu bere”**

*(for all committee members, chairs, invited & keynote speaker)*

## Friday, October 11<sup>th</sup>

### **10:00 – 16:00 Bucharest Treasures for Invited Guest**

- *Guided Tour & Lunch at the Palace of the Parliament*
- *The National History Museum*
- *The Romanian Athenaeum*
- *The Peasant and Village Museums*

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Known in the past as "The Little Paris," Bucharest has changed a lot lately, and today it has become a very interesting mix of old and new that has little to do with its initial reputation. Bucharest offers some excellent attractions. Also, it has cultivated a sophisticated, trendy, and modern sensibility that many have come to expect from a European capital.

Interesting sights include:



*The Palace of the Parliament*



*The Peasant and Village Museums*



*The Romanian Athenaeum*



*The National History Museum*

**Friday, October 11<sup>th</sup>**

**NUST POLITEHNICA Central Library, Floor 2, Room 2.2.**

**10:00 – 12:00 Oral Presentation – BIOMATERIALS ENGINEERING Session**

*Chairs: MUNTEANU Corneliu, POPESCU Violeta*

**O.A1. Procedure for Surface Saturation of Metal Surfaces Using the Electro-Spark Deposition / Alloying**

**Mihai Branzei<sup>1</sup>, Mihai Ovidiu Cojocaru<sup>1,2</sup>, Cosmin Mihai Cotrut<sup>1</sup>, Stefan Laptoiu<sup>1</sup>**

<sup>1</sup> *National University of Science and Technology POLITEHNICA Bucharest, 313 Spl. Independentei, Bucharest, Romania, mihai.branzei@upb.ro*

<sup>2</sup> *Technical Science Academy of Romania, Avenue Dacia 26, Bucharest, Romania*

**O.A2. Preliminary research on hydroxyapatite deposition on Ti alloys by aluminides binding zone formation**

**Stefan Alexandru Laptoiu, Marian Miculescu**

*National University of Science and Technology POLITEHNICA Bucharest, 313 Independentei Street, 060042, Bucharest, Romania,, stef.laptoiu@gmail.com*

**O.A3. In vitro evaluation of titanium nanostructured surface functionalized with doped hydroxyapatite**

**Diana M. Vranceanu<sup>1</sup>, Elena Ungureanu<sup>1</sup>, Anca C. Parau<sup>2</sup>,**

**Irina Titorencu<sup>3</sup>, Mihaela Badea<sup>4</sup>, Alina Vladescu (Dragomir)<sup>2</sup>, Cosmin M. Cotrut<sup>1</sup>**

<sup>1</sup> *National University of Science and Technology POLITEHNICA Bucharest, 313 Independentei Street, 060042, Bucharest, Romania.*

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<sup>4</sup> *Faculty of Medicine, Transilvania University of Brasov, Nicolae Balcescu 56, Brasov, Romania contact-author [diana.vranceanu@upb.ro](mailto:diana.vranceanu@upb.ro)*

**O.A4. Assessment of hydroxyapatite coatings doped with Sr and Ag obtained at different pH values**

**Elena Ungureanu<sup>1</sup>, Diana Vranceanu<sup>1</sup>, Alina Vladescu (Dragomir)<sup>2</sup>, Anca Parau<sup>2</sup>, Cosmin Cotrut<sup>1</sup>**

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<sup>2</sup> *National Institute of Research and Development for Optoelectronics INOE2000, 409 Atomistilor, 077125 Magurele, Romania*

**O.A5. Crown ether-functionalized polymeric membranes with enhanced biomineralization properties**

**Madalina Oprea<sup>1</sup>, Andreea Madalina Pandele<sup>1,2</sup>, Adrian Ionut Nicoara<sup>3</sup>, Stefan Ioan Voicu<sup>1,2</sup>, Iulian Vasile Antoniac<sup>4,5</sup>, Catalin Ionel Enachescu<sup>6</sup>, Anca Maria Fratila<sup>7,8</sup>**

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<sup>8</sup>*Military Clinical Emergency Hospital of Sibiu, 550024, Sibiu Romania*

#### **O.A6. Evaluating Magnetite Nanoparticles for Reducing Infectious Risks in Surgical Mesh Implants: A Review of Current Studies**

**Adina Mateescu<sup>1</sup>, Bianca Cancea<sup>2</sup>, Alina Prodan<sup>3</sup>, Ecaterina Andronescu<sup>4</sup>, Claudiu Turculeț<sup>5</sup>**

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<sup>5</sup>*Carol Davila university of Medicine and Pharmacy Bucharest, Bucharest, Romania*

#### **O.A7. Orbital Wall Reconstruction in Rabbit Animal Model Using Nanostructured Hybrid Hydroxyapatite-Collagen-Based Implant**

**Victor A. Vasile<sup>1</sup>, Sinziana Istrate<sup>2</sup>, Roxana M. Piticescu<sup>3</sup>, Diana M. Popescu<sup>4</sup>, Gerhard Garhöfer<sup>5</sup>, Ana M. Catrina<sup>4</sup>, Sonia Spandole-Dinu<sup>4</sup>, Cerasela Haidoiu<sup>4</sup>, Vladimir Suhaianu<sup>4</sup>, Oana C. Voinea<sup>4,6</sup>, Arcadii Sobetkii<sup>3</sup> and Alina Popa-Cherecheanu<sup>1,7</sup>**

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<sup>3</sup>*Nanostructured Materials Laboratory, National R&D Institute for Nonferrous and Rare Metals, 077145 Pantelimon, Romania;*

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<sup>7</sup>*Department of Ophthalmology, Emergency University Hospital, 050098 Bucharest, Romania*

#### **O.A8. Epithelial bioregenerative biomaterial for healing wounds and burns by modulating the skin microbiota**

**Gheorghe Giurgiu<sup>1</sup>, Manole Cojocaru<sup>2,3</sup>**

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<sup>3</sup>*Titu Maiorescu University, Faculty of Medicine, Bucharest, Romania, cojocaru.manole@gmail.com*

### **O.A9. Improving implant resistance of Ti6Al4V alloy by electrochemical oxidation**

**Lidia Benea**<sup>1\*</sup>, Alexandra Forray<sup>2</sup>

<sup>1</sup>Competences Center: Interfaces-Tribocorrosion-Electrochemical Systems, Faculty of Engineering, Dunarea de Jos University of Galati, 47 Domnească Street, RO-800008, Galati, Romania.

<sup>2</sup>Military Medicine Institute, Street Institutul Medico-Militar 3-5, RO-010919 Bucharest, Romania  
alexandra\_forray@yahoo.com

### **O.A10. Antimicrobial Composite Materials Destined for the Additive Fabrication of Implantable Devices**

**Aura – Cătălina Mocanu**<sup>1</sup>, **Florin Miculescu**<sup>1</sup>, **Ștefan Ioan Voicu**<sup>2,3</sup>, **Mădălina Andreea Pandele**<sup>2,3</sup>, **Sorina Dondea**<sup>1</sup>, **Andreea Elena Constantinescu**<sup>1</sup>, **Ștefan Alexandru Lăptoiu**<sup>1</sup>

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### **O.A11. MgB<sub>2</sub> as a candidate material for medical applications and**

#### **3D printed composites**

**Dan N. BATALU**<sup>1</sup>, **Petre BADICA**<sup>2</sup>, **Any C. SERGENTU**<sup>1, 2</sup>, **Mihai T. DRAGOMIR**<sup>1,3</sup>, **Eduard LICIU**<sup>3</sup>, **Ovidiu I. TRANCĂU**<sup>3,4</sup>, **Cristian SCHEAU**<sup>3,4</sup>, **Șerban DRAGOSLOVEANU**<sup>3,4</sup>, **Alina Necșulescu**<sup>1</sup>, **Robert BOLOLOI**<sup>1</sup>, **Alina BOLOLOI**<sup>1</sup>, **Carmen M. CHIFIRIUC**<sup>5</sup>, **Niculae TUDOR**<sup>6</sup>, **Emilia F. BALINT**<sup>6</sup>, **Ana-Maria PRELIPCEAN**<sup>7</sup>, **Coralia BLEOTU**<sup>8</sup>

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<sup>7</sup> National Institute for Biological Sciences, Splaiul Independentei 296, 060031 Bucharest, Romania

<sup>8</sup> Stefan S. Nicolau Institute of Virology - IVN, 285 Mihai Bravu Avenue, Bucharest, Romania

**12:00-13:00 Coffee Break – NUST POLITEHNICA Central Library, Floor 2**

## **NUST POLITEHNICA Central Library, Floor 2, Room 2.2.**

### **13:00-15:00 Keynote – BIOMATERIALS ENGINEERING Session**

*Chairs: MUNTEANU Corneliu, POPESCU Violeta*

**13:00-13:20 GRECU Dan** - Couple ceramic on ceramic in daily praxis of an orthopedic surgeon, after another 10 years of experience

**13:20-13:40 POPA Cătălin** - Field flow effects in capillary force microfluidic devices designed for medical applications

**13:40-14:00 RAICIU Anca Daniela** - Volatile oils an important role in medical devices

**14:00-14:20 MOHAN Aurel** - The Benefits of Customized Cranioplasty in Decompressive Craniectomies after Severe Brain Injuries

**14:20-15:00 Debates**

## **NUST POLITEHNICA Central Library, Floor 2, Room 2.1.**

### **10:00 – 12:00 Oral Presentation – BIOMATERIALS CLINICAL APPLICATION Session**

*Chairs: MANOLEA Horia, SAROSI Codruta*

#### **O.B1. Pindborg tumor: a rare case of a child patient**

**Elena Cristina Andrei<sup>1</sup>, Radu Slăvoiu<sup>2</sup>, Ilona Mihaela Liliac<sup>3</sup>, Horia Manolea<sup>4</sup>, Cristian Nicky Cumpătă<sup>5</sup>**

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#### **O.B2. Analysis of Thermal Effect on an Orthodontic System Using the Finite Element Method**

**Stelian-Mihai-Sever Petrescu<sup>1</sup>, Horia Octavian Manolea<sup>2</sup>, Radu Slăvoiu<sup>3</sup>, Dragoș Laurențiu Popa<sup>4</sup>**

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<sup>4</sup>*Department of Automotive, Transportation and Industrial Engineering, Faculty of Mechanics, University of Craiova, 200478 Craiova, Romania*

### **O.B3. Mechanical Evaluation of Complete Dentures Manufactured Using Different Technologies**

**Cristina-Maria Borțun<sup>2</sup>, Cristina Modiga<sup>1,2</sup>, Emanuela-Lidia Petrescu<sup>1,2</sup>, Cosmin Sinescu<sup>1,2</sup>, Mihai Romînu<sup>1,2</sup>, Meda-Lavinia Negruțiu<sup>1,2</sup>**

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<sup>2</sup>*Research Centre in Dental Medicine Using Conventional and Alternative Technologies, Faculty of Dental Medicine, “Victor Babeș” University of Medicine and Pharmacy Timișoara, Romania*

### **O.B4. The evaluation of periodontal response after cementation of fixed metal-ceramic prostheses**

**Daniela Maria Pop<sup>1,2</sup>, Hajaj Tareq<sup>1,2</sup>, Mihai Romînu<sup>1,2</sup>, Borislav Dușan Caplar<sup>1,2</sup>, Rodica Heredea<sup>3</sup>, Emanuela Lidia Petrescu<sup>1,2</sup>**

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### **O.B5. Hydrogels with Peptides for Dental Applications**

**Codruta Sarosi<sup>1</sup>, Alexandrina Muntean<sup>2</sup>, Doina Prodan<sup>1</sup>, Stanca Cuc<sup>1</sup>, Marioara Moldovan<sup>1</sup>**

<sup>1</sup>*Babes-Bolyai University, Institute of Chemistry “Raluca Ripan”, Cluj-Napoca, Romania*

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[codruta.sarosi@gmail.com](mailto:codruta.sarosi@gmail.com)

### **O.B6. 4D Digital Dentistry Workflow in Oral Rehabilitation through Neuromuscular Approach**

**Florin E. Constantinescu<sup>1</sup>, Giuseppe Rampulla<sup>2</sup>, Andreea Iuga<sup>3</sup>, Marian V. Constantinescu<sup>3</sup>**

<sup>1</sup>*Doctoral School, Faculty of Dentistry, “Carol Davila” University of Medicine and Pharmacy, 37, Dionisie Lupu Str., District 2, 020021 Bucharest, Romania; e-mail: [Dr.Florin.Constantinescu@gmail.com](mailto:Dr.Florin.Constantinescu@gmail.com)*

<sup>2</sup>*OBS Dental, Parma, Italy*

<sup>3</sup>*Holistic Dental & Medical Institute-ROPOSTURO, 102-104 Mihai Eminescu Str, District 2, 020082 Bucharest, Romania*

### **O.B7. Approaches in Dentistry: Integrating Digital Technologies, Biomaterials, and Medical Devices**

**Vlad Gabriel Vasilescu<sup>1</sup>, Lucian Toma Ciocan<sup>1</sup>, Marina Imre<sup>2</sup>**

<sup>1</sup>*Discipline of Dental Prosthetics Technology, Faculty of Dentistry, “Carol Davila” University of Medicine and Pharmacy, Dionisie Lupu Street, No. 37, District 2, 020021 Bucharest, Romania;*

<sup>2</sup>*Discipline of Prosthodontics, Faculty of Dentistry, “Carol Davila” University of Medicine and*

Pharmacy, 37 Dionisie Lupu Street, District 2, 020021 Bucharest, Romania;  
marina.imre@umfcd.ro

**O.B8. Tobacco Residues deposition at the Surface of Cobalt-Chromium Dental alloys and the effect of Cigarette Smoke Extract on Human Mesenchymal Stem Cells: *in vitro* Study**

**Willi Andrei Uriciuc<sup>1</sup>, Cătălin Ovidiu Popa<sup>2,#</sup>, Aranka Ilea<sup>1,#</sup>**

<sup>1</sup>Faculty of Dental Medicine, "Iuliu Hațieganu" University of Medicine and Pharmacy, Cluj-Napoca,

Romania, 400012; willi.uriciuc@umfcluj.ro (W.A.U.); aranka.ilea@umfcluj.ro (A.I.)

<sup>2</sup> Faculty of Materials and Environmental Engineering, Technical University of Cluj-Napoca, Romania, 400641;

catlin.popa@stm.utcluj.ro(C.O.P.)

# equal contribution in coordination and validation.

**O.B9. Researches regarding the biomaterials involved in treatment of combined endo-periodontal lesions**

**Kamel Earar<sup>1</sup>, Ada Stefanescu<sup>1</sup>,**

<sup>1</sup>Faculty of Medicine and Pharmacy, University "Dunarea de Jos" Galati, Romania.

**O.B10. Obtaining and using Mg-Ca-Sr biodegradable materials, through the microstructural evaluation of the biodegradable Mg-Ca-xSr system (x=0.5; 1) used in medicine**

**Gabriela Leată<sup>1</sup>, Kamel Earar<sup>1</sup>, Corneliu Munteanu<sup>2,3</sup>**

<sup>1</sup>University "Dunărea de Jos" from Galați, Romania

<sup>2</sup>Technical University "Gheorghe Asachi" from Iași, Romania

<sup>3</sup>Academy of Technical Sciences from Romania

**O.B11. Magnesium alloys as bone graft materials: testing on laboratory animals**

**R.Slavoiu<sup>1</sup>, A.Camen<sup>1</sup>, C.Munteanu<sup>1</sup>, H.Manolea<sup>2</sup>, E.Ciuca<sup>1</sup>, A.Salan<sup>1</sup>**

<sup>1</sup>Department of Oral and Maxillofacial Surgery, Faculty of Dental Medicine, University of Medicine and Pharmacy of Craiova, Petru Rares 2-4, 200349, Romania

<sup>2</sup>Department of Dental Prosthesis Technology, Faculty of Dental Medicine, University of Medicine and

Pharmacy of Craiova, Petru Rares 2-4, 200349, Romania

**NUST POLITEHNICA Central Library, Floor 2, Room 2.1.**

**13:00-15:00 Keynote – BIOMATERIALS CLINICAL APPLICATION Session**

*Chairs: MANOLEA Horia, SAROSI Codruta*

**13:00-13:20** **PETRESCU Emanuela Lidia** - Assessment of PEEK polymers used in dental prosthetics

**13:20-13:40** **PORUMB Anca** - The assessment of ceramic dental materials during the treatment of severe adult cleft palate

**13:40-14:00** **KAMEL Earar** – Dental Biomaterials in the Digital Age

**14:00-14:20** **MOLDOVAN Marioara** - Recent Advances and Developments in Composite Dental Materials in Romania

**14:20-15:00 Debates**



**NUST POLITEHNICA Central Library, Floor 2, Room 2.1.**

**15:00-16:00 Plenary Session**

*Chairs: ISTRATE Bogdan, MICULESCU Florin*

**15:00-15:30 FORNA Norina** - Practical experiences regarding the use of bone regeneration materials in substance losses

**15:30-16:00 MONZON Mario** - Biomedical application of polymeric-based composites containing piezoelectric ceramic additives

**16:00 – 19:00 Poster Session**

**19:00 – 20:00 Break**

**20:00 – 22:00 Gala Dinner**

***Vanity Restaurant***

*Street Splaiul Independenței 315B, Bucharesti*



**Saturday, October 12<sup>th</sup>**

**NUST POLITEHNICA Central Library, Floor 2, Room 2.1.**

**09:00-10:30 Plenary Session**

*Chairs: PORUMB Anca, EARAR Kamel*

**09:00-09:30 TABATA Yasuhiko** - Biomaterial-Based Regenerative Medicine Based on Natural Self-Healing Potential and Inflammation

**09:30-10:00 TARTSCH Jens** - Backgrounds and clinical application of dental ceramic implants

**10:00-10:30 MANOLEA Horia** - Dental opportunities for using bioactivated synthetic bone graft materials

**10:30-12:00 Debates “Titanium vs Ceramic in Implantology”**

**Chairs: ANTONIAC Iulian, PETRESCU Emanuela**

**TARTSCH Jens** – presentation **PRO Ceramic in Implantology**

**MANOLEA Horia** – presentation **PRO Titanium in Implantology**

**12:00-13:00 Coffee Break – UNSTPB Central Library**

**13:00-14:00 NTA Symposium –**

**New technological approaches in dental technique**

**Chairs:**

**ANTONIAC Iulian** – UNSTPB, Romania

**CACCIOTTI Ilaria** – Unicusano, Italy

**MONZON Mario** – UPLG, Spain



New technological approaches in dental technique



**14:00-15:00 Closing Ceremony**



10th International Conference  
Biomaterials, Tissue Engineering & Medical Devices



**BiomMedD'2024**

# PLENARY INVITED SPEAKERS



## **MIHNEA COSTOIU**



**Mihnea COSTOIU** is the Rector of the National University of Science and Technology POLITEHNICA Bucharest and General Secretary of the Romanian National Council of Rectors since 2012.

He held several political positions between 2001 to 2014, including Secretary General, State Secretary and Minister Delegate for Higher Education and Research within the Romanian Ministry of Education.

In 2012 he was elected Senator in the Parliament of Romania and in 2016 he was re-elected senator and member of the Committee for Education, Science, Youth and Sport, and member of the Foreign Affairs Committee of the Senate.

Since 2017 Mihnea Costoiu is a Member of the Board of Directors of CESAER (Conference of European Schools for Advanced Engineering Education and Research), while between 2020 - 2023 he held the position of Vice-president of the association.

Mihnea Costoiu is also a member of the Council of Administration of Agence Universitaire de la Francophonie (AUF) since 2017, actively promoting the academic Francophonie.

**Title of the BIOMMEDD 2024 lecture:**

***Evolving the purpose of universities: shaping a new institutional paradigm***

## **KI DONG PARK**



**Ki Dong Park** received his Ph.D. in Pharmaceutics and Pharmaceutical Chemistry at the University of Utah, USA in 1990. After postdoctoral training at CCCD in Utah, he worked as a principal research scientist at the Korea Institute of Science and Technology (KIST) from 1991 to 2000. He joined the faculty in the Department of Molecular Science and Technology and Applied Chemistry and Biological Engineering at Ajou University in 2000. He has been working in many national committees as a chair or member. He was the president of the Korean Society for Biomaterials (KSBM) in 2013 and have been honorary president of KSBM. He served as vice president of the Korean Industrial and Applied Chemistry Society and the Korean Translational Medical Device Society. He is an elected Fellow of the Korean National Academy of Science and Technology (KAST), an elected Fellow of Biomaterials Science and Engineering ((FBSE) of the International Union of Societies of Biomaterials Science and Engineering, and an elected Fellow of the American Institute of Medical and Biological Engineering (AIMBE). He is serving as a Congress chair of the World Biomaterials Congress (WBC2024) held in Korea in 2024. He is a regional editor of the Journal of Bioactive and Compatible Polymers and an editorial board member of many journals including JBMRA.

He has published over 330 scientific publications, possessed 60 patents, and joined many book chapters. He also received many awards including the National WOONGBI Medal for his contributions to academic societies and scientific achievements. His research interests are wide-ranging from implants, controlled drug delivery, tissue regeneration, and biomimetic surface modification.

**Title of the BIOMMEDD 2024 lecture:**

***Therapeutic Platforms based on Injectable Hydrogels***

## ASHOK KUMAR



**Professor Ashok Kumar** is a globally awarded researcher and academician and pioneer in bioengineering. He is currently an Endowed Chair Professor of Bioengineering at the Indian Institute of Technology Kanpur (IIT Kanpur), where he also leads the IIT Kanpur-La Trobe University Research Academy and acts as the Head of Environmental Science and Engineering. He is also the coordinator of the newly established Centre of Excellence for Materials in Medicine at the School of Medical Sciences and Technology, IIT Kanpur. He is also an associated faculty at the Mehta Family Centre for Engineering in Medicine, IIT Kanpur, and adjunct faculty at the Department of Biosciences and Bioengineering, IIT Jammu. He also served as a visiting professor at several universities internationally, including Aalto University, Finland; Lund University, Sweden and Miyazaki University, Japan. Besides these academic engagements, he is also holding the presidentship of the Society of Biomaterials and Artificial Organs, India.

Prof. Kumar obtained his doctorate from the Indian Institute of Technology Roorkee in 1994 after finishing his master's in Biochemistry from the University of Kashmir. A few years later, in 1997, he moved to **Sweden** to start working at Lund University, where his research focused on polymer technologies. Prof. Kumar was also able to visit Nagoya University in **Japan**, where the focus of his research shifted more towards a biomedical domain. The research time spent in Japan with a background of expertise attained in Sweden was the starting point for the work that Kumar is still doing. In 2004, Kumar returned to India to work at **IIT Kanpur**, where he strongly contributed to the development of the bioengineering department.

Prof. Kumar has been recognized nationally and internationally. **He has been conferred with honorary doctorate of science in technology by Aalto University, Finland.** He is elected fellow of biomaterial science and engineering (**FBSE**) by IUSBSE, a fellow of biomaterials and artificial organs, India (**FBAO**) and a fellow of the International Academy of Medical and Biological Engineering (**FIAMBE**). He has received a global research outreach (GRO) Samsung award, from Korea, TATA Innovation Fellowship from DBT, Govt. of India for outstanding research contributions. He serves as an expert member and chairperson for several committees in the science and technology ministries of the Government of India.

Prof. Kumar has contributed significantly to the research domain of biomedical engineering and regenerative medicine and has transferred several technologies to biomedical companies. He has founded a start-up companies Regenmedica Pvt. Ltd. India and Polybiomatrix HB, Sweden which is developing antibiotic-loaded bioactive ceramics for treating bone infection and haemostatic gels for trauma care. He has published over 300 peer reviewed research papers and edited 06 books, and hold many granted patents on novel biomaterials, and biomedical technologies.

**Title of the BIOMMEDD 2024 lecture:**

***Engineering the Future: Biomaterials Driving Breakthroughs in Biomedical Research***

## IULIAN ANTONIAC



**Prof. Iulian Antoniac** obtained his M.E., Ph.D. and Postdoc degrees in Materials Science at the University Politehnica of Bucharest. Since 2002, he has been associated with the Medical Engineering program in the Faculty Materials Science and Engineering University Politehnica of Bucharest, which is focused on biomaterials obtaining and characterization, medical image processing, and the development of new implants for medical applications.

Professor Iulian Antoniac is the leader of the Biomaterials Group, head of the Biomaterials & Interface Phenomenon Laboratory, and full professor at the Faculty Materials Science and Engineering. He was appointed Vice Dean of the Faculty Materials Science and Engineering and a member of the Senate of University Politehnica of Bucharest in 2016.

Professor Iulian Antoniac has published widely, with over 200 papers published in peer-reviewed journals and conference proceedings, 7 patents, more than 20 books and book chapters (like *Handbook of Bioceramics and Biocomposites*) and more than 50 invited lectures at conferences focused on biomaterials, bioceramics and materials science. His scientific activity materialized in many publications with relevant citations: ISI Web of Knowledge citation 233 (h-index 10); Scopus citation 580 (h-index 12); Google Scholar citation: 692 (h-index 14). He was a member in the research team of 47 projects – 13 of them as director or PI, and also as a team leader or management group member in various international projects in different frameworks (FP5, FP7, COST, INTERREG).

He is Editor in Chief for the journal *Materials Science Forum*, editorial board member for other journals and reviewer for more than 40 journals. In 2005, he received the Daniel Bunea Award from the Romanian Society for Biomaterials. Also, he received many awards for their patents at various international fairs and exhibitions dedicated to patents. He is currently President of the Romanian Society for Biomaterials (SRB), Former President and permanent Member of the Executive Committee of the International Society for Ceramics in Medicine (ISCM).

Professor Iulian Antoniac research interests include metallic biomaterials for orthopedic and dental applications, bioceramic coatings, biocomposites, biopolymers, retrieval analysis of explants, microscopy techniques for materials characterization, bone regeneration, physical and chemical characterization of nano- and micro-particles for biomedical application.

Present areas of research work: bioceramics, biocomposites, biodegradable metallic biomaterials, surface modification, interaction tissue-biomaterials, biointerfaces, tissue engineering, bone regeneration, retrieval, and failure analysis of orthopedic and dental implants.

**Title of the BIOMMEDD 2024 lecture:**

***Biodegradable Metals: From Materials Engineering to Medical Devices***

## YASUHIKO TABATA



**Dr. Yasuhiko Tabata** is the Professor and Chairman of the Laboratory of Biomaterials at the Institute for Life and Medical Sciences, Kyoto University and a Professor of the Graduate School of Medicine, Osaka University, and a guest professor at the Graduate School of Medicine, Dentistry, Pharmaceutical Sciences, and Engineering of 17 different universities. He received his B.D. in Polymer Chemistry (1981), Ph.D. (1988) in Technology, D.Med.Sc. (2002), and D.Pharm. (2003) all at Kyoto University. He was a Visiting Scientist at MIT (Professor Robert Langer) (1991-92). He has published 1,710 scientific papers including 146 book chapters and review articles and has 130 patents. He received the Young Investigator Award (1990), the Scientific Award from the Japanese Society for Biomaterials (2002), the Scientific Award from

the Japan Society of Drug Delivery System (2011), Chandra P. Sharma Award of the International Society of Biomaterials & Artificial Organs (2011), the Scientific Award from the Japanese Society for Regenerative Medicine (2014), Merit Award Winners for Industry-Academia-Government Collaboration, President of Science Council of Japan Award (2016), Outstanding Scientist Award of the Tissue Engineering and Regenerative Medicine International Society - Asian-Pacific Chapter (TERMIS-AP) (2018), TERMIS-AP Excellent Achievement Award (2022), and several awards. Dr. Tabata is the president of the Japan Society of Drug Delivery System (JSDDS), a board member of the Japanese Society of Regenerative Medicine (JSRM), the Japanese Society for Biomaterials (JSB), and the Japanese Society of Inflammation and Regeneration (JSIR), TERMIS-AP or the councilor of the Japanese Society of Wound Healing, the Japanese Artificial Organ Society, He is an associate member of the Science Council of Japan, Cabinet Office, a fellow of the World Biomaterials Society (WBS), the TERMIS, the Controlled Release Society (CRS) or the New York Academy of Science and American Institute for Medical and Biological Engineering (AIMBE), and the Founding Fellow for Tissue Engineering and Regenerative Medicine, (FTERM). Dr. Tabata is the one of founder members of the Asian Biomaterial Federation (ABF). He is a board member of Tissue Engineering Society International for 2001-2003 and 2012-present. He organized as the chairman of the 13th Annual Congress of JSRM (2014) and the 37th Annual Congress of JSB (2015), the 37th Annual Congress of JSIR (2016), and the 33th Annual Congress of JSDD (2017). He is a board member of TERMIS-AP for 2013-present and the president of TERMIS-AP for 2016-2020, and chairs the 5th TERMIS World Congress 2018, Kyoto, Japan. His research is very interdisciplinary in nature and brings together the fields of polymer chemistry, pharmaceutical science, biology, and basic and clinical medicines. He actively proceeds translational research by linking bioengineering scientists, clinicians, and industry to achieve clinical therapies of regenerative medicine as well as produce some commercialization products for basic research and cosmetics. His research focuses on the design and preparation of biodegradable or non-biodegradable biomaterials for their biological, medical, and pharmaceutical applications, while the keywords are biomaterials, drug delivery system (DDS), tissue engineering, regenerative medicine, stem cell technology, and medical diagnostics.

**Title of the BIOMMEDD 2024 lecture:**

***Biomaterial-Based Regenerative Medicine Based on Natural Self-Healing Potential and Inflammation***



## **LUIGI AMBROSIO**



**Luigi Ambrosio** is Emeritus Research Director at the Institute of Polymers, Composites and Biomaterials, National Research Council, Naples, Italy. Qualified Full Professor in Bioengineering and in Materials Science and Technology.

He received the doctoral degree in Chemical Engineering (1982) from the University of Naples "Federico II".

Director of Institute of Composites and Biomedical Materials, National Research Council, Naples, Italy (2008-2012). Director of Chemical Sciences & Materials Technology Department, National Research Council, Rome, Italy (2011-2017). Director of Institute of Polymers,

Composites and Biomaterials, Naples, Italy (Dec. 2018- Aug.2022).

*President of the European Society of Biomaterials* (2007-2013), Past President (2013-2017), Honorary Member (since 2018). Member of the High-Level Group on Key Enabling Technologies, European Commission (2010-2015).

He is the recipient of the "G. Winter Award" of the European Society for Biomaterials for his high worldwide contribution to Biomaterials Science (September 2015).

He has been nominated as *Fellow of the American Institute for Medical and Biological Engineering* (since 2001), *Fellow of Biomaterials Science and Engineering* (since 2004), *Fellow of the European Alliance for Medical and Biomedical Engineering & Science* (since 2018), and *Fellow Member of the European Academy of Science* (since 2019).

Editor-in-Chief of Journal of Materials Science: Materials in Medicine (since 2017).

Research interests include the design and characterization of polymers and composites for medical applications and tissue engineering, structural properties of natural tissue, properties and processing of polymers and composites and nanostructures, hydrogels and biodegradable polymers, and additive technologies.

Publications include over 380 peer review papers (>24000 citations, h-index >88), 27 patents, over 190 invited lectures, and over 500 presentations at international and national conferences.

**Title of the BIOMMEDD 2024 lecture:**

***Functional Biomaterials as theragenerative platform for bone tissue***

## **JENS TARTSCH**



**Dr. Jens Tartsch** is a well-known expert for ceramic implantology in Switzerland. He graduated in 1992 from the „Free University of Berlin (Charite) /Germany“. Today Dr. Tartsch is working in his private dental clinic in Zurich/Switzerland. His main emphasis is in ceramic implant dentistry, the biomaterial and immunological aspects in dentistry, and material incompatibilities. Thus, he is an international educator, speaker, and author on the topic of ceramic implantology and immunology in dentistry. Dr. Tartsch is the founder and President of the European Society for Ceramic Implantology (ESCI), 1st chairman of the German Society for Environmental Dentistry (DEGUZ) and a Member of the Board of Directors of the Swiss Society for Anti-Aging Medicine and Prevention (SSAAMP).

**Title of the BIOMMEDD 2024 lecture:**

***Backgrounds and clinical application of dental ceramic implants***

## **GULTEKIN GOLLER**



**Gultekin Goller** is a Material Science Professor in the Department of Metallurgical and Material Engineering at the Istanbul Technical University, Turkey. Co-author of 131 scientific articles, 6 book chapters with over 2448 citations reported by WoS (H-index 27) as a date of September 9<sup>st</sup>, 2024. In addition, he is a member of the scientific committee of different meetings, head of the organizing committee for different international conferences, member of the International Editorial Board of some journals, and reviewer for different journals. He is honored with the “Doctor Honoris Causa” title in material science from Politehnica University of Bucharest in 2022. He was awarded to “Pro Scientia et Innovatio” Honorary Order of Romania Inventory Forum in 2023. His research interests are in the field of metallurgical & material engineering, especially ceramic-based composite materials, high entropy alloys, biomaterials, and refractory materials. His main activities relating to these topics are focused on spark plasma sintering, plasma coating, and materials characterization by X-ray diffraction and electron microscopic techniques.

**Title of the BIOMMEDD 2024 lecture:**

***Biologically Derived HA and Its Composites for Biomaterials Applications***

## **NORINA FORNA**



**NORINA FORNA** – is a university professor, Discipline "Clinic and therapy of partial extended edentation", The Faculty of Dental Medicine within « Gr.T .Popa » University of Medicine and Pharmacy – Iasi and an Primary care physician – Dental prosthetics at Policlinica Stomatologică no. 1 (Bolta). Former Dean of the Faculty of Dental Medicine, Vice-president of the College of Dental Practitioners in Romania (2015-2019; 2019-2023), President of the College of Dental Practitioners, Iasi (2015-2019; 2019-2023), Member of the National Council for Scientific Research – CNCS. Director of the Clinical Education Facility of the Faculty of Dental Medicine, Expert ANMCS- 2017, Expert CNATDCU – Comisia Medicina Dentara, President of the Romanian Dental

Association for Education, President of the Romanian Society of Oral Rehabilitation, President of the Society of Regularized Computed Tomography, President of the Association of Dental Medicine, Iasi, Member in the Federal Bureau of the International Federation of Odontostomatology and Craniofacial Surgery, Member in the Managing Board of IMAT – Germany, Member in the Managing Board of EIDAM – Canada. Appointment of Dean assessor - 'Université des Montagnes, Cameroon, Vice-president of the College of Dental Practitioners Romania, president of the College of Dental Practitioners, Iasi, Medical Expert for Public health, Iasi, for the specialization General Dentistry (since 2005), President of the Dentistry Department within the Society of Doctors and Naturalists (since 2007), President of the Commission for the elaboration of practice guides in the field of dental prosthetics, CMDR (since 2007), Member in the Aracis medical commission.

**INTERNATIONAL TITLES AND POSITIONS:** President CIDCDF- Confederation of Deans of Faculties of Dental Medicine of Total or Partial French Origin, Past President European Prosthodontic Association, President of the Balkan Society of Dental Medicine (BaSS), Member in ERO FDI WG - RELATION BETWEEN DENTAL PRACTITIONERS AND UNIVERSITIES, Member in FDI WG Women Dentists Worldwide, President of the International Society of General and Oromaxillofacial Rehabilitation, Forum Odontologicum, Lausanne, Switzerland (2013) – present, Member in AFNOR-ISO, Expert ADEE, Fellow Global Dental Implant Academy – 2018, Fellow & Diplomat of International College of Dentistry (2013) – present, Fellow of Academy of Dentistry International (2013) – present, Member of the Administration Council of the Confederation of Deans of Faculties of Total or Partial French Origin (CIDCDF), Scientific Commission, since 2009- present, Fellow International Honor Dental Organization (2011) – present, Chevalier dans l'Ordre des Palmes Academiques, through decree since 1 March 2011-present, Expert AUF (L'Agence universitaire de la Francophonie) – 2011- present, Fellow and Diplomat al International Congress of Implantologists (2009) – present, Ambassador of the Confederation of Deans of Faculties of Total or Partial French Origin (CIDCDF) – 2008 – present, Member of European Society of Cosmetic Dentistry, since 2008- present, Member of the European Prosthetics Association (EPA), since 2007- present, Member in the Managing Board IMAT, Germany (2006) – present, Member in the Managing Board Eidam, Canada (2006) – present, Vice-president of the International Congress of Oral Implantologists - for Romania (ICOI, SUA) 2011-present.

**Title of the BIOMMEDD 2024 lecture:**

*Practical experiences regarding the use of bone regeneration materials in substance losses*

## MARIO MONZON



Mario D. Monzón is a doctor in industrial Engineer and University full professor in the Mechanical engineering department of University of Las Palmas G.C.. 4 six years research periods and 1 six years research transfer period certified by the Spanish CENAI. Coordinator of the research group of Integrated and Advanced Manufacturing which main fields are: Polymer processing, additive manufacturing, composite materials with natural fibres and biopolymers applied to tissue engineering. Member of ISO TC261 and CEN TC438 for standardization of Additive Manufacturing, where He has been the convenor of the ISO TC261 JWG 11 “Additive Manufacturing for Plastics”. Participation in 41 national and European projects (30 as main researcher). 18 research and transfer contracts with companies. 103 scientific publications .85 proceedings in conferences, supervisor of 9 doctoral thesis, 8 national patents and 1 international. Co-Editor of the book Additive Manufacturing – Developments in Training and Education (Springer). Member of the editorial board of the journal Bio-design and Manufacturing (Springer) and Springer Handbook of Additive Manufacturing. Coordinator of the PhD program of Chemical, Mechanical and Manufacturing Engineering in ULPGC. Coordinator of the master degree of Advanced Industrial Technologies in ULPGC. He was a founder, together other members, of the Spanish Association of Rapid Manufacturing in 2005.

**Title of the BIOMMEDD 2024 lecture:**

***Biomedical application of polymeric-based composites containing piezoelectric ceramic additives***

10th International Conference  
Biomaterials, Tissue Engineering & Medical Devices



# KEYNOTE SPEAKERS



## CATALIN POPA



Dean, Faculty of Materials and Environmental Engineering; Head of Biomaterials Research Group; Technical University of Cluj-Napoca, ROMANIA.

**Dr. Cătălin Popa** is a Professor in the Department of Materials Science and Engineering, Dean of the Faculty of Materials and Environmental Engineering, Head of the Biomaterials Research Group in the Technical University of Cluj-Napoca (TUCN). He is an Engineer since 1986 and, after working as a design engineer in several companies, he has become a member of the academic staff of TUCN since 1990. From the very early stages of his career, he worked in the field of Biomaterials and, later, he created the Biomaterials Research Group. Doctor of Engineering since 1997, Professor Popa was awarded a NATO / Royal Society Fellowship in the University of Nottingham (2000).

He was a recognized researcher in numerous research projects in the UK, in the IRC in Biomedical Materials, Queen Mary, University of London, and Rutherford Appleton Laboratory, STFC, as well as director in 29 research grants awarded by Romanian public funding bodies. The Biomaterials Research Group he leads focuses on optimisation of medical implants / devices, Tissue Engineering applications, drug delivery systems and Medical Microfluidics. Fundamental or developmental research for industry, in Romania, Germany or UK is, also, a key topic for the group he leads.

**Title of the BIOMMEDD 2024 lecture:**

*Field flow effects in capillary force microfluidic devices designed for medical applications*

## HOREA BENEĂ



**Horea Benea**, MD, PhD, is Associated Professor at “Iuliu Hatieganu” University of Medicine and Pharmacy from Cluj-Napoca, Romania. With more than 10 years of experience as specialist orthopedic surgeon, he is the Head of Orthopedics and Traumatology University Clinic Cluj-Napoca, a renowned public service of 110 beds, 10 specialist surgeons and 30 residents. He is the fellow of the dear departed Professor Philippe Hardy, who taught him shoulder arthroscopy in 2010-2011, in Paris, France, and of Professor Giuseppe Milano, former ESA President, who helped him perfect his practice during a fellowship in 2015 in Rome, Italy. He is an Arthroscopy DIU graduate in France, promotion 2010-2011. He is an active member of ESA Communication Workgroup for almost 4 years and founding member of

Romanian Arthroscopy Society SRATS.

His clinical activity is focused on shoulder surgery, arthroscopy, prosthetic replacement and trauma, but he is also fond of knee, hip and ankle surgery and general orthopedic trauma. His scientific activity resulted in more than 30 ISI papers published, 9 research projects, 20 invited lectures and 50 podium or poster presentations at international events, with a special interest on cartilage and bone regeneration and implant osseointegration. The most important awards received are the ESSKA-ON Foundation Partnership Award: Best Abstract in Orthoregeneration for ESSKA 2020 Congress and the Young Researcher Prize for Surgical Sciences from UMF Cluj-Napoca in 2013. He is the organizer of an annual Hands-on Course of Knee Arthroscopy Initiation in Cluj-Napoca, Romania. Contact: drbenea.ortho@yahoo.fr.

**Title of the BIOMMEDD 2024 lecture:**

*Innovative technologies in orthopedic surgery*

## **SIMONA BALTATU**



**Lecturer Ph.D Eng. Madalina Simona BALTATU** researcher since 2014 in the field of biomaterials, focused on titanium alloys, she obtained her Ph.D in 2017 with the theme “Contributions regarding the improvement of the properties of Ti-Mo alloys for medical applications”. She graduated in November 2023 the Advanced Research Postdoctoral Training Program on the "Gheorghe Asachi" Technical University of Iasi, Faculty of Science and Engineering. In 2022 she received the Excellence Award, offered by the "Gheorghe Asachi" Technical University of Iasi, for the "Young researcher with the best performance in scientific research" category. Her activity is embodied and highlighted in the list of works, which are mostly in the field of biomaterials (obtaining, characterization, testing and expertise of new biomaterials; medical devices; surface properties; tissue-implant interaction phenomena; functionalization).

The publication record is over 60 articles of which 42 are indexed in journals with F.I. > 1. Other achievements include: 6 international books, 2 national books, 6 international book chapters, 2 books as editor, 5 patent applications and 65 awards at invention salons. As experience in research projects, she was director/responsible for 3 grants, member of 3 international projects, and a member of 8 national projects. Also is Co-founder on SIMTIT ENGINEERING Spin-off ([www.simtit.ro](http://www.simtit.ro)), a company dealing with obtaining and characterizing of new materials for medical applications. She is Guest Editor for 9 Special Issues on MDPI and has made over 300 reviews on articles in the field. H-index = 18 (Google Scholar), 16 (Scopus), and 15 (Web of Science). Citations: 805 (Google Scholar), 508 (Web of Science). Personal webpage: <http://www.afir.org.ro/msb/>.

**Title of the BIOMMEDD 2024 lecture:**

*The latest research on titanium alloys suitable for medical applications*

## **STEFAN IOAN VOICU**



**Stefan Ioan Voicu** is Professor at the Faculty of Chemical Engineering and Biotechnologies starting his career in 2009, with a Bachelor in Organic Chemistry (from 2005), Ph.D. in Polymeric Membranes (from 2008), and Habilitation in Chemical Engineering (from 2016). He published 15 books and book chapters (Wiley, Springer Nature, Elsevier), >80 peer reviewed scientific papers with Hirsch index 38, total number of citations 4700+. The main research interests are related to polymeric membranes for biomedical applications with outstanding contributions in the field of surface functionalization methods for hemodialysis and osseointegration and polymeric membranes for water purification (first report in literature for membranes with self-indicating properties, that change the color surface during filtration process). Except academic activity, Prof. Voicu has also experience in the field of industrial research, being for two years Research Scientist at Honeywell Automation and Control Solutions, Sensors Laboratory with 3 granted US Patents (US 7,695,993 B2, US 7,867,552 B2, US 7,913,541 B2) developed in the field of metallic surface functionalization for SAW chemical sensors. He served as editor at different prestigious publishing houses, like Elsevier or Springer Nature.

**Title of the BIOMMEDD 2024 lecture:**

*Biocompatible and bioresorbable green polymers-based membranes for improved osseointegration*



## **CSABA BALASZI**



**Dr. Csaba Balázi** is Scientific Advisor of the HUN-REN Centre for Energy Research, Centre of Excellence of Hungarian Academy of Sciences. He obtained MSc degree in Materials Science and Metallurgical Engineering from Transilvania University of Brasov, Romania. He received PhD in Materials Science from University of Miskolc, Hungary in 2000. He was a visiting scientist at Tokyo Institute of Technology, Japan in 2001, University of Limerick, Ireland and Istanbul Technical University, Turkey in 2003.

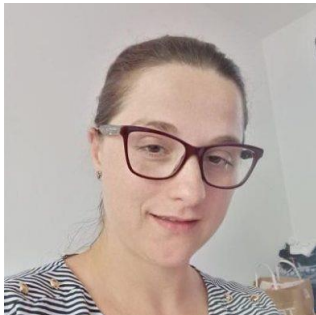
He is President of Fine Ceramics section of the Hungarian Scientific Society of Silicate Industry (SZTE) and Representative of SZTE in International Ceramic Federation (ICF), Member of Council Board and Industrial Working Group Leader – European Ceramic Society (ECerS), Member of the American Ceramic Society (ACerS) since 2004, Member in European Materials Research Society (EMRS), Bolyai Engineering Science Committee Evaluation (HAS). He served as Board Member of the Hungarian Society of Materials Science (MAE), Executive Committee Member of Federation of European Materials Societies (FEMS), Member of PEC (ECerS) and Steering Committee Member of Energy Materials Industry Research Initiative (EMIRI), Brussels.

He organized several international conferences, was acting as chair of CMCEE14, 2024 (Budapest), ECERS2017 (Budapest), FEMS Junior EUROMAT2018 (Budapest), symposium co-organizer in ICACC (ACerS) Daytona Beach, USA, EMRS Fall Meeting Symposia (Warsaw) with topics on ceramics based nanocomposites and co-chair of WoCeram2019 (JECS Trust, Budapest). He holds several awards, fellowships: Bolyai Plaquet (HAS), Fellow of the European Ceramic Society (ECerS), Gabor Dennis award (Novofer Foundation), ACerS Global Ambassador (ACerS), Fellow of the American Ceramic Society (ACerS) and he is Academician of the World Academy of Ceramics.

**Title of the BIOMMEDD 2024 lecture:**

*Ceramic biomaterials: from traditional technologies to novel applications*

## **OANA DOBRE**



**Dr. Oana Dobre**, Lecturer in Biomedical Engineering, Centre for the Cellular Microenvironment, Advanced Research Centre, University of Glasgow, UK. Oana holds a PhD in Mechanical Engineering (Tribology) from Imperial College London. After her doctoral studies, she worked as a Research Associate at the University of Manchester for two years, where she became fascinated by mechanobiological research and developed an expertise in biology to complement her extensive engineering background. From 2017 to 2022, Oana was a Research Associate at the Centre for the Cellular Microenvironment (CeMi) at the University of Glasgow. Her research focused

on developing and characterizing full-length protein-based hydrogels for efficient growth factor delivery for tissue engineering applications, with a particular emphasis on bone tissue regeneration, spinal cord injuries, and vascularization. She started a Lecturer in Biomedical Engineering position at the University of Glasgow in 2022. Her current research is focused on the development of a biomaterial platform using piezoelectric constructs for applications in regenerative medicine, particularly muscle regeneration, in vitro tissue models for drug testing, and new therapies using additive manufacturing techniques. Oana's work combines a strong engineering foundation with deep knowledge of stem cell biology and extracellular matrix dynamics.

**Title of the BIOMMEDD 2024 lecture:**

*3D Biomimetic piezoelectric scaffolds-based therapeutic approach for volumetric muscle loss repair*

## **MARIOARA MOLDOVAN**



**Mărioara Moldovan**, Ph.D., Research Professor, Head of "Polymeric Composite" Laboratory, Babes Bolyai University, Cluj-Napoca, Romania. Her research activity was focused on the study and development of the new technologies for synthesis and obtaining of nanostructured powders and other precursors for the composite materials (glasses, based monomer organic matrix) and of the experimental biomaterials with different application in dentistry and medicine. Dr. Marioara's research also encompasses lecturing and practical training for undergraduate, master's, and postgraduate students.

The major scientific interests involve problems related to development of technologies for obtaining micro and nanofiller, biomaterials and bioadhesives used in medicine: a) dental composites used for restoration b) sealants used for the prophylaxis of caries with children, c) synthesis and characterization inorganic materials e.g., micro- and nanocrystalline powders, bioglasses, as fillers for polymeric composites; d) synthesis of nanofillers by sol-gel method and stabilization of nanoparticles; e) surface treatments of inorganic particles with coupling agent, to make them compatible with the organic matrix of the composites; f) materials with biocompatible properties for the dental implants g) biomaterial used as skull bone replacement h) biomaterial used as meninges replacement; i) composites able to form thin films with adhesive properties cured at UV-radiation or visible light-cured, respectively. Her work focus primarily on the synthesis and characterization of micro and nanofiller, bioglasses, ceramics and biodegradable polymer (polylactic acid) used in bioadhesives and composite materials and on the studying the influence of inorganic matrix upon the physico-chemical and mechanical properties of the harden adhesive and composite materials.

**Title of the BIOMMEDD 2024 lecture:**

***Recent Advances and Developments in Composite Dental Materials in Romania***

## **HORIA MANOLEA**



**Horia Octavian Manolea** is Professor at the Prostheses Technology and Dental Materials Department and currently Chief of the 1-st Department of the Faculty of Dentistry from the University of Medicine and Pharmacy, Craiova, Romania. He graduated as valedictorian the Faculty of Dentistry in 2001, holds a PhD in Medicine and a Master degree in implant supported prosthesis. Research interests include the bioactive materials study, mainly of bone augmentation materials, restorative materials research, implant supported prosthesis technologies, development of ceramic and metal-ceramic technology, dental and periodontal structures morphology study. His professional and scientific activity comprises

10 textbooks, more than 80 papers published in scientific journals of which 50 were published in ISI journals with impact factor, more than 200 papers published in abstract in the proceedings of international or national conferences, invited speaker at several national and international scientific meetings, reviewer for several specialty scientific journals.

**Title of the BIOMMEDD 2024 lecture:**

***Dental opportunities for using bioactivated synthetic bone graft materials***

## **VICENTIU SACELEANU**



**Dr. Vicentiu Saceleanu** was born in 1968 in Sibiu - Romania, graduated from the Faculty of Medicine and Pharmacy „Iuliu Hațieganu,, Cluj-Napoca, Romania in 1994, received his Ph.D. from Lucian Blaga University (Sibiu-2011) and since 2011 he is the head of the Neurosurgical Department (County Hospital - Sibiu). Since 2000 he is a member of the Romanian Society of Neurosurgery, AOS International, Medical College of Sibiu and since 2016 he became a member of the Romanian Society of Biomaterials. He was a Associate Professor at Lucian Blaga University and since 2017 he joined the University of Sibiu as a full Professor, directing the Neurosurgical Department. In 2011 dr. Saceleanu founded the Neurosurgical Circle from Sibiu with 50 active students, participating in

over 15 international and national congresses and coordinated over 20 presentations. Dr. Saceleanu is the author of 3 neurosurgical books, coauthor in 2 books and he published 194 articles in national and international journals.

### **SCIENTIFIC ACTIVITY:**

- Participation in numerous congresses and courses of Continuing Medical Education in Neurosurgery starting from 1995; participation in the national and international conferences as chairman and speaker: Romanian-German Courses of Neuro-traumatology; Sibiu Medical Days Conference, Chairman at Sibiu Medical Days 2011, 2013; International Seminar Paulo Freire “For a pedagogy of the dialogue”; Stroke Conferences with international participation and symposia of Neurology and Psychiatry, Neurophysiology Electrodiagnostic Conference, Congresses and conferences on Neuroprotection and Neuroplasticity, Neurooncology Conference, Symposium "Il metodo Feuerstein”, National Symposium of corticosteroids, the Conferences of the Society of Surgery;
- Participation to specialized courses in the field of neurosurgery: Skull Base Surgery Course; Bucharest; Vertebroplasty course Bucharest;

### **RESEARCH ACTIVITY:**

- Professional training of residents (Neurology, Surgery, Orthopedics, Ophthalmology, Forensic Medicine), since 2011 till present;
- Founder and coordinator of the Neurosurgery Circle, LBUS, 2013,
- Development of Syllabus and course description of Neurosurgery discipline within the II Department of V. Papilian Faculty of Medicine Sibiu;
- MAIN organizer of the Conference: “Treatment options and methods of rehabilitation in stroke and spinal pathology ”, Sibiu, 2014, December 5.
- Member of the Scientific Commission of the County Clinical Emergency Hospital Sibiu, decision of Sibiu County Council no. 111/23.01.2015.
- Member of the Research Group of Ocular Surface, since 2014;
- Chairman of the Organizing Committee of the 45th edition of the Congress of the Romanian Society of Neurosurgery, Sibiu, October 2019;
- manager of the international project on Erasmus Programme - Brain Revealed: Innovative Technologies in Neurosurgery Study – Universitatea Lucian Blaga din Sibiu;

### **Title of the BIOMMEDD 2024 lecture:**

***Bridging Technology and Neurosurgery: The BrainIT Initiative***

## **AUREL MOHAN**



**Professor Dr. Mohan Aurel-George**, was born in the city of Bucharest on 27.04.1983, graduated from the Oltea Doamna General School, after which he graduated from the Mihai Eminescu National College in 2001. He attended the Faculty of Medicine and Pharmacy Oradea, specializing in General Medicine in the period 2002-2008, after which he was a resident doctor in the clinical department of Neurosurgery at the Oradea County Emergency Clinical Hospital between 2009-2015. In 2014, he obtained the title of doctor in medical sciences at the doctoral school of the Carol Davilla University of Medicine and Pharmacy in Bucharest.

He began his university career in 2009, obtaining through a competition the position of university trainer in the Department of Surgical Disciplines, Faculty of Medicine and Pharmacy, University of Oradea. In 2016, he took the exam for the position of Lecturer at the University of Oradea - Faculty of Medicine and Pharmacy, and at the same time, from the position of specialist neurosurgeon, he became the head doctor/coordinator of the operating room at the Oradea County Emergency Clinical Hospital.

In 2019, he becomes Associate Professor at the University of Oradea, and in 2021 he takes the primary exam, thus becoming a primary neurosurgeon also at the Oradea Neurosurgery Clinic. In 2022, he takes the exam for the position of Full Professor at Oradea University and is appointed Secretary of State at the Bucharest Ministry of Health, where he begins his work between January 2022 until February 2023.

In October 2023, he is elected in the position of Head of Department of Surgical Disciplines, at the University of Oradea – Faculty of Medicine and Pharmacy.

Currently, Dr. Mohan Aurel-George leads the residency program at the Oradea Neurosurgery Clinic, as a University Professor and primary neurosurgeon and is the coordinator of the Oradea County Emergency Clinical Hospital.

**Title of the BIOMMEDD 2024 lecture:**

*The benefits of customized cranioplasty in decompressive craniectomies after severe brain injuries*

## **DAN GRECU**



University for Medicine and Pharmacology from Craiova, Emergency Clinical Hospital from Craiova, Orthopedic Department.

Asist. univ. from 1991.

Prof.Univ.Habilitat from 2017. Head Department of Orthopedics and Traumatology in Emergency Clinical Hospital from Craiova from 2004. 49 articles first or secondary author, 51 papers in congress or conferences, 4 books or monographs, 9 grants (project manager or member).

**Title of the BIOMMEDD 2024 lecture:**

*Couple ceramic on ceramic in daily praxis of an orthopedic surgeon, after another 10 years of experience*

## **RAZVAN ENE**



**Assoc. Prof. Dr. Razvan Ene** got his MD and started working as a Trauma and Orthopedics resident in 2004, when starts working day and sometimes endless on-call nights learning the implications and subtleties of being an Orthopedic surgeon by believing in the developmental and shaping force of breaking out of its own comfort zone, accepting the most challenging medical cases. He activates in the fields of Trauma, Sports and arthroscopic surgery, Primary and Revision Joint Replacement Surgery, Orthopedic Oncology surgery with over 15.000 surgical cases in his credential book.

Since that time he got his PhD with “Magna Cum Laude” in 2011 and became an Assoc. Prof. in 2017, during all these years also shaping the dreams and minds of Medical students and residents. He is currently the Chairman of Orthopedic Department of the biggest Emergency Hospital in Bucharest, Romania and of the Romanian Society of Orthopedics and Traumatology (SOROT), member of various other Orthopedic National and International Societies (SRATS, AOLF, SICOT, EFFORT, ARSD, etc.), European Board of Orthopedics and Traumatology (EBOT) examiner.

As a human, doctor and a mentor he always stresses the importance of being empathetic with the patient’s condition but is also passionate and up-to-date regarding the research in the physiopathological mechanisms of a disease, biomechanics and biomaterials behavior of orthopedic implants within the human body in order to get the best possible results in any given situation.

As a researcher he published hundreds of articles in Medical and Biomedical Journals (Multidisciplinary Digital Publishing Institute - MDPI, Key Engineering Materials-KEM, Romanian Journal of Morphology and Embryology, Journal of Medicine and Life, Journal of Surgical Sciences, etc.), being the sole author and co-author of different chapters published in Medical Textbooks (Clinical exam in Orthopedics, Surgical Treaty – different volumes), coordinating research studies and various Curriculums (National Joint Replacement Program, National Bone and Tendon Procurement and Transplant).

**Title of the BIOMMEDD 2024 lecture:**

*Calcium Sulphate as a Biodegradable Antibiotic Carrier used in Osteomyelitis and Septic Arthritis Treatment*

## **RADU FLEACA**



**Dr. Radu Fleaca** earned his MD from the University of Medicine and Pharmacy Iuliu Hatieganu Cluj Napoca in 1992, he completed his training in Emergency Medicine in 1998 and in Orthopedy and Traumatology in 2002. He sustained his PhD Thesis in 2010 at the University Lucian Blaga of Sibiu. He serves as Professor at the Lucian Blaga University of Sibiu Faculty of Medicine. He is Dean of The Faculty of Medicine of the Lucian Blaga University of Sibiu from 2020.

Dr. Fleaca specializes in arthroscopy, sport and trauma surgery. He has large experience in knee, hip and shoulder endoprosthesis. Dr Fleaca has published more than 100 scientific articles, specialty books, he has more than 60 scientific presentations at national and international meetings to his credit. He was invited as lecturer at numerous national and international courses and congresses. He is a member of the SRATS (Societatea Romana de Artroscopie si Traumatologie Sportiva), ESSKA (European Society of Sports Traumatology, Knee Surgery and Arthroscopy), EKA (European Knee Associates), AO Trauma, and founding member of the Shoulder Pathology Study Society in Romania (SRCUC).

**Title of the BIOMMEDD 2024 lecture:**

*Graft Fixation in ACLR*

## **KAMEL EARAR**

**Professor Earar Kamel**, University „Dunarea de Jos” Galati, Romania, Medicine and Pharmacy Faculty, Dental Medicine Department, MD Pedodontics - a second specialty, Primary prosthetic dentist - second specialty, Specialist - Periodontology - second specialty, MD General Stomatology, Iasi, Romania, graduated from University of Medicine and Pharmacy „Gr. T. Popa” Iasi – Stomatological Faculty.



Member of the EUROINVENT Scientific Committee, Iasi, Romania, May 21, 2016, Member of EUROINVENT Organization Committee, Iasi, Romania, May 21, 2016, Member of the organizing committee of EuroInvent - European Exhibition of Creativity and Innovation, Iasi, 16 May 2015, Romania, Member of the organizational scientific committee of EuroInvent - European Exhibition of Creativity and Innovation, Iasi,

19-21 May 2016, Romania. Member of professional organizations of CMDR-College of Dental Practitioners in Romania – member, ASRRO - The Romanian Society of Oral Rehabilitation Association, SRP - Romanian Society of Periodontology – member, ANSPR - National Association of Pediatric Dentistry in Romania, UNAS - National Association of Dental Associations – member, ARSW - Romanian Straight Wire Association.

**Title of the BIOMMEDD 2024 lecture:**

*Dental biomaterials in the digital age*

## **ANCA DANIELA RAICIU**



Professor Dr. Anca Daniela Raiciu, Faculty of Pharmacy, "Titu Maiorescu" University, President of PLANTA ROMANICA Board of Trustees, HOFIGAL Commercial Director

The scientific activity of Mrs. Anca Daniela Raiciu is dedicated to innovation in the use of medicinal plants, having numerous patents of invention that focus on the exploitation of active compounds from local flora for the treatment and prevention of chronic conditions.

Notable Patents: Inventions recognized for the efficient extraction of bioactive compounds from plants such as milk thistle, rose hip and sea buckthorn; Innovative formulations designed to improve health and increase immunity through natural products, certified at international level.

Main research topics:

Pharmacognosy and phytotherapy, with emphasis on the development of native plant remedies;

Green technologies for the sustainable extraction of active principles from plants;

The antioxidant and anti-inflammatory effect of plant extracts in the management of metabolic and degenerative diseases.

Through his activity, university professor Dr. Anca Daniela Raiciu contributes to the promotion of a healthy lifestyle through natural solutions, highlighting the therapeutic potential of medicinal plants.

**Title of the BIOMMEDD 2024 lecture:**

*Volatile oils an important role in medical devices*

## **ANCA PORUMB**



**Anca Porumb** graduated from the "Iuliu Hatieganu" Faculty of Medicine and Pharmacy from Cluj-Napoca, class of 1998.

Primary doctor General Dentistry; Primary doctor Orthodontics;

Competence in Maxillo-Dental Radiodiagnosis; Private practice in Oradea; Doctor in Medical Sciences, Dentistry, at UMF Iuliu Hatieganu Cluj Napoca from 2008 with the title of the doctoral thesis: "Clinical-radiological diagnosis in isolated dental anomalies"; Qualification thesis, in January 2020, on the subject of dental imaging; University Professor from 2021; Author of several specialized books; Invited as a speaker at a large number of congresses, on dental imaging topics, with applicability in pedodontics and orthodontics; Residency coordinator at

the Oradea University Center in the newly reestablished specialty of General Dentistry.

**Title of the BIOMMEDD 2024 lecture:**

*The assessment of ceramic dental materials during the treatment of severe adult cleft palate*

## **ILARIA CACCIOTTI**



**Prof. Dr. Ilaria Cacciotti** is Full Professor of Biomaterials & Tissue Engineering and Materials Science and Technology and Coordinator of Ph.D. Course in "Advanced MOdelling, MAterials and Technologies (AMOMAT)" at University of Rome "Niccolò Cusano", with consolidated expertise in the synthesis and characterization of (bio)materials and eco-sustainable systems. She is expert in the synthesis, processing and characterisation of biocompatible nanostructured materials, particularly for applications in the biomedical, environmental and agri-food sectors, including bioceramics (undoped and doped calcium phosphates, bioactive glasses), biopolymers and composites. She is reviewer for more than 130 peer-review journals, e.g. Acta

Biomaterialia, Biofabrication, Chemical Engineering Journal, has been/is Guest Editor of several Special issues, and is a member of the Editorial Board of several international journals, including Applied Science-MDPI, Applied Surface Science Advances-Elsevier, Frontiers in Biomaterials, Open Journal of Materials Science-Bentham Science, Reviews on Advanced Materials Science-DE GRUYTER OPEN, and serves on various grant review committees, such as National Science Foundation (NSF), Canada Foundation for Innovation (CFI) and National Science Center (NCN, NARODOWE CENTRUM NAUKI). She was and is involved in several national and European projects.

For her research activity, she achieved several awards, including 8th CCT Award "Best Oral Presentation for Young Researchers 2011", 10th International Award "Giuseppe Sciacca" for Young Students, the European Biomaterials and Tissue Engineering Doctoral Award 2011, "L'ORÉAL-UNESCO Italy for Women and Science 2011", "Young Researcher Award Elsevier" Materials Science and Engineering C" 2014, "Inspirational Scientist Award in the International Scientist Award on Engineering, Science, and Medicine 2021", "Women Researcher Award" in the International Scientist Awards on Engineering, Science and Medicine 2021", "International Research Awards on Science, Technology and Management (INSO) 2022".

**Title of the BIOMMEDD 2024 lecture:**

*Additive manufacturing approach in the biomedical sector: current state and future perspectives*

## **EMANUELA LIDIA PETRESCU**



Department of Prosthesis Technology and Dental Materials  
Faculty of Dentistry  
"Victor Babeş" University of Medicine and Pharmacy Timișoara  
Romania

Graduated Faculty of Dentistry, "Victor Babeş" University of Medicine and Pharmacy, Timișoara 2008. Since 2009 is part of the Department of Prosthesis Technology and Dental Materials as assistant professor, lecturer since 2015 and coordinator of the Committee of Curricular Development in Dentistry.

The archived medical specialties are endodontics and orthodontics. The research activities and competences are in the fields of dental materials and imaging investigations in dentistry – Optical Coherence Tomography. She was part of the research group that developed the first Time Domain Optical Coherence Tomography and the first Spectral Domain Optical Coherence Tomography Systems dedicated to dentistry in the east of Europe. 83 scientific works – author or co-author of 9 ISI articles published and listed on the ISI Web of Science, author and co-authors of proceeding papers, oral communications at meetings in Romania and abroad and co-author at 3 monographies. Member in the research team of 4 grants – member 1 international project, member in 2 national projects and 1 project manager in a national project.

- Dental Specialist: Endodontics, Orthodontics
  - Doctoral Thesis: Interface studies of Fixed Partial Prosthesis 2013, Scientific Supervisor Professor Univ. Dr. Romînu Mihai
  - Master degree for Sanitary Educational Management (2021) at "Victor Babeş" University of Medicine and Pharmacy Timișoara, Romania
  - Member of the Romanian Society of Biomaterials
  - Coordinator of the Committee of Curricular Development in Dentistry Faculty of Dental Medicine, "Victor Babeş" University of Medicine and Pharmacy Timișoara
  - Part of the research group that developed the first Time Domain Optical Coherence Tomography and the first Spectral Domain Optical Coherence Tomography Systems dedicated to dentistry in the east of Europe
  - Member in the research team of 4 grants – member 1 international project, member in 2 national projects and 1 project manager in a national project.
- Internal auditor in the field of quality-environment-health integrated management system (2023)

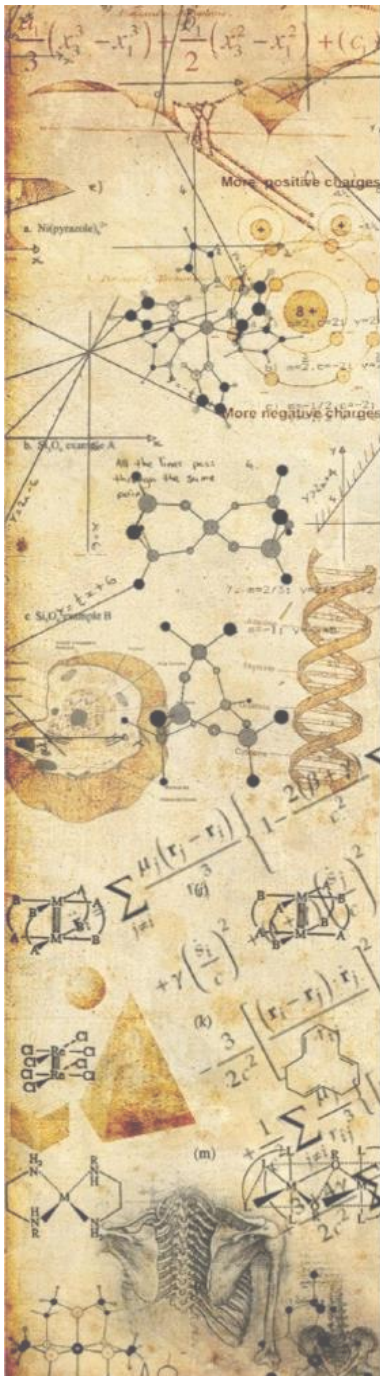
**Title of the BIOMMEDD 2024 lecture:**

*Assessment of peek polymers used in dental prosthetics*



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