

## **PROGRAM TIMETABLE**

### **1<sup>st</sup> REALME**

**Transnational Multiplier event of REALME project - A Mixed Reality E-Learning  
Platform Dedicated for Medical Engineering.**

**OCTOBER 18 – 19, 2023**

**Library Room 3.2. UPB, Splaiul Independenței 312,  
Bucharest, Romania**



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY POLITECHNICA  
BUCHAREST**

**FACULTY OF MEDICAL ENGINEERING**

**ORGANIZING COMMITTEE**

**MARIANA IONITA AND ALIN GEORGIAN TOADER**

<b>Program</b> <b>WEDNESDAY, OCTOBER 18, 2023</b>	
<b>9:30-10:00</b>	<b>REGISTRATION</b> <b>COFFEE BREAK</b>
<b>10:00-10:15</b>	Chairperson: <b>Mariana Ionita</b>  <b>OPENING CEREMONY</b>
<b>Plenary session</b> <b>10:15-10:45</b>	<b>Stefan Ioan Voicu</b>  Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest, Gheorghe Polizu 1-7, 011061 Bucharest, Romania  “Functional polymeric membranes for hemodialysis and osseointegration”
<b>Plenary session</b> <b>10:45-11:15</b>	<b>Alexandra Palla-Papavlu</b>  National Institute for Lasers, Plasma and Radiation Physics, Atomistilor str. 409, Magurele 077125, Romania  „Application of laser-based methods for the development of new coatings”

<p style="text-align: center;"><b>Plenary session</b> <b>11:15-11:45</b></p>	<p style="text-align: center;"><b>Stefan G. Stanciu</b></p> <p style="text-align: center;">Center of Microscopy-Microanalysis and Information Processing</p> <p style="text-align: center;">„Super-Resolved Non-linear Optical Microscopy: Architectures and Perspectives”</p>
<p style="text-align: center;"><b>11:45-12:30</b></p>	<p style="text-align: center;"><b>COFFEE BREAK</b> <b>POSTER PRESENTATION</b></p>
<p style="text-align: center;"><b>Invited speaker</b> <b>12:30-12:50</b></p>	<p>Chairperson: <b>Stefan Ioan Voicu</b></p> <p style="text-align: center;"><b>Madalina A. Pandele</b></p> <p style="text-align: center;">University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Analytical Chemistry and Environmental Engineering, Str. Gheorghe Polizu 1-7, Bucharest, Romania,</p> <p style="text-align: center;">“Polysulfone/crown ethers immobilized onto graphene oxide composite membranes for hemodialysis”</p>
<p style="text-align: center;"><b>Invited speaker</b> <b>12:50-13:10</b></p>	<p style="text-align: center;"><b>Alexandru Salceanu</b></p> <p style="text-align: center;">IMT-National Institute for Research and Development in Microtechnologies</p>

	<p>“Transfection technologies and the rise of LNP mRNA technology after COVID vaccine.”</p>
<p><b>Invited speaker</b> <b>13:10-13:40</b></p>	<p><b>Moara M. Castro</b></p> <p>Centre of Excellence for Advanced Materials Application, Slovak Academy of Sciences, Dubravska cesta 9, 84511 Bratislava, Slovakia</p> <p>„Exploring bioabsorbable Zn-ZnO composites consolidated by room-temperature-extrusion”</p>
<p><b>Invited speaker</b> <b>13:40-14:00</b></p>	<p><b>Madalina Oprea</b></p> <p>University Politehnica of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Department of Analytical Chemistry and Environmental Engineering, 1-7 Gh. Polizu Street, 011061 Bucharest, Romania</p> <p>“Surface-functionalized cellulose acetate membranes with enhanced biomineralization ability”</p>
<p><b>14:00-15:00</b></p>	<p><b>LUNCH</b></p> <p><b>POSTER PRESENTATION</b></p>
<p><b>Invited speaker</b> <b>15:00-15:20</b></p>	<p>Chairperson: <b>Madalina Oprea</b></p> <p><b>Florentin R. Nitu</b></p> <p>Genetic Lab, Str. Milcov, nr. 5, Sector 1, 012273 Bucuresti, Romania</p> <p>“Graphene oxide/Nitrocellulose non-covalent hybrid as solid phase for oligoDNA/miRNA extraction from complex medium.”</p>

<p style="text-align: center;"><b>Invited speaker</b> <b>15:20-15:40</b></p>	<p style="text-align: center;"><b>Roxana Cristina Popescu</b></p> <p style="text-align: center;">National Institute for Lasers, Plasma and Radiation Physics, Atomistilor str. 409, Magurele 077125, Romania</p> <p style="text-align: center;">“Targeted Intracellular Treatment for Anti-cancer Therapy using Nanoparticles”</p>
<p style="text-align: center;"><b>Invited speaker</b> <b>15:40-15:50</b></p>	<p style="text-align: center;"><b>Anne-Marie Heredea</b></p> <p style="text-align: center;">Research Center in Dental Medicine Using Conventional and Alternative Technologies, Department of Prostheses Technology and Dental Materials, Faculty of Dental Medicine, “Victor Babeş” University of Medicine and Pharmacy of Timișoara, 9 Revoluției 1989 Ave., 300070 Timișoara, Romania</p> <p style="text-align: center;">„Polymeric fixed partial prostheses evaluation related to bacterial load</p>
<p style="text-align: center;"><b>Invited speaker</b> <b>15:50-16:00</b></p>	<p style="text-align: center;"><b>Vanessa- Maria Dinis</b></p> <p style="text-align: center;">Department of Prosthetic Tehnology and Dental Materials,”Victor Babes University of Medicine and Pharmacy, Faculty of Dentistry</p> <p style="text-align: center;">“Materials and Technologies approach for provisional restauration”</p>

<b>Program</b> <b>THURSDAY, OCTOBER 19, 2023</b>	
<b>Invited speaker</b> <b>10:00-10:20</b>	<p>Chairperson: <b>Stefan Ioan Voicu</b></p> <p style="text-align: center;"><b>Anca Hermenean</b></p> <p style="text-align: center;">“Aurel Ardelean” Institute of Life Sciences, Vasile Goldiș Western University of Arad</p> <p style="text-align: center;">“Assessment of Chrysin's Protective Potential in Nanoformulations Containing Calixarene 0118 (OTX008) and Sulfobutylether-β-cyclodextrin (SBEβCD) against Cardiac Fibrosis in Diabetes: Insights from In Vitro and In Vivo Investigation”</p>
<b>Invited speaker</b> <b>10:20-10:30</b>	<p style="text-align: center;"><b>Joseph Lovecchio</b></p> <p style="text-align: center;">Institute of Biomedical and Neural Engineering, Reykjavik University, 102 Reykjavík, Iceland</p> <p style="text-align: center;">“Quantitative virtual profiles for an advanced monitoring of 3D in vitro bone extracellular matrix mineralization”</p>
<b>Invited speaker</b> <b>10:30-10:40</b>	<p style="text-align: center;"><b>Cristiano Giordani</b></p> <p style="text-align: center;">Instituto de Física, Universidad de Antioquia, Calle 70 No. 52-21, Medellín 050010, Colombia, Grupo Productos Naturales Marinos, Facultad de Ciencias Farmacéuticas y Alimentarias, Universidad de Antioquia, Calle 70 No. 52-21, Medellín 050010, Colombia.</p> <p style="text-align: center;">Calorimetry and Langmuir-Blodgett Monolayers Biophysical Studies on the Interaction between Synthesized Peptides and Lipids with Model Membranes.</p>

<p style="text-align: center;"><b>Invited speaker</b> <b>10:40-11:00</b></p>	<p style="text-align: center;"><b>Andra Onas</b></p> <p style="text-align: center;">Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, 1-7 Gheorghe Polizu, Sector 1, Bucharest, Romania</p> <p style="text-align: center;">“Rational design of peptoid molecules with antibiotic complexation properties”</p>
<p style="text-align: center;"><b>Invited speaker</b> <b>11:00-11:20</b></p>	<p style="text-align: center;"><b>Alina Tirdea</b></p> <p style="text-align: center;">Palm Beach, Florida (FL), United States</p> <p style="text-align: center;">“ Bridging the Gap: The Evolution of a Biomedical Engineer through Computer-Aided Design”</p>
<p style="text-align: center;"><b>11:20-11:50</b></p>	<p style="text-align: center;"><b>COFFEE BREAK</b></p> <p style="text-align: center;"><b>POSTER PRESENTATION</b></p>
<p style="text-align: center;"><b>Workshop</b> <b>11:50-12:20</b></p>	<p>Chairperson: <b>Mariana Ionita</b></p> <p style="text-align: center;"><b>Ciprian Iliescu</b></p> <p style="text-align: center;">e-Bio-hub Research Center, National University of Science and Technology POLITEHNICA Bucharest - CAMPUS, 6 Iuliu Maniu Boulevard, 061344, Bucharest, Romania</p> <p style="text-align: center;">“EBio-hub from. Mechanical engineering to medicine”</p>
<p style="text-align: center;"><b>Invited speaker</b> <b>12:20-12:40</b></p>	<p style="text-align: center;"><b>Stamin Daniel</b></p> <p style="text-align: center;">Grundimpuls redesign reactions</p> <p style="text-align: center;">“Innovation is a business &amp; every business needs innovation”</p>



<b>Invited speaker 12:40-13:00</b>	<b>Cornel Cobianu</b>  e-Bio-hub Research Center, National University of Science and Technology POLITEHNICA Bucharest - CAMPUS, 6 Iuliu Maniu Boulevard, 061344, Bucharest, Romania  NANOM MEMS, Str. George Cosbuc 9 C, Brasov, Romania  “Basics of IP FOR Research institutions”
<b>13:00-13:15</b>	<b>CLOSING CEREMONY</b>
<b>13:15-14:00</b>	<b>LUNCH</b>  <b>POSTER PRESENTATION</b>

<b>POSTER SESSION</b> <b>WEDNESDAY-THURSDAY, OCTOBER 18-19</b>	
<b>Digital poster session</b>	
<b>Elena Cojocaru</b>	Advanced Polymer Materials Group, National University of Science and Technology POLITEHNICA Bucharest, 1-7 Gh. Polizu Street, 011061 Bucharest, Romania  “Design of Electrospun and 3D-printed Scaffold co-loaded with Therapeutic Agents for Antibacterial Wound Dressings”
<b>Alin Toader</b>	Faculty of Medical Engineering, University Politehnica of Bucharest, Gh Polizu 1-7, 011061 Bucharest, Romania  “Solid Phase Oligo-DNA Extraction from Complex Medium Using an Aminated Graphene/Nitrocellulose Membrane Hybrid”
<b>Marian Verziu</b>	Department of Organic Chemistry, Biochemistry and Catalysis, Faculty of Chemistry, University of Bucharest, Bdul Regina Elisabeta, 4-12, Bucharest 030016, Romania

	<p>“The synergistic effect between Brønsted and Lewis acid sites of Re-TiO<sub>2</sub> catalyst in one-pot synthesis of levulinic acid from glucose”</p>
<p><b>Marius Manole</b></p>	<p>Associate Professor of Propedeutic and Esthetic Dentistry, Department of Prosthetics and Dental Materials, Faculty of Dentistry, University of Medicine and Pharmacy „Iuliu Hatieganu” Cluj-Napoca</p> <p>„Biomaterials used in prosthetic structures on dental implants”</p>
<p><b>Liana Diaconu</b></p>	<p>Victor Babes University of Medicine and Pharmacy from Timisoara, Romania</p> <p>“Aspects regarding the characterization of the profile of the finished of some non -metallic materials used in direct dental restoration”</p>
<p><b>Ionela Alice Podaru</b></p>	<p>Military Technical Academy „Ferdinand I”, 39-49 G. Cosbuc Blvd., Bucharest, 050141, Romania</p> <p>“Nanocomposite Hydrogel Films Based on Sequential Interpenetrating Polymeric Networks as Drug Delivery Platforms”</p>
<p><b>Adriana Zainea</b></p>	<p>Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Street Gheorghe Polizu No. 1-7, Bucharest, Romania</p> <p>“Prostate on a chip as a new predictive model”</p>
<p><b>Mădălina-Cristina Nicolae</b></p>	<p>Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Street Gheorghe Polizu No. 1-7, Bucharest, Romania</p>

	<p>Gelatin Methacryloyl-polysaccharide based bioink with potential in 3D bioprinting applications</p>
<p><b>Adriana-Elena Bratu</b></p>	<p>Research and Innovation Center for CBRN Defense and Ecology, Bucharest, Romania</p> <p>Nanocomposite Coatings for Military Textiles</p>
<p><b>Mădălina Ioana Necolau</b></p>	<p>Advanced Polymer Materials Group, University “Politehnica” of Bucharest, Gh. Polizu street, 1-7, Bucharest, Romania</p> <p>“Hyaluronic Acid-Based Hydrogels as Potential Scaffolds for Tissue Engineering Applications”</p>
<p><b>Petcov Teodora-Eliana</b></p>	<p>Faculty of medical engineering, University Politehnica of Bucharest, gh polizu 1-7, 011061 Bucharest, Romania</p> <p>“DNA Nanostructure: An Efficient Drug Delivery Platform”</p>
<p><b>Gabriela Toader</b></p>	<p>Military Technical Academy ‘Ferdinand I’, Bucharest 050141, Romania</p> <p>“Photocrosslinkable Hydrogel Films for Chemical Warfare Agents Decontamination Applications”</p>
<p><b>Damaris-Cristina Gheorghe</b></p>	<p>Laboratory of Electrochemistry and Patlab, National Institute of Research for Electrochemistry and Condensed Matter, 202 Splaiul Independentei street, 060021, Bucharest-6, Romania</p> <p>“Simultaneous determination of vitamins b5, b7 and b9 using stochastic sensors as tools”</p>

<p><b>Ruxandra-Maria Ilie-Mihai1</b></p>	<p>Laboratory of Electrochemistry and Patlab, National Institute of Research for Electrochemistry and Condensed Matter, 202 Splaiul Independentei street, 060021, Bucharest-6, Romania</p> <p>“Stochastic sensors as new tools for the assay of ca72-4, ca19-9, ca12-5 and cea in biological samples”</p>
<p><b>Catalina Cioates Negut</b></p>	<p>Laboratory of Electrochemistry and Patlab, National Institute of Research for Electrochemistry and Condensed Matter, 202 Splaiul Independentei street, 060021, Bucharest-6, Romania</p> <p>“ 3D Stochastic microsensor based on graphene for simultaneous determination of p53, her-3, and her-4 “</p>
<p><b>Andreea-Roxana Niculae</b></p>	<p>Laboratory of Electrochemistry and Patlab, National Institute of Research for Electrochemistry and Condensed Matter, 202 Splaiul Independentei street, 060021, Bucharest-6, Romania</p> <p>“Fast screening of biological and food samples using miniplatforms based on 3D stochastic microsensors”</p>
<p><b>Andreea-Roxana Niculae</b></p>	<p>Laboratory of Electrochemistry and Patlab, National Institute of Research for Electrochemistry and Condensed Matter, 202 Splaiul Independentei street, 060021, Bucharest-6, Romania</p> <p>“Ultrasensitive assay of atrazine in food and water samples”</p>
<p><b>Maria Minodora Marin</b></p>	<p>Advanced Polymer Materials Group, Politehnica University of Bucharest, 1-7 Polizu Street, 011061 Bucharest, Romania Collagen Department, Leather and Footwear Research Institute, 93 Ion Minulescu Street, 031215 Bucharest, Romania; maria_minodora.marin@upb.ro (M.M.M.)</p> <p>“Alginate-Salecan-Nanoclay hydrogel composites as ink formulations for additive manufacturing processes”</p>

<b>Mihaela Raluca Dobrișan</b>	<p>Advanced Polymer Materials Group, University of Science and Technology Politehnica Bucharest</p> <p>“Innovative bio-hybrid structures for hard tissue engineering”</p>
<b>Ruxandra Larion</b>	<p>Advanced Polymer Materials Group, University of Science and Technology Politehnica Bucharest</p> <p>“Development of gelatin/gellan scaffolds for tissue substitutes”</p>
<b>Carmen-Valentina Nicolae</b>	<p>Advanced Polymer Materials Group, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest, 011061 Bucharest, Romania</p> <p>“Nanodiamond-driven potential modulation of cellular response through local (nano)mechanical reinforcement of 3D printed gellan gum scaffolds”</p>
<b>Eliza I. Vulpe</b>	<p>Faculty of Medical Engineering, National University of Science and Technology POLITEHNICA of Bucharest, 011061, Romania</p> <p>“Complex architecture encapsulation systems for therapeutic principle release control”</p>
<b>Elena Alina Chiticaru</b>	<p>Faculty of Medical Engineering, University Politehnica of Bucharest, Gh Polizu 1-7, 011061 Bucharest, Romania; elena.chiticaru@yahoo.com (E.A.C)</p> <p>“Electrochemical label-free biosensor based on reduced graphene oxide and gold nanoparticles for DNA hybridization detection”</p>

<b>Raluca-Florina Sîrbu</b>	Faculty of Medical Engineering, National University of Science and Technology POLITEHNICA of Bucharest, 011061, Romania  „Isolation of natural extracellular matrices and optimization of morphostructural characteristics for targeted applications”
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