

CNB2026 - 19th National Conference of Biophysics with International Participation Craiova, Romania, September 3rd-5th 2026

CONFERENCE PROGRAM

Thursday, September 3rd 2026	
10.00-13.00	Administrative programme and conference registration
13.00-13.30	Conference Opening
13.30-14.30	Session 1 - chair: Eugen Osiac - "Multifunctional Electrospun Nanofiber Matrices: Dual Action in Interfacial Stability and Advanced Biosensing" - Monica Florescu , Department of Fundamental, Prophylactic and Clinical Disciplines, Transilvania University of Brasov, Romania - "Synchrony analysis of a thalamo-cortical oscillating neuron network" - Bogdan Amuzescu , Dept. Biophysics and Physiology, Faculty of Biology, University of Bucharest, Romania - "Testosterone Conversion To Dihydrotestosterone In Hepatic And Blood-Brain Barrier Cells Under Acute Atrazine Exposure" - Cristian-Emilian Pop , Department of Anatomy, Animal Physiology and Biophysics, Faculty of Biology, Romania - "Single-Cell Electro-optical Profiling Using Integrated Dielectrophoresis and Optical Tweezers" - Florela Gherghinoiu , Biophysics and Cellular Biotechnology Department, University of Medicine and Pharmacy Carol Davila, Bucharest, Romania
14.30-15.00	Coffee break
15.00-16.00	Session 2 - chairs: Juliánna Szakács, Eugen Osiac - "Nanozyme-Based Sensor Architectures for the Sensitive Detection of Water Contaminants" - Melinda David , Laboratory for Quality Control and Process Monitoring, University of Bucharest, Romania - "Real Time Impedance-based Cytotoxicity Profiling of Chlorhexidine-Loaded Medical Device" - Bianca Goanță , Biophysics and Cellular Biotechnology Dept., Carol Davila University of Medicine and Pharmacy, Romania - "Optimisation of a Surface-Enhanced Raman Spectroscopy Protocol for Molecular Fingerprinting of Equine Peritoneal Fluid" - Oana Maria Biro , Faculty of Physics, Babeş-Bolyai University Cluj-Napoca, Romania - "Spectrophotometry and Intraoral Scanning for Objective Color Assessment of Dental Tissues and Prosthetic Restorations" - Horia Octavian Manolea , Dental Materials Department, University of Medicine and Pharmacy of Craiova, Romania
16.00-16.45	Sponsors / Presentation of the special issue of the European Biophysics Journal - Monica Florescu
16.45-17.00	Discussions, announcements and closing of the Day 1 scientific programme
17.00-19.00	Welcome reception / cocktail party

Friday, September 4th 2026

09.00-10.00	Chair - Beatrice Mihaela Radu Keynote Lecture - "Dynamics of FtsZ clusters in the Z-ring of E. coli" - Mario Feingold , Department of Physics, Ben Gurion University of the Negev, Israel
10.00-10.30	Session 3 - chair: Beatrice Mihaela Radu - "Rapid Polydopamine–Collagen Functionalization of Microfluidic Platforms for Modeling Murine Ovarian Cancer-on-Chip" - Dragos Amarie , Center for Advanced Materials Science, Georgia Southern University, Statesboro, GA 30460, USA - "Population Perceptions of Radioactivity and Natural Background Radiation: Level of Information, Perceived Risk, and Preventive Attitudes" - Juliánna Szakács , Department of Biophysics, Faculty of Medicine, George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures, Gheorghe Marinescu Street No. 38, 540142 Targu Mures, Romania
10.30-10.45	Coffee break
10.45-12.00	Session 4 - chair: Adrian Neagu - "Artificial Intelligence For Modelling In Vivo EPID-Based Dose Reconstruction In Radiotherapy" - Robert Stefan Oniga , Faculty of Physics, Babes-Bolyai University, Romania - "Dezvoltarea unui model eficient de învățare profundă pentru detectarea aritmiilor cu ajutorul ceasurilor inteligente (Development of an efficient deep learning model for arrhythmia detection using smartwatches)" - Zoltán Bálint , Faculty of Physics, Babeş-Bolyai University, Romania - "Quantitative Phase Microscopy for Label-Free Cells and Tissue Analysis: Opportunities for Diagnostic Pathology" - Violeta L. Calin , Department of Biophysics and Cellular Biotechnology, Excellence Center for Research in Biophysics and Cellular Biotechnology, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania - "Real-Time Biophysical Analysis of Single-Cell Electroporation Using an Integrated System for Phase Imaging" - Christien O. Matei , Biophysics and Cellular Biotechnology Dept, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania - "Applications of Hyperspectral Imaging in the Medical Field" - Dragos Manea , Optoelectronic Methods with Biomedical Applications (OMBA), National Institute of Research and Development for Optoelectronics - INOE 2000, Romania
12.00-12.30	Scientific discussions, announcements and buffer interval
12.30-14.15	Lunch break
14.15-14.45	Special conference award ceremony
14.45-16.00	Poster session - 19 posters, all sections and topics
16.00-19.00	Conference social event
19.00-22.00	Gala dinner

Saturday, September 5th 2026

09.00-10.15	Session 5 - chairs: Nicolae Leopold, Eugen Osiac - "Radiation Dose Assessment in Lung Cancer Screening: A Comparative Analysis of Chest Radiography, Standard-Dose CT and Low-Dose CT" - Rossy Vlăduț Teică, Department of Radiology and Medical Imaging, University of Medicine and Pharmacy of Craiova, Romania - "Assessment of subcutaneous fat using the standardized ultrasound method" - Cristiana Smaranda Ivan, Department of Functional Sciences, Victor Babes University of Medicine and Pharmacy Timisoara, Romania - "Individual Geometric Fingerprint And Positioning Reproducibility In Head And Neck Cancer Patients Treated With TrueBeam CBCT-Guided Radiotherapy" - Sanda Amelia Dracea, Biophysics, University of Medicine and Pharmacy Craiova, Romania - "Commissioning And Quality-Assurance Management Of A Bravos HDR Afterloader Replacing A GammaMedplus iX In Cervical Cancer Brachytherapy" - Marian Razvan Balan, Department of Biophysics, University of Medicine and Pharmacy of Craiova, ROMANIA - "Optogenetics: A Challenging Technique of Biophysics (A short review)" - Aurel Popescu, Department of Electricity, Solid State and Biophysics, Faculty of Physics , University of Bucharest, Romania
10.15-11.45	Session 6 - chair: Adrian Balseanu - "Polarization Digital Holographic Microscopy for Quantitative Birefringence Mapping of Biological Cells" - Constantin Losmanschii, Institute of Applied Physics, Moldova State University, Moldova - "Rheology-Based Prediction Of Print Outcomes In Extrusion-Based Bioprinting From Simple Extrusion Rate And Speed Measurements" - Stelian Arjoca, Department of Functional Sciences, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania - "Exploring the strong correlation of the elemental content of Zn, Mg, Cu, Fe and Cr in colorectal cancer" - Marius Ciprian Varut, Biophysics, Faculty of Pharmacy,, University of Medicine and Pharmacy Craiova, Romania - "Cancer-Associated GPR55 Mutations Remodel Receptor-Ligand Recognition and Alter the Binding Profile of 3''-Hydroxycannabidiol" - Andra-Maria Paun, Department of Anatomy, Animal Physiology and Biophysics, University of Bucharest, Faculty of Biology, Splaiul Independentei 91-95, Bucharest, R-050095, Romania - "Biophysics of prefrontal tDCS in depression" - Beatrice Mihaela Radu, Department of Anatomy, Animal Physiology and Biophysics, Faculty of Biology, University of Bucharest - "Advancements in Silymarin Nanoformulations: Overcoming Bioavailability Challenges in Cancer Treatment" - Mohammad Asif Gawhari, Biotechnology and Food Technology, Punjabi University, Patiala, India
11.45-12.15	Coffee break
12.15-13.30	SRBPA Meeting
13.30-14.00	Closing Ceremony