Dialoguri Doctorale în Fizică

Program

Lucrările conferinţei se vor desfăşura în amfiteatrul A1

13 noiembrie 2026

9:00 – 9:15 Cuvânt de deschidere: prof.univ.dr. Daniela DRAGOMAN

SO1: 9:15 – 10:45 Prezentări orale
Moderatori: prof.univ.dr. Iulia GHIU, student-doctorand Diana STAN-BERLIC

9:15 – 9:30 SO1.1.
Iulian-Florin ANDREICOVICI
Can event-shape selection reveal the tetrahedral α-like configuration of O16 in O–O collisions at LHC energies?

9:30 – 9:45 SO1.2.
Francesca-Giulia GUARNERI
The contribution of backbone groups to the water-mediated hydrogen-bond network of bovine rhodopsin

9:45 – 10:00 SO1.3.
Cecilia OANCA, Ana DINCA, Alexandru MIHALCEA, Gabriel COJOCARU, Mihai SERBANESCU, Razvan DABU, Sandel SIMION
Tiled-aperture coherent beam combination of two femtosecond laser pulses using interferometric phase control

10:00 – 10:15 SO1.4.
Andreea BĂRĂSCU, Bogdan ANTONESCU
Rediscovering Romania's Tornadoes: From Historical Newspapers to Modern Reanalysis

10:15 – 10:30 SO1.5.
Alexandru CARABOGDAN, Tristan DA CÂMARA SANTA CLARA GOMES, Pascal VAN VELTHEM, Etienne FERAIN, Flavio ABREU ARAUJO, Luc PIRAUX, Vlad-Andrei ANTOHE
Impact of diameter and thermal treatment on the electrical and thermoelectric performance of electrodeposited Bismuth-Antimony crossed nanowires

10:30 – 10:45 SO1.6.
Bianca SOLOMONEA, Etienne A. HODILLE, George Alexandru NEMNES, Cornel STAICU, Paul DINCA, Corneliu POROSNICU
Deuterium retention in amorphous boron co-deposited layers: a combined DFT, TDS and rate-equation modelling approach

----------Pauză----------

SO2: 11:15 – 12:45 Prezentări orale
Moderatori: prof.univ.dr. Ana-Nicoleta BONDAR, student-doctorand Ionuț UNGUREANU

11:15 – 11:30 SO2.1.
Gabriel MAJERI, Virgil BĂRAN
Critical behavior, scaling laws and restoration of regularity at the transition to chaos in Hamiltonian systems

11:30 – 11:45 SO2.2.
Maria-Adela TĂNASE, Maria-Luiza STÎNGESCU, Mihai-Adrian SOPRONY, Mihai-Robert ZAMFIR, Nicu -Doinel SCĂRIȘOREANU, Vlad-Andrei ANTOHE
Nanostructured optical coatings

11:45 – 12:00 SO2.3.
Ion SPINU, Nicoale FILIPOIU, Mihaela COSINSCHI, George Alexandru NEMNES, Algirdas MEKYS, Cătălin NEGRILA, Andra Georgia BONI, Lucian PINTILIE, Cristina BESLEAGA
Transport mechanism in IGZO memristors

12:00 – 12:15 SO2.4.
Daniel-Cristian COSTACHE, Calin ALEXA, Anca-Maria DINU, Ioan-Mihail DINU, Ioana DUMINICA, Matei-Stefan FILIP, Gabriel Constantin MAJERI
Advances in searches for an ultraheavy diquark scalar in multijet final states at the HL-LHC

12:15 – 12:30 SO2.5.
Vlad Andrei POPESCU, I. POP, S.V. BALAN, Stefan POPA, Dan G. MATEI, M. CARAGEA, Daniel URSESCU
Generation and control of water microdroplets: High repetition rate target development for laser-plasma interaction with mass limited targets

12:30 – 12:45 SO2.6.
Madalina-Iuliana ROMAN, Daniel-Andrei PAPARAGICA, Catalin DUCU, Ioan STAMATIN
Heat Transfer and Thermal-Hydraulic Performance of Bayonet-Tube Steam Generators in Lead-Cooled Reactors: A State-of-the-Art Review

----------Pauză de masă----------

SO3: 14:00 – 15:15 Prezentări orale
Moderatori: prof.univ. dr. Ştefan ANTOHE, student-doctorand Adela TĂNASE

14:00 – 14:15 SO3.1.

Adrian BADEA, Mihaela CAIAN
Studii asupra instabilitatii convective pentru perioada 1966-2025 (60 ani) pe teritoriul Romaniei

14:15 – 14:30 SO3.2.
Mihaela COSINSCHI, Amanda T. PREDA, Nicolae FILIPOIU, Calin A. PANTIS-SIMUT, Diana MANEA, George A. NEMNES
Atomistic Models of Amorphous Oxides for Laser Mirror Coatings

14:30 – 14:45 SO3.3.
Miruna-Ioana BELCIU, Alin VELEA, George Alexandru NEMNES
The importance of physico-chemical descriptors for the prediction of glass transition temperature in chalcogenide glasses

14:45 – 15:00 SO3.4.
Daniel Andrei PAPARAGICĂ, Mădălina Iuliana ROMAN, Ioan STAMATIN
High-entropy alloys for generation iv lead-cooled fast reactors: principles, motivation and perspectives

15:00 – 15:15 SO3.5.
Gabriel MAJERI, Mădălina BOCA, Virgil BĂRAN
Superradiant emission of light with orbital angular momentum (OAM) through the inverse Thomson scattering of a Laguerre-Gauss laser beam against an electron bunch

----------Pauză----------

SP1: 15:30 – 17:30 Postere
Moderatori: prof.univ.dr. Daniela DRAGOMAN, student-doctorand Mihaela COSINSCHI

SP.1.
Ioana-Daniela DUMITRU, Maike MENZEL, Eric BEITZ, Ana-Nicoleta BONDAR
Molecular Mechanism of lactate transport via the MCT1-Basigin complex

SP.2.
Ionel ELISEI, Ionel LAZANU
The radioactive background in rare-event experiments; observation of cosmic muons activation in stainless steel material for primary membrane of the LAr/LXe detector

SP.3.
Silviu Alexandru PENCU, Doru Sabin DELION
Quartet Structure Analysis for Nuclei Above 100Sn

SP.4.
Argentina Teodora NERȚAN, Mihaela CAIAN
Seceta extremă în România – studiu de caz realizat prin modelare climatică și date satelitare

SP.5.
Adina. D. DOBRIN, Dana G. POPESCU, Cosmin M. ISTRATE, Adrian I. BORHAN, Daniel GHERCA, Marius A. HUSANU
Influence of Interface Geometry on Spin Functionality in Metal-Oxide Heterostructures

SP.6.
Cristian RADU, Andrei Cristian KUNCSER, Mihai SECU
Clustering-Based Quantitative Nanoparticle Characterization Using Scanning Electron Diffraction

SP.7.
Florin POPESCU, Elena MATEI, George STOIAN, Victor KUNCSER
An approach for the investigation of magnetic structures through specific facilities of Scanning Electron Microscopy

SP.8.
Cristian ZAGĂR, Iulia ANTOHE, Andrei STOCHIOIU, Vlad-Andrei ANTOHE, Gabriel SOCOL
Simulation modeling and experimental investigation of SPR-based sensors

SP.9.
Denisa Valentina IVAN (NEGREANU), Maria-Alexandra NACU, Ruxandra SAPOI, Margareta CHERESTES, Alexandru NICOLIN-ZACZEK, B. ZORILA
Radonul în spațiile de lucru și de învățare din România: rezultate din primul an de monitorizare

SP.10.
Victor-Ovidiu ȘLUPIC
The Feynman-Dyson argument extended to the inhomogeneous Maxwell equations

SP.11.
David MAZURENCU-MARINESCU-PELE, Virgil BĂRAN
Interaction maps or sequence footprints? A power-calibrated test of seismic correlation networks

SP.12.
Oana Lorena ȘLUPIC, Virgil BĂRAN
Station effects in ground-motion predictions for intermediate-depth Vrancea earthquakes: an explainable AI analysis

SP.13.
Josuah MEA
Extended Entangled Relativity: A Parsimonious Modified Gravity with a Cosmological Attractor

SP.14.
Cristian ALEXE, Stefan POPA, Alice DUMITRU, Ioan DANCUS, A. GRIGORE, Daniel URSESCU
Metrology of Spatio-Temporal Couplings (STC) in Ultra-Intense Laser Pulses for Particle Acceleration

SP.15.
Ionuț-Petrișor UNGUREANU, Mihai BONI, Ionuț Relu ANDREI, Angela STAICU
Controlling Interface Oscillations in Hanging Droplets via Long-Range Interactions and Schlieren Visualization of Mass Transport

SP.16.
Sermon CAISAR, Tom IACOB, Cornelia NICHITA, Bogdan MITREA, Catalin HULEA, Adriana BALAN, Cornelia DIAC, Ioan STAMATIN
Impedance Based Evaluation of Carbon-Deep Eutectic Solvent Hybrid Materials

SP.17.
Catalin HULEA, Cornelia DIAC, Tom IACOB, Bogdan MITREA, Cornelia NICHITA, Sermon CAISAR, Adriana BALAN, Ioan STAMATIN
Obtinerea materialelor carbonice din biomasa de hamei pentru aplicatii in bateriile sodiu-ion

SP.18.
Daniel Dorobantu, Domenico Doria, Petru Ghenuche, Deepak Sangwan, Dan Stutman, Lucian Tudor, Calin Ur, Mihail Cernaianu
High-quality laser-driven ion beam generation for radiobiology studies at ELI-NP

14 noiembrie 2026

SO4: 9:00 – 10:30 – Prezentări orale
Moderatori: conf.univ.dr. Anca DUMITRU, student-doctorand Marilena ZUZEAC

9:00 – 9:15 SO4.1.
Andreea-Cătălina POP, Dan Alin NEDELCU, Mirela-Mădălina TRELIA, Mirel BÎRLAN
Simultaneous multi-station optical observations of artificial satellites: experimental results and astrometric analysis

9:15 – 9:30 SO4.2.
Andreea CRISTIAN
Synergic integration of the European Severe Weather Database and National Meteorological Administration observations to derive a new hail climatology for Romania

9:30 – 9:45 SO4.3.
Bogdan GHERASIM, Ștefan ANTOHE
Generative AI in Physics Education

9:45 – 10:00 SO4.4.

Calin-Andrei PANTIS-SIMUT, Nicolae FILIPOIU, Andrei MANOLESCU, George Alexandru NEMNES
Accelerating ab initio calculations by predicting charge densities using machine learning techniques

10:00 – 10:15 SO4.5.
Adrian Ionut BERCEA, Daniela DRAGOMAN
Polarization-Controlled Orbital Angular Momentum and Thermo-mechanical Response in Plasmonic Vortex Generators

10:15 – 10:30 SO4.6.
Stefan POPA, Vlad Andrei POPESCU, Andrei NAZIRU, Ana Maria LUPU, Dan G. MATEI, Alice DUMITRU, Cristian ALEXE, Claudiu STAN, Daniel URSESCU
Liquid-Sheet Targets for High-Repetition-Rate Experiments and Laser Diagnostics at ELI-NP

----------Pauză----------

SO5: 11:00 – 12:30 Prezentări orale
Moderatori: prof.univ.dr. Virgil BĂRAN, student-doctorand Andreea BĂRĂSCU

11:00 – 11:15 SO5.1.
Gabriela CIOCAN, Silke GROSS, Anca NEMUC
Moisture or dust: what sets the vertical extent of winter trade-wind clouds?

11:15 – 11:30 SO5.2.
Sorin ION, Adrian SONKA, Mirel BIRLAN
Tracing surface diversity among potentially hazardous asteroids within the NEOPOPS project

11:30 – 12:00 SO5.3.
Marilena-Ioana ZUZEAC, Adrian Bogdan ANTONESCU
Severe Wind-Producing Convective Storms in Romania: Spatial and Temporal Patterns, Data Limitations, and Impacts on critical sectors

12:00 – 12:15 SO5.4.
Nicolae FILIPOIU, Diana MANEA, Mihaela COSINSCHI, Alaa ALLOSH, Calin-Andrei PANTIS-SIMUT, Amanda Teodora PREDA, C. VISAN, George Alexandru NEMNES
Computational studies on materials in extreme conditions

12:15 – 12:30 SO5.5.
Gabriel-Paul FILIPCIUC
Self-interacting dark matter simulations using an N-body Monte-Carlo method

12:30 – 12:45 SO5.6
Maria-Ruxandra NĂSTASE
Vortex Beam Propagation - Beam Homogenisation with phase plates

12:45 – 13:00 SO5.7

Laura MUNTEANU (NECUȚĂ), Mihaela CAIAN

Identification and Differentiation of Atmospheric Environments Associated with Severe Icing Events in Romanian Airspace

----------Pauză----------

13:15 – 13:30 Concluzii şi închiderea lucrărilor conferinţei
Prof.univ.dr. Daniela DRAGOMAN, prof.univ.dr. Virgil BĂRAN