



Third International Conference of the National Institute of Physics Program

Day 1: Monday – June 2nd 2025

Time	Abstract title	Presenting author	Affiliation
8:50-9:20	Registration		
9:20-9:30	Welcome speech		
9:30-10:10	Session 1 - Plenary Session: Quantum Physics. Moderatore: Mimoza Hafizi		
9:30-9:50	On the problem of measurement in quantum theory	Rexhep Meidani	<i>Academy of Sciences of Albania</i>
9:50-10:10	Contribution of quantum theory to atomic structure and real-world applications	Floran Vila, Fatos Ylli	<i>Academy of Sciences of Albania, IANP, UT (Albania) & Mediterranean University (Albania)</i>
10:10-11:30	Session 1 - Plenary Session: Astrophysics		
10:10-10:50	Gamma-ray bursts: the biggest explosions in the Universe	Robert Mochkovitch	<i>Institut d'Astrophysique de Paris (France)</i>
10:50-11:30	The Euclid mission to study the dark universe	Silvano Tosi	<i>University of Genova (Italy)</i>
11:30-11:40	Coffee Break		
11:40-12:40	Session 2: Quantum Physics. Moderator: Silvano Tosi		
11:40-12:00	Modeling quantum correlations in e+e- annihilation	Albi Kerbizi	<i>Lund University (Sweden) & INFN Trieste (Italy)</i>
12:00-12:20	The quantum Pascal: Measuring pressure and vacuum with light	Sefer Avdiaj	<i>University of Prishtina (Kosovo)</i>
12:20-12:40	Cavity-modified electron-electron interactions in integer and fractional quantum Hall phases	Dalin Boriçi	<i>Université Paris Cité (France)</i>
12:40-14:00	Lunch Break		



14:00-15:00 Session 3: Condensed Matter Physics and Materials Science. Moderator: Dodë Prenga			
14:00-14:20	Microstructure and magnetic properties of high-energy ball-milled $\text{Sm}(\text{Fe}, \text{Co}, \text{Ti})_{12}$ alloys doped with Zr	Margarit Gjoka	<i>INN, NCSR Demokritos (Greece)</i>
14:20-14:40	Dewetting-induced structuring of polylactide films into micro- and nanoparticles	Karolina Głowacka	<i>University of Warsaw (Poland)</i>
14:40-15:00	Anisotropy in two-dimensional strongly correlated electronic systems	Orion Çiftja	<i>Prairie View A&M University (USA)</i>
15:00-15:10	Coffee Break		
15:10-16:30 Session 4: Condensed Matter Physics and Materials Science. Moderator: Margarit Gjoka			
15:10-15:30	Detecting nematic superconductivity via μSR : Recent progress	Toni Shiroka	<i>PSI & ETH Zürich (Switzerland)</i>
15:30-15:50	Laser-induced electrostriction	Ardian B. Gojani	<i>Secopta analytics (Germany)</i>
15:50-16:10	Contrasting c -axis and in-plane uniaxial stress effects on superconductivity and stripe order in $\text{La}_{1.885}\text{Ba}_{0.115}\text{CuO}_4$	Orion Gërguri	<i>PSI (Switzerland)</i>
16:10-16:30	Spin wave theory of itinerant Kondo lattice magnets in the strong coupling regime	Mario Frakulla	<i>Drexel University (USA)</i>
16:30-16:35	Closure of the Conference 1st Day		



Day 2: Tuesday – June 3rd 2025

Time	Abstract title	Presenting author	Affiliation
9:30-10:50 Session 5: Computational Physics, Simulations and Medical Physics. Moderator: Albi Kerbizi			
9:30-9:50	Advances and challenges in computer simulations of biological and molecular systems	Hiqmet Kamberaj	<i>International Balkan University (North Macedonia)</i>
9:50-10:10	Realistic simulations of the Earth's dynamo	Klaudio Peqini	<i>University of Tirana (Albania)</i>
10:10-10:30	Clinical commissioning of a commercial CT artefact reduction algorithm (iMAR) for hip implants radiotherapy planning	Xhulia Dosti	<i>Royal Berkshire Hospital (UK)</i>
10:30-10:50	Coefficients estimation of specific stopping power, angular scatter power, specific angular scatter power and their importance in the dose distribution in human body	Ervis Telhaj	<i>American Hospital Tirana (Albania)</i>
10:50-11:20 Coffee Break and Poster Session			
11:00-11:10	Constraining lens models using double quasars predicted for the Roman space telescope	Lindita Hamolli	<i>University of Tirana (Albania)</i>
11:10-11:20	Quantum technologies in cancer treatment: A new step in modern medicine	Ester Oshafi	<i>Aldent University (Albania), University of Tirana (Albania)</i>
11:20-12:20 Session 6: Cosmology and Astrophysics. Moderator: Robert Mochkovitch			
11:20-11:40	Exploring a novel Einstein-Rosen BTZ wormhole	Mendrit Latifi	<i>Heidelberg University (Germany)</i>
11:40-12:00	Polarimetric microlensing as a tool for breaking degeneracies in compact object lensing toward the galactic bulge	Marsida Laze	<i>University of Elbasan (Albania)</i>
12:00-12:20	Quantum gravity searches with neutrinos	Alba Domi	<i>ECAP-FAU (Germany)</i>
12:20-12:25	Closure of the Conference 2nd Day and Closing Remarks		