



First NIP Conference Program

Day 1

10 February 2022

Time	Abstract title	Field	Session	Presenter author	Affiliation
9:00	Welcome speech				
9:30	On the dichotomy: continuity-discreteness in physics (Invited)	General physics	1	Rexhep Meidani	Academy of Sciences of Albania
10:00	Binary pulsars and precision tests of General Relativity (Invited)	Astrophysics	1	Nathalie Deruelle	CNRS, France
10:30	Motion of an ensemble of magnetic microbeads in a microfluidic system	Materials Science	1	Ardian Gojani	BAM, Federal Institute for Materials research and Testing, Berlin, Germany
10:50	Beam dynamics and Wakefield simulations for free electron lasers	Optics	1	Erion Gjonaj	Institute for Accelerator Science and Electromagnetic Fields (TEMF), Technical University of Darmstadt, Schlossgartenstr. 8, 64289 Darmstadt, Germany
11:10	Aplikimi i integraleve jo të plota cilindrike në problemet e difraksionit	Optics	1	Burim Kamishi	Department of Physics, Faculty of Mathematical and Natural Sciences, University of Prishtina "Hasan Prishtina", Prishtina, 10000, Republic of Kosovo
11:25	Coffee break				



11:45	Searching for dark matter with optomechanical force sensors (Invited)	Astroparticle Physics	2	Giovanni Cantatore	Istituto Nazionale di Fisica Nucleare, Trieste, Italy
12:15	A stability criterion for feedback loops in frequency domain	System Dynamics	2	Naim Bajçinca	Department of Mechanical Engineering and Process Engineering, University of Kaiserslautern, Germany
12:35	SpaceTRiP simulation code developments for space radiation research	Biophysics	2	Albana Topi	Biophysics Department, GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, 64291, Germany
12:55	Lab-on-a-chip photonic biosensors for point-of-care applications	Biophysics	2	Aurel Ymeti	Applied Nanotechnology Group, Faculty of Life Sciences, Engineering and Design, Saxion University of Applied Sciences, PO Box 75000, 7500 KB Enschede, Overijssel, Netherlands Nanoalmyona BV, Heutinkstraat 463, 7535 AZ Enschede, Netherlands Department of Engineering Physics, FEM&EP, PUT, Tirana, Albania
13:15	Interactive molecular dynamics simulations of biological molecules	Biophysics	2	Hiqmet Kamberaj	Department of Computer Engineering, Faculty of Engineering, International Balkan University, Makedonsko-Kosovska Brigada BB, 1000 Skopje, Republic of North Macedonia
13:30	Lunch break				
14:30	Posters				
15:30	The transverse spin structure of nucleons	Nuclear Physics	3	Albi Kerbizi	INFN Sezione di Trieste, Via Valerio 2, 34127, Trieste, Italy



15:50	Search for a HH production in the $bbZZ$ final state at $\sqrt{s} = 13\text{TeV}$ with full run II data	Particle Physics	3	Ilirjan Margjeka	Dipartimento Iteraneo di Fisica dell' Università degli Studi "Aldo Moro" di Bari, INFN di Bari, Via Giovanni Amendola, 173, 70126 Bari BA, Italy; The CMS Experiment at CERN, Espl. Des Particules 1, 1211 Meyrin, Switzerland
16:05	Properties of Boriçi – Creutz fermions as minimally doubled lattice fermions	Particle Physics	3	Rudina Zeqirllari	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
16:20	The critical slowing of algorithms in LQCD simulations	Particle Physics	3	Dafina Xhako	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
16:35	Renormalized factorization formula for the $h \rightarrow \gamma\gamma$ decay process	Particle Physics	3	Bianka Mecaj	Department of Physics, Yale University, New Haven, CT 06510, USA
16:50	Coffee break				
17:10	The unique properties of confined systems of electrons in low dimensions	Condensed Matter Physics	4	Orion Ciftja	Department of Physics, Prairie View A&M University, Prairie View, Texas 77446, USA
17:30	A local-probe perspective on correlated quantum matter	Condensed Matter Physics	4	Toni Shiroka	Laboratorium für Festkörperphysik, ETH Zürich, CH-8093 Zürich, Switzerland Paul Scherrer Institut, CH-5232 Villigen PSI, Switzerland
17:50	Effect of Mischmetal (MM) and transition metal elements I doped on properties of the SmCo_5 intermetallics	Condensed Matter Physics	4	Margarit Gjoka	Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece
18:10	Closure				



Day 2

11 February 2022

Time	Abstract title	Field	Session	Presenter author	Affiliation
9:00	The storage ring proton electric dipole moment with the hybrid/symmetric lattice <i>(Invited)</i>	Particle Physics	5	Yannis Semertzidis	Center for Axion and Precision Physics Research, Institute for Basic Science (IBS), Daejeon 34141, Republic of Korea Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), Daejeon 34141, Republic of Korea
9:30	Galactic cosmic rays: hurdles toward the Moon and Mars <i>(Invited)</i>	Biophysics	5	Marco Durante	Biophysics Department, GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, 64291, Germany Institute of Condensed Matter Physics, Technische Universität, Darmstadt, 64289, Germany
10:00	Primordial black holes as dark matter candidates	Astrophysics	5	Mimoza Hafizi	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
10:20	Signatures from the dark Universe from observations in space	Astroparticle Physics	5	Konstantin Zioutas	University of Patras, Greece
10:35	About some correlations in GRB prompt emission	Astrophysics	5	Sonila Boçi	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
10:50	Coffee break				
11:10	Modelling equilibrium chemistry in laser induced plasmas and plasma chemical reactors <i>(Invited)</i>	Plasma Physics	6	Igor Gornushkin	BAM Federal Institute for Materials Research and Testing, Richard-Willstaetter-Strasse 11, 12489 Berlin, Germany



11:40	Zhvillimi I rrjetit kombëtar të monitorimit të rrezatimit mjedisor	Nuclear Physics	6	Entelë Gavoçi	Department of Radiation Protection and Monitoring Networks, Institute of Applied Nuclear Physics, University of Tirana, Albania
11:55	Variacionet e përqendrimeve të aerosoleve dhe joneve atmosferike bazuar në proceset e rikombinimit dhe të kapjes	Environmental Physics	6	Edmond Lukaj	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
12:10	Plasma – material interactions: from nuclear fusion reactors to semiconductor processing	Plasma Physics	6	Luxherta Buzi	T. J. Watson Research Center, 1101 Kitchawan Rd Yorktown Heights, NY 10598 USA
12:30	Electrodeposition of copper and chromium in aluminum alloys AA6063 and AA6060	Condensed Matter Physics	6	Liridon Sulejmani	Department of Physics, Faculty of Natural Science, University of Tetova, Tetovo, 1200, North Macedonia
12:45	Characterization and quantification of crystalline and amorphous phase assemblage in ternary binders during hydration	Materials Science	6	Elsa Qoku	Institute of Ceramics, Refractories and Composite Materials, Department of Building Chemistry and Building Composites, TU Bergakademie, 09599, Freiberg, Germany
13:00	Lifetimes measurement in the $f_{7/2}$ shell using the AGATA spectrometer	Nuclear Physics	6	Julgen Pellumaj	INFN, Laboratori Nazionali di Legnaro, Legnaro (Padova), Italy Dipartimento di Fisica e scienze della terra, Università degli Studi di Ferrara, Ferrara, Italy
13:15	Lunch break				
14:15	Fine grain cosmological streams of dark matter in solar neighborhood	Astroparticle Physics	7	Abaz Kryemadhi	Department of Computing, Math, and Physics / Messiah University, Mechanicsburg, PA / Pennsylvania / 17055, USA



14:35	Strong lensing time delay as a probe of cosmological parameters	Astrophysics	7	Lindita Hamolli	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
14:50	Comparison between cooling flow model and isothermal model, estimating S-Z effect	Astrophysics	7	Enkelejd Çaçë	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
15:05	Coffee break				
15:25	The CERN test beams and irradiation facilities (<i>Invited</i>)	Particle Physics	8	Eva Barbara Holzer	CERN, Geneva, Switzerland
15:55	Identifikimi dhe vlerësimi i kontributit të burimeve kryesore të ndotjes në fraksionin PM 2,5 të lëndës së grimcuar në ajër në një stacion urban në Tiranë	Environmental Physics	8	Nikolla Civici	Tirana Metropolitan University, Tirana, Albania
16:10	Solar energy in Albania: comparison of solar energy prediction models	Environmental Physics	8	Driada Mitrushi	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
16:25	Perspective of using artificial intelligence in diagnostic imaging	Medical Physics	8	Niko Hyka	Department of Diagnostic, Faculty of Medical Technical Sciences, University of Medicine, Tirana, 1000, Albania
16:40	Closure				



Posters

Day 1, 14:30 – 15:30

No	Abstract title	Field	Presenter author	Affiliation
1	Correlation and prediction of the viscosities of multicomponent liquid mixtures	Condensed Matter Physics	Arbër Zeqiraj	Department of Materials and Metallurgy, Faculty of Geosciences, University "Isa Boletini" Mitrovica, Mitrovica, 40000, Republic of Kosovo
2	Mbi rregullimin optimal të sistemeve cooperative	System Dynamics	Argtim Tika	Lehrstuhl für Mechatronik in Maschinenbau und Fahrzeugtechnik, Technische Universität Kaiserslautern, Kaiserslautern, Germany
3	Lattice QCD simulations with FermiQCD	Particle Physics	Dafina Xhako	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
4	The assessment of the tilt angle of a plain surface for optimal solar energy utilization	Environmental Physics	Driada Mitrushi	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
5	Comparison between cooling flow model an isothermal model, estimating S-Z effect	Astrophysics	Enkelejd Çaçë	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
6	A treatment planning for head tumors	Biophysics	Ester Oshafi	Aldent University, Tirana, Albania
7	Densities and speeds of sound in binary mixtures of 1-butanol with toluene, aniline, and N, N-dimethylaniline at 298.15 K and ambient pressure	Chemical Physics	Florentine Limani	Department of Physics, Faculty of Mathematical and Natural Sciences, University of Prishtina, Prishtina, 10000, Republic of Kosovo



8	Volumetric and refractometric study of the liquid mixtures containing propan-1-ol, pyridine, and benzene	Chemical Physics	Kaltrina Krasniqi	Department of Chemistry, Faculty of Mathematical and Natural Sciences, University of Prishtina, Prishtina, 10000, Republic of Kosovo
9	Noise monitoring areas in Durrës city	Environmental Physics	Marsida Klemo	Applied and Natural Science Department, Professional Studies Faculty, Aleksandër Moisiu University, Durrës, 2000 Albania
10	Modelimi i sforcimeve termike te një shufër metalike	Materials Science	Naim Syla	Department of Physics, Faculty of Mathematical and Natural Sciences, University of Prishtina, Prishtina, 10000, Republic of Kosovo
11	Characterization and production technology study of ancient copper alloy objects excavated in Albania	Materials Science	Olta Çakaj	Department of Physics, Faculty of Natural Sciences, University of Tirana, Tirana, 1000, Albania
12	Një vlerësim statistikor i aktivitetit sizmik në zonën e thyerjeve Frakull - Kepi i Rodonit	Geophysics	Rrapo Ormeni	Department of Seismology, Institute of Geosciences, Polytechnic University, Tirana, Albania
13	Struktura e bërthamave të breshërit dhe mekanizmi i formimit të tyre	Environmental Physics	Sylë Tahirsylaj	Department of Meteorology, Faculty of Agriculture and Veterinary Medicine, University of Prishtina "Hasan Prishtina", Prishtina, Republic of Kosovo
14	Properly design of PV power systems	Environmental Physics	Urim Buzra	Department of Physics Engineering, Faculty of Mathematical Engineering and Physics Engineering, Polytechnic University of Tirana, Tirana, 1000, Albania
15	An estimation of wind energy potential in Albania			