

4th Workshop of the Hellenic Institute of Nuclear Physics

New Aspects and Perspectives in Nuclear Physics - Ioannina 5-6 May

PROGRAMME

Friday, 5th of May

- 8:30 – 9:00 *Registration*
9:00 – 9:10 *Welcome address from the Rector of the University of Ioannina*
9:10 – 9:20 *Welcome address from the Dean of the School of Sciences*
9:20 – 9:30 *Welcome address from the President of HINP*

Session I: Chair George Lalazissis

- 9:30 - 10:20 **Peter Ring** (TUM-Germany)
Covariant density functionals in nuclear physics and their microscopic origin
10:20 - 11:00 **Nicolas Alamanos** (IRFU/CEA/SACLAY-France)
Evolution of ideas in direct and fusion reactions

11:00 - 11:30 coffee break

Session II: Chair Panagiotis Misaelides

- 11:30 - 12:10 **Krzysztof Rusek** (HIL-University of Warsaw-Poland)
Everything is coupled: reactions with weakly bound projectiles
12:10 - 12:50 **Nicholas Keeley** (NCBJ-Poland)
Light charged particle production in reactions induced by weakly-bound projectiles: Still an open question
12:50 - 13:30 **Dimitra Pierroutsakou** (INFN Napoli- Italy)
The EXOTIC project at INFN-LNL

13:30 - 15:00 Workshop photo / lunch break

Session III: Chair Dennis Bonatsos

- 15:00 - 15:40 **Francesco Cappuzzello** (University of Catania and INFN- Italy)
The nuclear matrix elements of $0\nu\beta\beta$ decay and the NUMEN project at INFN-LNS
15:40 - 16:10 **Charalampos Moustakidis** (AUTH - Greece)
Speed of sound bounds, tidal polarizability and gravitational waves from neutron stars
16:10 - 16:40 **Theodoros Gaitanos** (AUTH - Greece)
Momentum-dependent mean-field dynamics for in-medium γ -interactions
16:40 - 17:10 **Konstantinos Karakatsanis** (AUTH – Greece)
Spin-orbit splittings of neutron states in $N = 20$ isotones from covariant density functionals and their extensions

17:10 - 17:40 coffee break

Session IV: Chair Charalampos Moustakidis

- 17:40 - 18:10 **Dennis Bonatsos** (NCSR “Demokritos” - Greece)
A new symmetry for heavy nuclei: Proxy-SU(3)
- 18:10 - 18:25 **Ioannis Assimakis** (NCSR “Demokritos” - Greece)
Proxy-SU(3) symmetry in heavy nuclei: Foundations
- 18:25 - 18:40 **Adriana Martinou** (NCSR “Demokritos” - Greece)
Parameter-independent predictions for shape variables of heavy deformed nuclei in the proxy-SU(3) model
- 18:40 - 18:55 **Smaragda Sarandopoulou** (NCSR “Demokritos” - Greece)
Prolate dominance and prolate-oblate shape transition in the proxy-SU(3) model
- 18:55 Closing of Day 1 of the Workshop

20:00 – 23:00 *Social Dinner*

Saturday, 6th of May

Session I: Chair Efstathios Stiliaris

- 9:00 - 9:40 **Aldo Bonasera** (Texas A&M- USA)
Nuclear Physics Using Lasers
- 9:40 - 10:20 **Martin Veselsky** (Institute of Physics, SAS, Slovakia)
EoS studies in nucleus-nucleus collisions: from Coulomb barrier to LHC
- 10:20 - 10:50 **George Souliotis** (NKUA - Greece)
Production of Neutron-Rich Rare Isotopes toward the astrophysical r-process path
- 10:50 - 11:15 **Nikolaos Nicolis** (UOI – Greece)
Fission in high-energy proton induced spallation reactions

11:15 - 11:40 *coffee break*

Session II: Chair George Souliotis

- 11:40 - 12:10 **Efstathios Stiliaris** (NKUA -Greece)
AMIAS: A Model Independent Analysis Scheme - From Hadronics to Medical Imaging
- 12:10 - 12:25 **Lefteris Markou** (Cyl – Cyprus)
On Proton Deformation: Multipole Amplitude Extraction from Photoproduction Data with AMIAS
- 12:25 - 12:40 **Loizos Koutsantonis** (Cyl - Cyprus)
AMIAS: A Novel Statistical Analysis Method for Tomographic Image Reconstruction in the Emission Tomography
- 12:40 - 12:55 **Nikolaos Rapsomanikis** (NKUA - Greece)
PhoSim: A Simulation Package designed for Macroscopic and Microscopic Studies in the Time-Resolved Optical Tomography
- 12:55 - 13:15 **Maria Zioga joint talk with Maria Mikeli** (NKUA - Greece)
Mastering Conic Sections for a Direct 3D Compton Image Reconstruction

13:15 - 14:30 *lunch break*

Session III: Chair Xenofon Aslanoglou

- 14:30 - 15:00 **Panagiotis Misaelides** (AUTH - Greece)
Study of organic-rich limestones of the Epirus region (Greece) using nuclear and synchrotron radiation techniques
- 15:00 - 15:30 **Konstantinos Stamoulis** (UOI - Greece)
Paleoseismology: Defining the seismic history of an area with the use of the OSL dating method
- 15:30 - 15:45 **Chrysoula Betsou** (AUTH - Greece)
 ^{210}Pb and ^7Be concentrations in moss samples from the region of Northern Greece
- 15:45 - 16:00 **Angeliki Asimakopoulou** (NKUA - Greece)
Systematic studies of proton-induced spallation reactions with microscopic and phenomenological models
- 16:00 - 16:15 **Sofia Papadimitriou** (NKUA - Greece)
Microscopic description of neutron-induced fission with the Constrained Molecular Dynamics (CoMD) Model: recent progress
- 16:15 - 16:30 **Athanasios Papageorgiou** (NKUA - Greece)
Neutron-rich rare isotope production with stable and radioactive beams in the mass range $A = 40-60$ at 15 MeV/nucleon
- 16:30 - 16:45 **Onoufrios Sgouros** (UOI - Greece)
Study of $^7\text{Be}+^{28}\text{Si}$ at near barrier energies: Elastic scattering and alpha production
- 16:45 - 17:00 **Vasileios Soukeras** (UOI - Greece)
A global study of the $^6\text{Li}+p$ system at near barrier energies in a CDCC approach
- 17:00 Announcement of HINPW5 / Workshop closing