

## **Program**

**5-6 Jun 2026**



# **34th Annual Symposium of the Hellenic Nuclear Physics Society, HNPS2026**

Lamia, University of Thessaly, Physics Department, Library Amphitheatre  
3rd km Old National Road Lamia-Athens 35100, Lamia Greece

# Friday 5 June — Main Programme

Opening		
08:00-09:00	Registration	
09:00-09:30	Welcome addresses	
Honorary Nomination		
09:30-09:45	Honorary Nomination	Professor Dario Vretenar
Invited Talk		
Session Chair: V. Prassa		
09:45-10:15	Microscopic Studies of Fission Dynamics	Dario Vretenar
Nuclear Structure: Models and Methods		
Session Chair: D. Vretenar		
10:15-10:30	The B4/2 anomaly: Observation and theoretical interpretation	Dennis Bonatsos
10:30-10:45	Evidence of triaxiality in Mo and Ru nuclei	Dimitrios Petrellis
10:45-11:00	High-K isomers in the $N \approx 116$ shape-transition region and in oblate nuclei within the Relativistic Hartree-Bogoliubov theory	Konstantinos Karakatsanis
11:00-11:15	Exploring Triaxial Features in Quadrupole Collective Bands of Even-Even Yb Isotopes	Polytimos Vasileiou
11:15-11:30	Ground-state properties of finite nuclei with astrophysical interest in extreme magnetic fields, via covariant density functional theory	Ioannis Mavroudis
11:30-11:45	Physics-Informed Neural Networks for Solving the Three-Dimensional Schrödinger Equation in Woods-Saxon Nuclear Potential	Iraklis Spyrou
11:45-12:15	Coffee break	
Nuclear Reactions and Experimental Methods		
Session Chair: Th. Mertzimekis		
12:15-12:30	Neutron spectrum deconvolution by Bayesian methods	Achmet Chalil
12:30-12:45	Advancing Beam Diagnostics on ESS Neutron Beamlines: Simulation and Validation of Ionization Chamber Monitors	E. Samouilidis
12:45-13:00	Differential cross-section measurements and R-matrix calculations for the elastic scattering of low energy protons on $^{19}\text{F}$ , suitable for IBA purposes	Evangelia Taimpiri
13:00-13:15	Differential cross-section measurements for $^3\text{He}$ -induced reactions and elastic scattering on $^{16}\text{O}$	Vasileios Stefanidis Toulkeridis
13:15-13:30	Measurement of the $^{18}\text{O}(d,\alpha)^{16}\text{N}$ reaction cross sections for NRA purposes	Stavros Karachristos
13:30-13:45	Development of a Gas Ionisation Detector for the ToF-ERDA setup at NCSR Demokritos	Anastasia Ziagkova
13:45-14:00	$^{177}\text{Yb}$ , $^{178}\text{Yb}$ ground-state lifetimes	Margarita Efsthathiou
Note: All contributed and online talks are scheduled as 15-minute slots (12 min presentation + 3 min questions).		

# Friday 5 June — Afternoon Programme

14:00-14:45	Conference Photo and Lunch Break	
<b>Poster session</b>		
14:45-15:30	Poster session — see page 4	
<b>Nuclear Astrophysics, Dense Matter and Compact Stars</b>		
Session Chair: A. Martinou		
15:30-15:45	Multi-Strangeness non-linear potentials & the hyperon-puzzle in neutron stars	Theodoros Gaitanos
15:45-16:00	Estimating neutron-capture rate uncertainties for iron isotopes using shell-model-based level densities in TALYS	Sofia Karampagia
16:00-16:15	Nuclear Imprints on Neutron-Star Properties: A Universal-Relation Perspective	Polychronis Koliogiannis
16:15-16:30	Neutron star dissipative tidal deformation originated by the bulk viscosity of npe matter	Alkiviadis Kanakis-Pegios
16:30-16:45	Thermal effects on hadron-quark phase transition and the structure of proto-compact stars	Pavlos Laskos-Patkos
16:45-17:00	Dark Neutron decay in Neutron Stars	Michail Vikiaris
17:00-17:15	Modeling the transition from Hadron Gas to deconfined Quark Matter via the Albright-Kapusta-Young switch function.	Giorgos Tsalis
17:15-17:45	Coffee Break	
<b>Online Session</b>		
Session Chair: A. Lagoyannis		
17:45-18:00	Statistical Evidence for Oscillatory Components in Neutron-Capture Cross Sections	Thanos Stamatopoulos
18:00-18:15	Probing Explosive Nucleosynthesis through ( $\alpha$ ,n) and (p,n) Reactions Using SECAR	Pelagia Tsintari
18:15-18:30	Probing nuclear interactions à la Rutherford: insights on $^4\text{He}$ from $\alpha$ scattering	Vasileios Soukeras
18:30-18:45	First results of the neutron induced fission cross section measurement of Uranium-236 at n_TOF facility	Zinovia Eleme
18:45-19:00	Charged-particle discrimination using an NTD silicon detector at n_TOF/CERN	Styliani Goula
<b>General Assembly of HNPS</b>		
19:00-20:00	General Assembly of HNPS	
<b>Conference dinner</b>		
21:00	Green Loft Lamia Plateia Agiou Louka, 35100 Lamia	

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# Saturday 6 June

## Radiation Measurements, Dosimetry, Environmental Radioactivity and Applications

Session Chair: A. Ioannidou and I. Stamatelatos

09:30-09:45	Geological Analysis of Radon Exhalation on Cephalonia Island with In Situ Measurements	Ioannis Kaissas
09:45-10:00	Assessment of Occupational Radiation Exposure in DEMO Maintenance Operations: Application to the ECRH System	Theodora Vasilopoulou
10:00-10:15	Preliminary results of radon exhalation measurements in Northern Greece	Athanasios Ouzounis
10:15-10:30	Evaluation of $^{210}\text{Pb}$ -based radiochronology models at four deep basins in Aegean Sea	Zoi Maniati
10:30-10:45	The experimental set up and the application of a marine mini gamma-ray spectrometer for the identification of radioactive objects	Ioanna Kora
10:45-11:00	Proton dosimetry at Oslo Cyclotron Laboratory for radiobiological experiments*	Antigoni Kalamara
11:00-11:15	Patient-Level SPECT Myocardial Perfusion Classification Using Tracer-Aware Deep Learning	Dimitrios Samaras
11:15-11:30	Combined Photopeak and Compton Analysis for Radiological Characterization of Activated Steel in Nuclear Reactor Decommissioning	Angelos Markopoulos
11:30-11:45	Preliminary Study of Radiation Exposure Following a Nuclear Weapon Test	Nikos Salpadimos
11:45-12:15	Coffee Break	

## Neutron Physics, Facilities and Cross-Section Measurements

Session Chair: M. Diakaki

12:15-12:30	Measuring detector efficiency in $\gamma$ spectroscopy: comparison of Monte Carlo simulations with experimental measurements	Anastasios Kanellakopoulos
12:30-12:45	Neutron induced cross-sections on Zr isotopes in the energy range 16-18 MeV	Veatriki Michalopoulou
12:45-13:00	Determination of $^{14}\text{N}(n,p)^{14}\text{C}$ MACS using activation measurements and AMS	Ioanna Goula
13:00-13:15	Development of a high-resolution neutron transmission station at the GELINA facility	Georgios Gkatis
13:15-13:30	Upgrade of the ELISA setup at the GELINA facility for neutron scattering experiments from 500 keV to 8 MeV	Anna Karakaxi
13:30-13:45	Study of a New Liquid Scintillator Array for Neutron Scattering Cross Section Measurements at NCSR Demokritos	Lamprianos Amanatidis
13:45-14:00	Neutron Flux Measurement with a Diamond Detector System in Harsh Environmental Conditions	Kalliopi Kaperoni
14:00-14:15	Activation cross section measurements of short-lived reaction products on Mo isotopes induced by 16 to 20 MeV neutrons	Zoi Bari
14:15-14:30	The $^{243}\text{Am}(n,f)$ cross-section measurement at the EAR2 of the CERN n_TOF facility	Nikolaos Kyritsis

## Closing

14:30-14:45	Poster Prizes	
14:45-15:00	CLOSING REMARKS HNPS2026	

Note: All contributed and online talks are scheduled as 15-minute slots (12 min presentation + 3 min questions).

# Friday 5 June — Poster Session

## Poster Session

14:45-15:30 Poster presentations

### Poster Presentations

P-1	Application of Gaussian Process Regression for Total Kinetic Energy in Neutron-Induced Fission	Martha Papadopoulou
P-2	Predicting Fragment Kinetic Energy Distributions in Nuclear Fission using a Bayesian Mixture Density Network	Christos Bompotas
P-3	Evaluating Neutron-Induced Fission Yields using Gaussian Process Regression	Konstantinos Stergiou
P-4	Reconstructing Compact Objects Equation of State (EoS) via Machine and Deep Learning	Ioannis Stergakis
P-5	Machine Learning and Neural Network Approaches for the Classification of Compact Stars	Despoina Neraki
P-6	On the Nature of the Central Compact Object in HESS J1731-347 within Hadronic and Kaon-Condensed Frameworks	Dimitrios Nanopoulos
P-7	Simulation studies of a MPGD-based Neutron Beam Monitoring system for ESS	Alexandros Gardikiotis
P-8	Investigation of $\alpha$ -Cluster Transfer in Peripheral Collisions of $^{40}\text{Ca}$ at 12.3 MeV/nucleon	Chrysi Giannitsa
P-9	Multinucleon Transfer and Incomplete Fusion at 15 MeV/nucleon for the $^{86}\text{Kr} + ^{27}\text{Al}$ System	Konstantinos Gkatzogias
P-10	Astrophysical S-factors for alpha reactions with $^{130,132,134}\text{Ba}$	George Pappas
P-11	Gamma-ray spectroscopy of $^{184}\text{Os}$ studied via the $^{176}\text{Yb}(^{12}\text{C},4n)^{184}\text{Os}$ fusion-evaporation reaction*	Vasilis Gkionis
P-12	Assessment of $^{161}\text{Tb}$ Production from Natural Gadolinium Using Laser-Generated Fast Neutrons at ELI-ALPS	Nikoletta Giannakou
P-13	Evaluation of different materials as potential trigger foils for MCP detectors	Anastasia Ziagkova
P-14	Quantifying C profiles in heavy ion irradiated Fe(50nm)/SiO <sub>2</sub> (300nm)/Si stacks by ion beam analysis techniques	Eleni Mitsi
P-15	Monte Carlo Characterization of a Neutron Irradiation System for Radiobiological Experiments	Apospori Eirini
P-16	Development of a Methodology for Gamma-Spectrometric Analysis of Neutron Irradiated Metallic Samples	Vasileia Saridaki
P-17	Comparative Analysis of Turbine Leading and Reactor Leading Operating Modes in an iPWR Simulator under Load-Following Conditions	Ioannis Kaissas
P-18	Neutron Flux at the Boundaries of Rectangular Subcritical Piles with a Point Am-Be Neutron Source at their Mass Centers for Various Moderation Scenarios	N.P. Petropoulos