

PROGRAMME

Monday, June 26

Morning session

- 09:30 – 10:05 Opening of the workshop and talk of *Jordan Stamenov*,
Director of INRNE-Sofia
- 10:05 – 10:40 *Rupert Machleidt*: The nuclear force problem: Is the never-ending
story coming to an end?
- 10:40 – 11:00 *Coffee*
- 11:00 – 11:35 *Dorin Poenaru*: Proca equations of a massive vector boson field
- 11:35 – 12:10 *Francesca Sammarruca*: The nuclear equation of state: a tool to
constrain hadronic interaction
- 12:10 – 12:45 *Aldo Covello*: Shell-model calculations with modern nucleon-
nucleon potentials
- 16:30 – 17:00 *Coffee*

Afternoon session

- 17:00 – 17:35 *Jerry Draayer*: Light nuclei in the framework of the symplectic
no-core shell model
- 17:35 – 18:10 *Radu Gherghescu*: Three center shell model
- 18:10 – 18:25 *Break*
- 18:25 – 18:45 *Raquel Alvarez-Rodriguez*: Isospin mixing and Fermi transitions
within a mean field approach
- 18:45 – 19:20 *Dimitri Van Neck*: Quasiparticle properties in a density functional
framework
- 19:20 – 19:40 *Cesar Fernandez-Ramirez*: Nucleon resonances: study of their
properties through photo pion production

Tuesday, June 27

Morning session

- 09:30 – 10:05 *Anton Antonov*: Superscaling analyses of inclusive electron
scattering and their extension to charge-changing neutrino
cross sections in nuclei
- 10:05 – 10:40 *Maria B. Barbaro*: Superscaling in lepton-nucleus scattering

- 10:40 – 11:00 *Coffee*
- 11:00 – 11:35 *Carlotta Giusti*: Neutrino-Nucleus Quasielastic Scattering in a relativistic model
- 11:35 – 12:10 *Hiko Morita*: A Study of final state interaction in the ${}^4\text{He}(e,e'p){}^3\text{H}$ reaction
- 12:10 – 12:45 *Daniela Rohe*: First measurement of the spectral function at high energy and momentum in medium-heavy nuclei

15:30 – 16:00 *Coffee*

Afternoon session

- 16:00 – 16:35 *Anthony Cowley*: Multistep direct mechanism in the $(\vec{p}, {}^3\text{He})$ inclusive reaction on ${}^{59}\text{Co}$ and ${}^{93}\text{Nb}$ at incident energies between 100 and 160 MeV
- 16:35 – 17:10 *Elena Zemlyanaya*: Calculations of nucleus-nucleus microscopic optical potentials and the respective elastic differential and total reaction cross sections
- 17:10 – 17:45 *Armando Relaño*: Chaos and 1/f noise in quantum many-body system
- 17:45 – 18:00 *Break*
- 18:00 – 18:35 *Hendrik Geyer*: Recent developments in non-hermitian quantum mechanics
- 18:35 – 19:10 *Nicola Lo Iudice*: Collective modes in nuclei: an exact microscopic multiphonon approach
- 19:10 – 19:30 *Stoyan Mishev*: Description of low-lying states in odd open-shell nuclei in the framework of the quasiparticle-phonon model

Wednesday, June 28

Morning session

- 09:30 – 10:05 *Werner Scheid*: Rotation modes in the dinuclear model
- 10:05 – 10:25 *Plamen Yotov*: High order angular momentum dependence of a nuclear rotation Hamiltonian
- 10:25 – 10:45 *Nikolay Minkov*: Description of parity-doublet splitting in odd-A nuclei
- 10:45 – 11:05 *Coffee*

- 11:05 – 11:40 *Eric Voutier*: Nucleon structure and generalized parton distributions
- 11:40 – 12:15 *Kristina Sviratcheva*: Dynamical symmetries reflected in realistic interactions
- 12:15 – 12:35 *Beatriz Errea*: Generalization of Richardson-Gaudin models to rank 2 algebras
- 12:35 – 12:55 *Huben Ganev*: Description of the odd mass nuclei within the framework of the Interacting Vector Boson Model
- 15:30 – 16:00 *Coffee*

Afternoon session

- 16:00 – 16:35 *Maria M. Garzelli*: Correlations in the interaction of ion beams with matter
- 16:35 – 17:10 *Dimitar Balabanski*: Evidence for X (5) critical point symmetry in ^{128}Ce
- 17:10 – 17:45 *Dennis Bonatsos*: The X(3) model and its connection to the shape/phase transition
- 17:45 – 18:00 *Break*
- 18:00 – 18:35 *Chavdar Stoyanov*: Nuclear structure calculation in large domain of excitation
- 18:35 – 18:55 *Dimitar Tarpanov*: Pygmy resonances in tin isotopic chain

Thursday, June 29

EXCURSION

Friday, June 30

Morning session

- 09:30 – 10:05 *Heinigerd Rebel*: The highest energies in the universe
- 10:05 – 10:40 *Iliana Brancus*: Flux and charge ratio of atmospheric muons
- 10:40 – 11:00 *Coffee*
- 11:00 – 11:35 *Pavel Zarubin*: Clustering in fragmentation of relativistic nuclei
- 11:35 – 11:55 *Ralitsa Stanoeva*: Interactions of relativistic ^8B nuclei with photoemulsion nuclei