

38th international workshop on
38th INT NUCLEAR
T HEORY

23 June -29 June 2019

Rila Mountains, Bulgaria

<http://ntl.inrne.bas.bg/workshop/2019/>

PROGRAMME

Monday, June 24

MORNING session

09:30 – 09:45 **OPENING**

09:45 – 10:15 *J. Draayer*: *Ab Initio* symmetry adapted shell model studies

10:15 – 10:45 *S. Gmuza*: Mapping of Dirac-Hartree-Fock approach onto the relativistic mean field model

10:45 – 11:15 COFFEE

11:15 – 11:45 *Shan-Gui Zhou*: Multidimensionally-constrained covariant density functional theories

11:45 – 12:15 *I. Molodtsova*: The triplet of nuclear scissors modes

12:15 – 12:45 *V. Samarin*: Role of dinuclear collective excitations and nucleon states in fusion dynamics

AFTERNOON session

17:00 – 17:30 COFFEE

17:30 – 18:00 *A. Martinou*: A mechanism for shape coexistence

18:00 – 18:30 *N. Minkov*: Study of pear-shape effects in the spectra of even-even nuclei

18:30 – 19:00 *S. Lalkovski*: Nuclear data project

Tuesday, June 25

MORNING session

- 09:30 – 10:00 *C. Giusti*: Microscopic optical potential for elastic proton-nucleus scattering from chiral forces
- 10:00 – 10:30 *G. Popa*: *Ab initio* nonlocal NCSM one-body densities as input to folding potentials for proton-nucleus scattering
- 10:30 – 11:00 *A. Shukla*: Nuclear structure effects in bubble nuclei
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *J. Rożynek*: The symmetry energy in the dense nuclear matter
- 12:00 – 12:30 *P. Baganu*: Shapes coexistence in the frame of the Bohr model
- 12:30 – 13:00 *Y. Lashko*: Two-cluster potential energy and the Pauli principle

AFTERNOON session

- 15:30 – 16:00 COFFEE
- 16:00 – 16:30 *M. Gaidarov*: Isotopic and isotonic evolution of the symmetry energy and skins of mirror nuclei
- 16:30 – 17:00 *H. Mebrek*: Description of the spectroscopic properties of ^{26}Si
- 17:00 – 17:30 *M. Ivanov*: Realistic spectral function model for charged-current quasielastic-like neutrino and antineutrino scattering cross sections on ^{12}C
- 17:30 – 18:00 *S. Mishev*: Transition densities in odd-A nuclei
- 18:00 – 18:30 *P. Radovanov*: Transfer to TVSA-12 fuel assembly in Kozloduy Nuclear Power Plant
- 18:30 – 19:00 *G. Deyanova*: Factors for building new nuclear capacities in the light of energy markets liberalization in European Union

POSTER session

- 19:00 – 19:30 *N. Zabari*: Bizarreness of symmetry energy behavior in peculiar cases of meson interactions
- Ch. Velchev*: Alternative theoretical approaches in the examination of the interaction of nucleons in the atomic nuclei

Wednesday, June 26

MORNING session

- 09:30 – 10:00 *D. Bonatsos*: Manifestations of SU(3) symmetry in heavy deformed nuclei
- 10:00 – 10:30 *E. Balbutsev*: Wigner Function Moments method and RPA – similarity and difference
- 10:30 – 11:00 *V. Nesterenko*: Toroidal mode in nuclei: recent progress
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *P. Zhao*: Covariant density functional theory for nuclear spectroscopy: on and beyond the mean field
- 12:00 – 12:30 *A. Vdovin*: Skyrme-TQRPA calculations of stellar electron capture rates
- 12:30 – 13:00 *A. Repko*: Nuclear excitations by spurious-free Skyrme QRPA and beyond

AFTERNOON session

- 15:30 – 16:00 COFFEE
- 16:00 – 16:30 *M. Oulne*: Shape phase transition in nuclei within a correlation between two quantum concepts
- 16:30 – 17:00 *K. Drumev*: Shapes and shape phase transitions in even-even *sd*- and *pf*-shell nuclei within the Algebraic Microscopic Pairing-plus-Quadrupole Shell Model
- 17:10 – 17:30 *Ch. Christov*: Are the medium modifications of the nucleon structure suggested by a chiral quark-meson theory reliable?
- 17:30 – 18:00 *Y. Mutafchieva*: Unified equation of state for magnetar crusts
- 18:00 – 18:30 *Z. Stoyanov*: Nuclear abundances in the crust of magnetars
- 20:00 – **OFFICIAL DINNER**



Friday, June 28

MORNING session

- 09:30 – 10:00 *T. Nakamura*: Recent progress of spectroscopic studies of nuclei near and beyond the neutron drip line
- 10:00 – 10:30 *A. Adahchour*: Bohr Hamiltonian with Hulthén plus ring-shaped potential for triaxial nuclei with deformation-dependent mass term
- 10:30 – 11:00 *H.M. Mittal*: Description of identical superdeformed bands in $A \sim 190$ mass region using soft rotor formula
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *A. Kurteva*: Beta-decay $^{231}\text{Th} \rightarrow ^{231}\text{Pa}$
- 12:00 – 12:30 *G. Ismail*: Accepting l_{max} as a limiting angular momentum for complete fusion
- 12:30 – 13:00 *H. Maridi*: Energy dependence of the optical potential for proton-nucleus scattering up to 1 GeV/nucleon

13:00 – 13:10 **CLOSING**