

37th international workshop on
NTNUCLEAR
THEORY

24 June -30 June 2018

Rila Mountains, Bulgaria

<http://ntl.inrne.bas.bg/workshop/2018/>

PROGRAMME

Monday, June 25

MORNING session

09:30 – 09:45 **OPENING**

09:45 – 10:15 *J. Terasaki*: Consistency Examinations of Calculations of Nuclear Matrix Elements of Double- β Decay by QRPA

10:15 – 10:45 *A. Vitturi*: Two-Particle Transfer Reactions: A Key Tool for the Study of Phase Transitions in Nuclei

10:45 – 11:15 COFFEE

11:15 – 11:45 *V. Samarin*: Time-Dependent Analysis of Multinucleon Transfer Reactions with Heavy Nuclei

11:45 – 12:15 *E. Suraud*: Dissipation in Quantum Time Dependent Mean Fields

AFTERNOON session

17:00 – 17:30 COFFEE

17:30 – 18:00 *N. Minkov*: Electromagnetic Properties of the ^{229m}Th Isomer

18:00 – 18:30 *A. Martinou*: Magic Numbers of Shape Coexistence

18:30 – 19:00 *S. Lalkovski*: $j - 1$ Anomaly Across the Shells

Tuesday, June 26

MORNING session

- 09:30 – 10:00 *R. Machleidt*: What is Wrong with Our Current Nuclear Forces
- 10:00 – 10:30 *X. Viñas*: New Gogny Interaction Suitable for Astrophysical Calculations
- 10:30 – 11:00 *A. Antonov*: Temperature Dependence of the Volume and Surface Contributions to the Nuclear Symmetry Energy within the Coherent Density Fluctuation Model
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *C. Mondal*: Understanding the Interdependence of Different Symmetry Energy Elements
- 12:00 – 12:30 *M. Oudih*: Tensor Force Effect on the Structure Evolution in Si Isotopes
- 12:30 – 13:00 *A. Galoyan*: Strange Particle Production in Hadronic Interactions

AFTERNOON session

- 15:40 – 16:00 COFFEE
- 16:00 – 16:30 *A. Kaur*: The Symmetry Energy in Mass-Symmetric and Mass-Asymmetric Heavy-Ion Reactions
- 16:30 – 17:00 *M. Ivanov*: Charged-Current Quasielastic (Anti)Neutrino Cross Sections on ^{12}C with Realistic Spectral Functions Including Meson-Exchange Contributions
- 17:00 – 17:30 *S. Dimitrova*: Large Scale Shell Model Calculations for Even Xenon Isotopes
- 17:30 – 18:00 *R. Mittal*: Probing Surface Diffuseness of Nucleus-Nucleus Interaction Potential

POSTER session

- 18:00 – 19:00 *Y. Benbouzid*: $T = 1$ Pairing and Number-Projection Effects on the Spectroscopic Factor of One-Proton Stripping Reactions within the Picket-Fence Model

Wednesday, June 27

MORNING session

- 09:30 – 10:00 *D. Bonatsos*: Why Nilsson Quantum Numbers Remain Good at Moderate Deformations?
- 10:00 – 10:30 *F. Sammarruca*: From Nuclei to Neutron Stars with a Microscopic Approach
- 10:30 – 11:00 *J. Rozynek*: Nucleon Properties and Nuclear Equation of State
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *N. Buyukcizmeci*: Investigations of Binding Energies of Hypernuclei
- 12:00 – 12:30 *E. Zemlyanaya*: Microscopic Optical Potential Model for Analysis of the $^{12,14}\text{Be} + ^{12}\text{C}$ Experimental Data

AFTERNOON session

- 15:40 – 16:00 COFFEE
- 16:00 – 16:30 *S. Ait Elkorchi*: γ -Rigid Triaxial Nuclei in the Presence of a Minimal Length via a Quantum Perturbation Method
- 16:30 – 17:00 *K. Drumev*: Topics Recently Addressed by the Algebraic Microscopic Pairing-Plus-Quadrupole Shell Model
- 17:10 – 17:30 *I. Moumene*: Comparison between Coulomb and Hulthen Potentials within Bohr Hamiltonian for γ -Rigid Nuclei in the Presence of Minimal Length
- 17:30 – 18:00 *V. Samarin*: Study of Dynamics of External Neutrons in Reactions $^{7,9,11}\text{Li} + ^{28}\text{Si}$
- 19:30 – **OFFICIAL DINNER**

Thursday, June 28

EXCURSION



Friday, June 29

MORNING session

- 09:30 – 10:00 *A. Kurteva*: Comparison of the Description of Nuclear β -Decay in Dynamic Collective Model and Microscopic Quasiparticle-Phonon Model
- 10:00 – 10:30 *G. Filippov*: Effect of Polarization Phenomena on Interaction of Projectile with a Solid Target
- 10:30 – 11:00 *M. Bouhelal*: Level Structure of ^{30}S of Astrophysical Importance in rp reaction $^{29}\text{P}(p, \gamma)^{30}\text{S}$
- 11:00 – 11:30 COFFEE
- 11:30 – 12:00 *C. Das*: Equation of State of Neutron-Rich Matter
- 12:00 – 12:30 *Z. Stoyanov*: Neutron Matter in Magnetar Crusts
- 12:30 – 13:00 *Y. Mutafchieva*: Structure, Composition and Equation of State of Magnetar Inner Crusts
- 13:00 – 13:10 **CLOSING**