IWNT42, 29 June – 5 July 2025, PROGRAMME

Monday, 30 June

Morning session

09:30 - 09:45	*Opening*
09:45 - 10:05	**S. Pate:** “Progress on constraining the strange quark contribution to the proton axial form factor”
10:05 - 10:25	**M. Sharma:** “Doubly magic nuclei near *r-p* process region unravelled in deformed space”
10:25 - 10:45	**E. Voutier:** “The Ce+BAF Jefferson Lab upgrade initiative”
10:45 - 11:15	*Coffee*
11:15 – 11:35	**E. Suraud** (remote)**:** “Surprises with mean field dynamics”
11:35 – 11:55	**L. Fortunato:** “Three-body models of exotic nuclei and molecular states in light nuclei”
11:55 – 12:15	**Y.-M. Jiang**: “Octupole deformation in ^{220,222,224,226}Rn”
12:15 – 12:35	**L. Ferreira** (remote)**:** “Nuclear structure at the limits of proton stability”

Afternoon session

16:00 - 16:30 *Coffee*

16:30 – 16:50	**A. Botvina:** “Nucleation of rapidly expanding nuclear matter in intermediate energy nuclear reactions”
16:50 – 17:10	**N. Buyukcizmeci:** “A comparative study of nuclei/hyper nuclei formation phenomena in heavy ion collisions”
17:10 – 17:30	**T. Saito:** “Hunting for hypernuclei with machine learning”
17:30 – 17:40	*Break*
17:40 – 18:00	**A. Afanasjev** (remote)**:** “Global optimizations of covariant energy density functionals: challenges, solutions and global calculation errors”
18:00 – 18:20	**D.-D. Zhang:** “Multinucleon transfer reaction with time-dependent covariant density functional theory”
18:20 – 18:40	**P. Laskos-Patkos** (remote)**:** “Non-radial oscillation modes of twin stars in the Cowling approximation”
18:40 – 19:00	**H. Pasca:** “Cluster effects in the fission of heavy nuclei”

Tuesday, 1 July

Morning session

09:30 - 09:50	**J. Meng:** “Nuclear structure and dynamics in relativistic density functional theory”
09:50 - 10:10	**Bao-An Li:** “Probing symmetry energy of dense neutron-rich matter”
10:10 - 10:30	**Ch. Moustakidis** (remote)**:** “Effects of nuclear symmetry energy on dark neutron decay in neutron stars”
10:30 - 10:50	**P. Koliogiannis:** “Nuclear constraints and multimessenger signatures: probing the equation of state of neutron-rich matter”
10:50 - 11:20	*Coffee*
11:20 - 11:40	**M. Barbaro:** “MEC-induced two-nucleon emission in neutrino-nucleus scattering”
11:40 - 12:00	**H. Dai:** “Microscopic study of wobbling motion based on relativistic density functional theory”
12:00 - 12:20	**M. El Adri** (remote)**:** “Isoscalar giant resonances in calcium isotopes using CDFT and finite amplitude method”
12:20 - 12:40	**I. Yakymenko** (remote)**:** “Analysis of elastic α-^{116}Sn scattering in the energy region 240-480 MeV by the S-matrix model”

Afternoon session

15:00 - 15:30 *Coffee*

Session in memory of Dr. Christo Christov (1950-2025)

15:30 – 15:50	**M. Gaidarov:** “Giant monopole resonance excitation energy: systematic analysis and open problems”
15:50 – 16:10	**P. Casale:** “Short-range correlations and meson exchange currents in electron and neutrino scattering”
16:10 – 16:30	**M. Ivanov:** “Superscaling analysis of inclusive (anti)neutrino scattering within the coherent density fluctuation model”
16:30 – 16:50	**D. Bonatsos** (remote)**:** “Preponderence of triaxiality in atomic nuclei”
16:50 – 17:00	*Break*
17:00 – 17:20	**N. Minkov:** “Vector boson model application with proxy-SU(3) symmetry”
17:20 – 17:40	**H. Ganev:** “Symplectic symmetry approach to clustering in atomic nuclei: the case of ^{20}Ne”
17:40 – 18:00	**S. Jin**: “Production of elements in the third peak of r-process”
18:00 – 18:20	**J. Czeh** (remote)**:** “Dynamical algebras from nuclear structure to planetary motion”
18:20 – 18:40	**J. Draayer** (remote)**:** “Symmetry adapted model”

Wednesday, 2 July

Morning session

Session in Memory of Professor Vadim Soloviev (1925–1998)

09:30 - 09:50	**N. Antonenko:** “Correlation of spin-orbit potential and effective mass”
09:50 - 10:10	**Ch. Stoyanov:** “Quasiparticles, phonons and beyond”
10:10 - 10:30	**N. Tsoneva Larionova:** “The significance of the quasiparticle-phonon model for the study of nuclear structure and nuclear reactions”
10:30 - 10:50	**G. Adamian:** “Decays of heavy nuclei from isomeric states”
10:50 - 11:20	*Coffee*
11:20 - 11:40	**C. Giusti:** “Microscopic optical potentials for elastic nucleon-nucleus scattering”
11:40 - 12:00	**M. Vorabbi:** “Recent developments in microscopic optical potentials”
12:00 - 12:20	**A. Larionov:** “Quasielastic proton knockout from p-shell nuclei”
12:20 - 12:40	**A. Dzhioev:** “Thermal effects on (anti)neutrino emission from nuclear processes in pre-supernova stars”

Afternoon session

14:30 - 15:00 *Coffee*

15:00 – 15:20	**J.A. Caballero:** Neutrinos & nuclei: relevance to neutrino oscillations
15:20 – 15:40	**V. Kota** (remote)**:** “Statistical Shell Model Results for Neutrinoless Double beta-decay Nuclear Transition Matrix Elements”
15:40 – 16:00	**P. Veselý:** “Description of double beta decay within EMPM and STDA”
16:00 – 16:20	**P. Buganu:** “A shift from phase transition to the coexistence of nuclear shapes”
16:20 – 16:40	**R. Rodríguez-Guzmán:** “Beyond-mean-field description of quadrupole-hexadecapole coupling in atomic nuclei”
16:40 – 16:50	*Break*
16:50 – 17:10	**F. Lassiaille** (remote)**:** “Relativity predicts a variable G”
17:10 – 17:30	**X. Lu:** “Removal of K mixing in angular momentum projected nuclear wave functions”
17:30 – 17:50	**G. Stellin:** “Spectrum and electromagnetic properties of ^{24}Mg in the geometric α-cluster model: evidence of D4h symmetry”
17:50 – 18:10	**I. Petrov:** “1912: Plank's hypothesis transforms to a theory”

19:30 OFFICIAL DINNER

Thursday, 3 July

E X C U R S I O N

Friday, 4 July

Morning session

09:30 - 09:50	**F. Sammarruca** (remote)**:** „Ab initio nuclear physics: The bridge between “Heaven and Earth””
09:50 - 10:10	**Y. Lashko:** “Assessing the viability of ^{49}Ti(p,x)^{47}Sc for medical applications: A genetic algorithm approach”
10:10 - 10:30	**D. Petrellis:** “Manifestations of triaxiality in Mo and Ru nuclei”
10:30 - 10:50	**Y. Wang:** “Theoretical investigation of the rotational spectra of reflection asymmetric nuclei”
10:50 - 11:20	*Coffee*
11:20 - 11:40	**D. Vale** (remote)**:** “Advancing the microscopic relativistic description of nuclear excitations: from second Tamm-Dancoff approximation to second Random Phase Approximation”
11:40 - 12:00	**I. Mazumdar** (remote)**:** “Studies in nuclear structure & nucleosynthesis using low and medium energy proton beam”
12:00 - 12:20	**U. V. S. Seshavatharam** (remote)**:** “A heavy weak fermion proposal for a dark matter candidate”
12:20 - 12:40	**V. Petousis** (remote)**:** “Explaining low mass and radius compact objects using kaon condensates”

Afternoon session

14:30 - 15:00 ***Coffee***

15:00 – 15:20	**T. Ghosh** (remote)**:** “Nuclear reaction rate uncertainties in the r-process: Insights from self-consistent FT-RQRPA calculations of dipole transitions”
15:20 – 15:40	**P. Kostryukov** (remote)**:** “Estimation of Transverse Vibration Energies of Pre-Fragments in Induced Fission”
15:40 – 16:00	**A. El Batoul** (remote)**:** “Shape phase transitions and mixing in even-even nuclei using the confined rotor model with deformation-dependent mass”
16:00 – 16:10	*Break*
16:10 – 16:30	**Y. El Bassem** (remote)**:** “Shape evolution and shape coexistence in even-even Mo isotopic chain”
16:30 – 16:50	**M. Bouhelal** (remote)**:** “Electromagnetic transition systematics in proton-rich aluminum isotopes”
16:50 – 17:10	**A. Selim** (remote)**:** “Comprehensive shell-model analysis of the spectroscopic properties in ^{28}Al”
17:10 – 17:20	*Closing*