Republic of Türkiye's 100th Anniversary.
We are stronger together, our beloved Turkish Nation.

16th International Conference on Nuclear Structure Properties
NSP 2023
8 – 10 May, 2023, Karabük University, Karabük, Türkiye

SCIENTIFIC PROGRAMME

May 8, 2023 Monday

Morning Session 09.15 – 10.50 **Time Zone Istanbul (GMT+3)**
Chair: Necla Çakmak (Karabük Un., Karabük, Türkiye)

09.15 – 09.30 **Opening Remarks**

09.30 – 09.55 **Takehiko R. Saito** (RIKEN, Japan)
Experimental studies of light hypernuclei

09.55 – 10.20 **Serkan Akkoyun** (Sivas Cumhuriyet Un., Sivas, Türkiye)
Creating an Online Calculation Tool for Fission Barrier Energy based on Machine Learning Methods

10.20 – 10.35 **Mouna Bouhelal** (Echahid Cheikh Larbi Tebessi Un., Algeria)
Theoretical investigation of the T=1/2, A=27 Mirror Nuclei

10.35 – 10.50 **Mouna Bouhelal** (Echahid Cheikh Larbi Tebessi Un., Algeria)
Study of the Energy Spectrum of ^{26}Mg

10.50 – 11.20 **COFFEE BREAK**

Morning Session 11.20 – 12.30 Time Zone Istanbul (GMT+3)
Chair: Serkan Akkoyun (Sivas Cumhuriyet Un., Sivas, Türkiye)

11.20 – 11.35 **Abir Selim** (Echahid Cheikh Larbi Tebessi Un., Tebessa, Algeria)
Shell-Model Study of the Nuclear Structure of ^{25}Al Nucleus

11.35 – 11.50 **Abir Selim** (Echahid Cheikh Larbi Tebessi Un., Tebessa, Algeria)
Investigation of The Energy Spectrum of ^{24}Al Using the PSDPF Interaction

11.50 – 12.05 **Ayşe Çömü** (Selçuk University, Konya, Türkiye)
Analysis of Irradiation Effects on Laroxyl Drug Using EPR Spectroscopy

12.05 – 12.20 **Gamze Ekici** (KTO Karatay University, Konya, Türkiye)
ESR Dating of Old Beyşehir Lake Basin Using Fossil Mollusc Shells

12.30 – 13.30 LUNCH BREAK

Afternoon Session 13.30 – 15.00 Time Zone Istanbul (GMT+3)
Chair: Nihal Büyükçizmeci (Selçuk Un., Konya, Türkiye)

13.30 – 13.55 **Fabrice Pelestor** (France)
Anti-Missile Reactive Net

13.55 – 14.20 **Khusniddin K. Olimov** (Uzbekistan Academy of Sciences, Tashkent Uzbekistan)
Correlations between parameters of the Tsallis distribution and Hagedorn function with transverse flow in proton-protons collisions at the LHC

14.20 – 14.35 **Khusniddin K. Olimov** (Uzbekistan Academy of Sciences, Tashkent Uzbekistan)
Dependencies of the average transverse momenta of charged particles on particle species, centrality and collision energy in Au+Au collisions from the BES program at the RHIC

14.35 – 14.50 **Fatima Benrachi** (Frères Mentouri Constantine-1 Un., Algeria)
Nuclear Properties of Even-Even Nuclei in Calcium-40 Region

14.50 – 15.05 **Nadjet Laouet** (Frères Mentouri Constantine-1 Un., Algeria)
Proton Rich A=95 Systems Nuclear Structure: Nushellx@MSU Application

15.10 – 15.30 **COFFEE BREAK**

Afternoon Session 15.30 – 17.00 Time Zone Istanbul (GMT+3)
Chair: Savaş Ağduk (Karabük Un., Karabük, Türkiye)

15.30 – 15.45 **Robert Poenaru** (Horia Hulubei National Institute of Nuclear Physics and Engineering, Romania)
Parity Partner Bands and the Wobbling Motion in 163-Lu

15.45 – 16.00 **Christopher Oluwatobi Adeogun** (Miva University, Nigeria)
Investigation of the Air-Gap Signal in Kalman Filter Under Relative Acceleration

16.00 – 16.15 **Gamze Hoşgör** (Sakarya University, Sakarya, Türkiye)
Polarization Effects on g_R-factors in Odd-Mass Deformed Nuclei

16.15 – 16.30 **Gamze Hoşgör** (Sakarya University, Sakarya, Türkiye)
Understanding the Low-Energy Electromagnetic Dipole Response in ^{155}Sm Nucleus: A Theoretical Perspective

16.30 – 16.45 **Esra Evcin Baydilli** (Hakkari University, Hakkari, Türkiye)
The Detection of the Gamma-Irradiation Effects on Electrical Characteristics of Au/3% Gr-doped PVA/p-Si Type Schottky Structure

May 9, 2023 Tuesday

Morning Session 09.30 – 10.50 **Time Zone Istanbul (GMT+3)**
Chair: Mahmut Böyükata (Kırıkkale Un., Kırıkkale, Türkiye)

09.30 – 09.55 **Jameel-Un Nabi** (University of Wah, Wah Cantt, Pakistan)
Half-life of heavy and exotic nuclei to investigate the r-process

09.55 – 10.20 **Manuela Cavallaro** (Laboratori Nazionali del Sud – INFN, Catania, Italy)
Double charge-exchange reactions for the nuclear matrix elements of neutrinoless double beta decay

10.20 – 10.35 **Francesco Cappuzzello** (Catania University, Catania, Italy)
Heavy-ion induced direct reactions with the MAGNEX spectrometer at INFN-LNS: A multi-channel approach

10.35 – 10.50 **Frederic Lasiaille** (FL Researcher, France)
Relativity in motion

10.50 – 11.20 **COFFEE BREAK**

Morning Session 11.20 – 12.30 **Time Zone Istanbul (GMT+3)**
Chair: Tuncay Bayram (Karadeniz Technical Un., Trabzon, Türkiye)

11.20 – 11.35 **Dennis Bonatsos** (Inst. of Nuclear and Particle Phy., NCSR, Greece)
Shape coexistence and shape/phase transitions in even-even nuclei

11.35 – 11.50 **Ergash M. Tursunov** (INP-Academy of Sciences, Uzbekistan)
Detailed Study of the Astrophysical Capture Reaction $\alpha(d, \gamma)^6Li$ in a Three-Body Model

11.50 – 12.05 **Majid Gojayev** (Baku State University, Baku, Azerbaijan)
Production of the vector boson and two Higgs bosons in the electron-positron collisions

12.05 – 12.20 **Mohammed El Adri** (Cadi Ayyad University, Marrakesh, Morocco)

Investigation of the ground state properties of Hg isotopes within the HFB theory

12.30 – 13.30 LUNCH BREAK

Afternoon Session 13.30 – 15.00 Time Zone Istanbul (GMT+3)
Chair: Nihal Büyükçizmeci (Selçuk Un., Konya, Türkiye)

13.30 – 13.55 **Mannap Yu.Tashmetov** (INP-Academy of Sciences of the Republic of Uzbekistan)
The development and implementation of perspective technologies

13.55 – 14.20 **Esra Yüksel** (University of Surrey, Surrey, United Kingdom)
Constraining the nuclear symmetry energy using parity-violating electron scattering experiments

14.20 – 14.35 **Sema Küçüksucu** (University of Zagreb, Zagreb, Croatia)
Isotopic dependence of (n, α) reaction cross sections for Fe and Sn nuclei

14.35 – 14.50 **Anna Mastroberardino** (University of Calabria, Rende, Italy)
Nuclear techniques for assessment of radiation exposure from TENORM

14.50 – 15.05 **Nihal Büyükçizmeci** (Selçuk Un., Konya, Türkiye)
Rapidity distributions of nuclei and hypernuclei

15.10 – 15.30 **COFFEE BREAK**

Afternoon Session 15.30 – 17.00 Time Zone Istanbul (GMT+3)
Chair: Aybaba Hançerlioğulları (Kastamonu Un., Kastamonu, Türkiye)

15.30 – 15.45 **Mohammad Reza Hadizadeh** (Central State University, Ohio, USA)
Investigating Few-Body Systems in 2D Materials: Adapting Faddeev Method from Nuclear Physics

15.45 – 16.00 **Aybaba Hançerlioğulları** (Kastamonu Un., Kastamonu, Türkiye)

Utilization Of Some Boron Containing Minerals as Fast Neutron Shielding in Nuclear Power Plants

16.00 – 16.15 **Rezvan Rezaeizadeh** (University of Guilan, Rasht, İran)
Solutions of Klein-Gordon equation with Woods-Saxon potential through PQR method

16.15 – 16.30 **Elif Kemah** (Sakarya Un., Sakarya, Türkiye)
Investigation of the Ground-State M1 moments in ^{229,231}Th Isotopes

16.30 – 16.45 **Büruce Öztürk** (Sakarya Un., Sakarya, Türkiye)
Magnetic Moment Inference and Modeling of $^{53\text{-}81}$Cu Nuclei with Anfis

May 10, 2023 Wednesday

Morning Session 09.30 – 10.50 Time Zone Istanbul (GMT+3)
Chair: Nihal Büyükçizmeci (Selçuk Un., Konya, Türkiye)

09.30 – 09.55 **Valentine O. Nesterenko** (JINR, Dubna, Russia)
Anomalous behavior of nuclear moment of inertia

09.55 – 10.20 **Izyan Hashim** (Universiti Teknologi Malaysia, Malaysia)
Ordinary Muon Capture Delayed Gamma Ray Analysis for double beta decays (DBDs) and anti-neutrino nuclear responses

10.20 – 10.35 **Ali A. Kuliev** (National Aviation Academy of Azerbaijan, Azerbaijan)
Investigation of the magnetic dipole moments of the $I^{\pi}K=1^{+}1$ States with extremely short lifetimes (about 10^{-15} s)

10.35 – 10.50 **Huseynqulu Quliyev** (National Aviation Academy of Azerbaijan, Azerbaijan)
Distribution of dipole excitation up to 10 MeV: The case of ^{124}Xe nucleus

10.50 – 11.20 **COFFEE BREAK**

Morning Session 11.20 – 12.30 Time Zone Istanbul (GMT+3)
Chair: Aysuhan Ozansoy (Ankara Un., Ankara, Türkiye)

11.20 – 11.45 **İlkay Türk Çakır** (Institute of Technology Accelerator, Ankara Un., Türkiye)
Future Circular Collider (FCC) Project

11.45 – 12.00 **Sultan Şahin Bal** (Bitlis Eren Un., Bitlis, Türkiye)
The Determination of ^{238}U, ^{232}Th and ^{40}K Radioactivity Concentrations of Some Healing and Spa Water in Bitlis

12.00 – 12.15 **Sultan Şahin Bal** (Bitlis Eren Un., Bitlis, Türkiye)
The Determination of ^{222}Rn Gas Radioactivity Concentrations of Some Healing and Spa Water in Bitlis

12.15 – 12.30 **Khalid H. Mahdi Aal-Shabeeb** (Karabük Un., Karabük, Türkiye)
Comparing the concentration of radon in the old and new residential houses in Karabük city/Türkiye using the passive method

12.30 – 13.30 LUNCH BREAK

Afternoon Session 13.00 – 14.15 Time Zone Istanbul (GMT+3)
Chair: Mahmut Böyükata (Kırıkkale Un., Kırıkkale, Türkiye)

13.30 – 13.45 **Abdurahman Büber** (Kırıkkale Un., Kırıkkale, Türkiye)
Nuclear Structure of even-even $^{100\text{-}128}$Cd isotopes under the framework of IBM-1

13.45 – 14.00 **Najm Abdullah Saleh Saleh** (University of Duhok, Duhok, Iraq)
U1F Transition Logft Value for As-74 Isotope by pn-QRPA

14.00 – 14.15 **Esranur Yalçınkaya** (Sakarya Un., Sakarya, Türkiye)
Investigation of $I^{\pi}=1^{-}$ excited states properties in neutron-deficient ^{162}Yb nucleus

14.15 – 14.30 **Mehmet Dağ** (Karabük Un., Karabük, Türkiye)
Gamow-Teller Transition Logft Value for Pd-114 Isotope

14.30 – 15.00 Closing Remarks