

# XI. INTERNATIONAL CONFERENCE ON NUCLEAR STRUCTURE PROPERTIES SCIENTIFIC PROGRAM

## Wednesday, 12 September 2018

### 08:00-17:00 Registration

**09:00**      **Official Opening Ceremony**      **Hasan Turan Hall**

**09:30**      **Coffee Break**

**09:45**      **Invited Lectures**      **Hasan Turan Hall**  
                 **Chairperson**                      **İsmail Boztosun**

*09:45 Jose Javier Valiente-Dobón, Nuclear Structure of Moderately Exotic Nuclei Populated via Multinucleon Transfer Reactions*

*10:15 Jameel-Un Nabi, Weak Rates and Nuclear Structure Properties of Heavy rp-process Waiting Point Nuclei*

*10:45 Osman Yilmaz, Quantal Diffusion in Heavy-Ion Collisions*

**11:15**      **Poster Session**      **Osman Turan Culture and Congress Centre**

### 13:00 Lunch

**14:15**      **Invited Lectures**      **Fahri Kuran Hall**  
                 **Chairperson**                      **Sefa Ertürk**

*14:15 Takehiko R. Saito, Hypernuclear Spectroscopy with Heavy Ion Beams: The Present Status and the Perspective*

*14:45 Andrey Denikin, Modern Instruments for Nuclear Reaction Simulations Based on NRV Web Knowledge Base*

*15:15 Niyazi Meriç, Optically Stimulated Luminescence and Thermoluminescence Dating of Archaeological and Geological Samples*

**15:45**      **Coffee Break**

**16:00**            **Oral Session 1**                            **Fahri Kuran Hall**  
                         **Chairperson**                                    **Jose Javier Valiente-Dobón**

*16:00 Nihal Büyükçizmeçi and Rıza Oğul, Investigation of Binding Energies of Hypernuclei*

*16:15 Haris Dapo, New Data On  $\beta^+$  Decay From Photonuclear Reactions*

*16:30 Şule Karatepe, Elastic Scattering of  $^{17}\text{O}$  Projectile with Different Targets at 340 MeV*

*16:45 Yunsheng Dong, Study of the Performance of the FOOT Experiment*

**16:00**            **Oral Session 2**                            **Nihat Turan Hall-1**  
                         **Chairperson**                                    **Jameel-Un Nabi**

*16:00 Radu Budaca, Wobbling Phase Transition in Odd Mass Nuclei*

*16:15 Serkan Akkoyun, Experimental Determination of Nuclear Spins and Multipolarities*

*16:30 Necla Çakmak, Unique First-forbidden  $\beta$ -decay Transitions in Odd Mass Nuclei*

*16:45 Andreea-Ioana Budaca and Radu Budaca, Proton Emission with a Generalized Electrostatic Barrier*

**19:00**            **Dinner**

## **Thursday, 13 September 2018**

**08:00-17:00**    **Registration**

**08:30**            **Invited Lectures**                            **Fahri Kuran Hall**  
                         **Chairperson**                                    **Takehiko R. Saito**

*08:30 İsmail Boztosun, Contribution of Akdeniz University to Experimental Nuclear Physics Studies in Turkey: Photonuclear Reactions and Photofission*

*09:00 Sefa Ertürk, Evaluation of Electronic Systems for Gamma-Ray Spectroscopy: Adaptaion of NUMEXO2 Digital Electronic into Detector Systems*

*09:30 Cenap Ş. Özben, Nuclear Instrumentation; from the Detection of Radiation to the Detection of Explosives*

**10:00**            **Coffee Break**

**10:15 Oral Session 3 Fahri Kuran Hall**  
**Chairperson Osman Yılmaz**

10:15 Mahmut Büyükat and İhsan Uluer, *Investigation of Gamma-band Structure of Even-even Nuclei Along  $30 \leq Z \leq 42$  Within the Interacting Boson Model-1*

10:30 Semra Kaim, *High spin states Interpretation of Nuclei  $^{135}\text{Ba}$ ,  $^{135}\text{Ce}$  and  $^{135}\text{La}$  within Rotational Nilsson-Strutinsky Model*

10:45 Rezvan Rezaeizadeh, Niloufar Zoghi Fumani and Abbas Ghasemizad, *Using Proper Quantization Rule Method to Investigate the Energy Levels of Quantum Systems*

11:00 Burcu Erol, A. Hakan Yılmaz, Z. Merve Cinan and Taylan Başkan, *Coupled-Channel Analyses on  $^{16}\text{O} + ^{70,72,74,76}\text{Ge}$  Heavy-Ion Fusion Reactions*

**10:15 Oral Session 4 Nihat Turan Hall-1**  
**Chairperson Dharmendra K. Gupta**

10:15 Gokhan Apaydin, Oguz Kağan Koksal, Erhan Cengiz, Engin Tirasoğlu, Hasan Baltaş, Kazim Karabulut and Omer Sogut, *Assessment of Natural Radioactivity and Radiological Risk of Sediment Samples in Karacaören II Dam Lake, Isparta/Turkey*

10:30 Hüseyin Ali Yalın, Ayla Gümüş and Rıdvan Ünal, *Correlation between Soil Gas Radon Concentrations and Terrestrial Radioactivity ( $^{238}\text{U}$  and  $^{232}\text{Th}$ ) in Afyonkarahisar*

10:45 Aybaba Hançerlioğulları, *Assessment of contamination of soil by heavy metals caused by coal-fired thermal power plant*

11:00 Fatima Benrachi, Ghania Bouhila, *Measurement of Natural and Anthropogenic radioactivity in sediment samples from streams of northeast Algeria*

**10:15 Oral Session 5 Nihat Turan Hall-2**  
**Chairperson Takhmasib Aliev**

10:15 Yaşar Hiçyılmaz, *Supersymmetry Beyond MSSM*

10:30 Boris Krippa, *Mixing Theorems and Chiral Symmetry Restoration at Finite Density*

10:45 Emine Yıldırım, Stefania De Curtis, Stefano Moretti and Kei Yagyu, *Aspects of the Extended Higgs Boson Sector Within the C2HDM Model*

**11:15 Refreshments**

**11:30**            **Oral Session 6**                            **Fahri Kuran Hall**  
                         **Chairperson**                                    **Hasan Gümüř**

11:30 Fatma Bulut Gulbeyaz, Hamide İmal Avcı, Nihal Buyukcizmeci and Rıza Oğul, Isotopic Yields in Heavy-Ion Collisions

11:45 Mavra İřfaq, Haris Djapo, Can Ertugay, İsmail Boztosun and Jameel-Un Nabi, Study of half-life and  $\gamma$ -Transitions for  $^{44}\text{Sc}$  using Photo-Nuclear Reaction

12:00 Zehra Merve Cinan, A.Hakan Yılmaz, Burcu Erol and Taylan Başkan, Elastic Scattering Processes Calculations using the Optical Model Parameters of  $^{19}\text{F} + ^{16,17,18}\text{O}$  Reactions at Multifarious Energy Regions

12:15 Hamide İmal Avcı, Fatma Bulut Gulbeyaz, Nihal Buyukcizmeci and Rıza Oğul, Fragment Composition in Central Heavy-ion Collisions

**11:30**            **Oral Session 7**                            **Nihat Kuran Hall-1**  
                         **Chairperson**                                    **Hüseyin Ali Yalın**

11:30 Dharmendra K. Gupta, Radioactive waste contamination: Remediation through Bio/Phytoremediation techniques

11:45 Meryem Seferinođlu and Pınar Esra Erden, Estimation of Measurement Uncertainty for  $^{230}\text{Th}$  Radioisotope Analysis in Soil

12:00 Sultan Şahin Bal, Determination of the Radio-isotope Activity Concentration in Some Medicinal and Aromatic Plants in Bitlis

12:15 Tahsin Özer and Ali İhsan Öztürk, Outdoor Radioactivity and Health Risks for Nurdađı, Turkey

**11:30**            **Oral Session 8**                            **Nihat Turan Hall-2**  
                         **Chairperson**                                    **Cenap Ş. Özben**

11:30 Vakkas Bozkurt and Sefa Erturk, Performance of NUMEXO2 Digital Electronic for EXOGAM Detector

11:45 Can Ertugay, Haris Dapo and İsmail Boztosun, Demonstration and Testing of Coincidence Setup with V1725 CAEN Digitiser

12:00 Zafer Caner and Mustafa Çağatay Tufan, Developing the alternative desktop and web based software for gamma anlysis

12:15 Cafer Mert Yeşilkanat, Yaşar Kobya and Halim Taşkın, Radon flux mapping for Artvin using artificial neural network

**13:00**            **Lunch**

**14:15**            **Invited Lectures**                            **Fahri Kuran Hall**  
                         **Chairperson**    **Cevad Selam**

*14:15 Takhmasib Aliev, Radially and Orbitally Exited Doubly Heavy Baryons Spectrum*

*14:45 Ali Kuliev, Evaluation of Strength Function of M1 Resonance with Difference Averaging Functions*

**15:15**            **Coffee Break**

**15:15**            **Oral Session 9**    **Fahri Kuran Hall**  
                         **Chairperson**    **Mahmut Büyükata**

*15:15 Nadjet Laouet and Fatima Benrachi, Investigation of Odd Proton Rich Sr Isotopes in the Vicinity of Ni Mass region*

*15:30 Emrullah Tokqöz and Ekrem Almaz, Internal Bremsstrahlung Spectra of Tc-99 and Sr-89 Forbidden Beta Decay Sources*

*15:45 Huseynqulu Quliyev, Ekber Guliyev and Ali Akbar Kuliev, Study of the Pygmy Dipole Resonance in <sup>150,152</sup>Nd*

*16:00 Ekrem Almaz and Ahmet Akyol, Continuous Photon Spectrum from the Sr-90 and Y-90 in Equilibrium Beta Source Obtained by the SVD (Singular Value Decomposition) Method*

*16:15 Şevki Şentürk, Tuncay Bayram and Serkan Akkoyun, On the Ground-state Nuclear Properties of Superheavy Fl, Lv and Og Nuclei*

*16:30 Huseynqulu Quliyev, Nilüfer Demirci Sayğı, Filiz Ertuğral, Ekber Guliyev, Ali Akbar Kuliev and Sevinj Aliyeva, Investigating the Giant Dipole Properties of Deformed Even-Even <sup>160</sup>Gd Nuclei*

*16:45 Serkan Akkoyun, Tuncay Bayram, Mahmut Büyükata, Shell Model Calculation for some sd and pf Shell Nuclei*

*17:00 Tuncay Bayram, Serkan Akkoyun and Şevki Şentürk, On the New Developed DEFNE Interaction Parameters for RMF Model*

**15:15**            **Oral Session 10**    **Nihat Turan Hall-1**  
                         **Chairperson**    **Nihal Büyükçizmeci**

*15:15 Aybaba Hançerlioğulları, Measurement of Naturally Occurring Radionuclides (<sup>226</sup>Ra, <sup>232</sup>Th and <sup>40</sup>K) in Rock Salts and Evaluation Annual Effective Dose*

*15:30 Selcen Uzun Duran and Belgin Küçükömeroğlu, Radon Concentration Measurements in Offices at Karadeniz Technical University Campus in Trabzon City*

*15:45 Muhammet Karataşlı, Assessment of Absorbed Gamma Dose Rate Levels in Kahramanmaraş, Turkey*

*16:00 Osman Günay and Serpil Aközcan, Determination of <sup>137</sup>Cs Concentrations in Maltepe-Istanbul*

16:15 *Serdar Dizman, Didem Kart and Recep Keser, Natural Radioactivity Levels and Related Risk Assessment in Some Ceramic Materials*

16:30 *Yaşar Kobya and Cafer Mert Yeşilkanat, Spatial distribution of radioactivity in moss samples collected from Artvin, Turkey*

16:45 *Seçil Niksarlioğlu and Fatih Külahcı, Modelling of <sup>134</sup>Cs and <sup>137</sup>Cs Radionuclides Deposition from Fukushima Daiichi Accident with Geostatistical Methods*

17:00 *Heydar Dehghanpour, Faraz Afshari, Kemalettin Yılmaz, ABAQUS Modeling and Investigation of Nuclear Central Cooling Tower Reinforced by CFRP*

**15:15**                      **Oral Session 11**                                      **Nihat Turan Hall-2**  
   **Chairperson**    **İsmail Boztosun**

15:15 *Hasan Gümüş, Stopping Power and Range Calculations of Electrons For Some Human Body Tissues*

15:30 *Georgios S. Polymeris, Eren Şahiner, Hümeyra Gur and Niyazi Meriç, Thermally Assisted Optically Stimulated Luminescence (TA – OSL) in BeO and MgO Dosimeters; A Comparative Study*

15:45 *Serap Çatlı Dînc, Investigation of Dosimetric Characteristic of A OSLD (Optically Stimulated Luminescence Dosimeter) for Clinical Photon Beams*

16:00 *Eren Şahiner, Serdar Şahin, Fatih Göksel, Georgios Polymeris and Niyazi Meriç, Measurement of Radiation Dose with BeO OSL Dosimeters and Comparison with TPS in Electron Treatments of Radiotherapy Application*

16:15 *Dilek Şolpan, Sinem Demir, Murat Torun and Masoomeh Mehrnia, Degradation of N-Nitrosodiethylamine in Aqueous Solution by Gamma-irradiation*

16:30 *Merve Meltem Atabay, Harun Çümen, Paşa Yalçın and Sevil Porikli Durdağı, Investigation of the Chemical Effect Using EDXRF Spectrometry on the Lines of Bromine K $\alpha$  and K $\beta$  X-ray emission Spectra*

16:45 *Masoomeh Mehrnia, Murat Torun and Dilek Şolpan, Investigation of Degradation Mechanism for Dimethyl Phthalate (DMP) in Aqueous Solution by Using Analytical Methods*

**19:00**                      **Gala Dinner**



**11:15 Oral Session 14 Fahri Kuran Hall**  
**Chairperson Serkan Akkoyun**

11:15 Oguz Kagan Koksali, Erhan Cengiz, Gokhan Apaydin, Ali Tozar and İsmail Hakki Karahan, Determination of the Mass Attenuation Coefficient, Effective Atomic Number and Electron Density for Nano Manganese Hydroxyapatite by using 778-1457 keV Gamma Rays

11:30 Mehtap Düz and Hilal Bardakçı, The Radial Investigation of Radiation Damage in Structural Material for Curium Added Fluid and Some Libraries in Hybrid Reactor

11:45 Hande Boydaş and Abdullah Aydın, Proton Capture Cross Sections and Astrophysical S-factors of 106,108Cd Isotopes for Different the Level Density Models and the  $\gamma$ -strength functions

12:00 Hilal Bardakçı and Mehtap Düz, Investigation of Neutronic Calculations in Curium Added Fluid for Some Libraries of a Hybrid Reactor Using Monte Carlo Method

12:15 Valdrin M. Beluli, Implementation of Nuclear Power Plants instead of "Kosovo A and B" power plants as the only rescue of coal resources in the Republic of Kosovo

12:30 Faraz Afshari, Heydar Dehghanpour, A Review Study On Cooling Towers; Types, Performance and Application

**11:15 Oral Session 15 Nihat Turan Hall-1**  
**Chairperson Haris Dapo**

11:15 Khalid Elmomun Ahmed Ibrahim, Abdalla Ahmed Elbashir, Masoomah Mehrnia, Murat Torun, Mustafa Mohamed Osman Ahmed and Dilek Şolpan, Radiolytic Degradation of Carbaryl in Aqueous Solution by Gamma-irradiation/H<sub>2</sub>O<sub>2</sub> Process

11:30 Canan Aksoy, Engin Tıraşoğlu, Kemal Ozturk, Burcu Savaşkan, Sait Barış Güner and Ezgi Taylan Koparan, K-Shell X-Ray Fluorescence Parameters of Superconducting Ag Added MgTi<sub>0.06</sub>B<sub>2</sub> Bulk Samples

11:45 Harun Çümen, Merve Meltem Atabay, Tuba Akkuş and Sevil Porikli Durdağı, Analysis of Magnetic Field Effects on K $\alpha$  and K $\beta$  XRF Spectra of Selenide Compounds

12:00 Murat Torun, Masoomah Mehrnia and Dilek Şolpan, Degradation of Imipramine by Gamma-irradiation

12:15 Yasin Mısırlıoğlu, Sevil Savaşkan Yılmaz, Tuncay Bayram, Ahmet Hakan Yılmaz, Şevki Şentürk, Abdulsamet Küçük, Zehra Merve Cinan, The Gamma-Ray Attenuations of Hyperbranched PCL Copolymer-Plaster of PARIS Composites Sorbed As and Pb Atoms

**13:00 Lunch**

**14:00 Excursion**