

SCIENTIFIC PROGRAMME

June 02 2021 Wednesday

Morning session 10:00 – 12:30

Time Zone Istanbul (GM+3)

Chair: Nihal Buyukcizmeci (Selcuk Un., Konya, Turkey)

10:00- 10:30 **Opening Remarks**

10:30-11:00 **Marcus Bleicher** (ITP, Goethe Un., HFHF, Frankfurt, and GSI, Germany)
Cluster production in high-energy collisions

11:00-11:30 **Wolfgang Trautmann** (GSI, Darmstadt, Germany)
The nuclear symmetry energy: New directions from new results?

11:30-12:00 **Igor Mishustin** (FIAS, Frankfurt, Germany)
Alpha-clustering and alpha condensation in nuclear matter

12:00-12:15 **Manpreet Kaur** (Institute of Physics, Bhubaneswar, India)
Effect of microscopic temperature-dependent binding energies in the decay of $^{32}\text{Si}^*$ nuclear system

12:15-12:30 **Anagha Chakraborty** (Visva-Bharati Un., Visva-Bharati, India)
Onset of different excitation modes in the neutron rich ^{78}As

12:30 -13:30 **LUNCH BREAK**

Afternoon session 13:30 -15:30

Chair: Bulent Yilmaz (Ankara Un., Ankara, Turkey)

13:30-14:00 **Mitko Gaidarov** (INRNE-BAS, Sofia, Bulgaria)
Evolution of the symmetry energy and skins of mirror nuclei

14:00-14:15 **Koh Meng Hock** (University Teknologi Malaysia, Malaysia)
Role of nuclear tensor within Skyrme mean-field approach on deformed magic numbers in rare earth region

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14:15-14:30 **Ugur Ilter** (Nigde Omer Halisdemir Un., Nigde, Turkey)
Results from the EMPIRE code for reaction cross-section calculations

14:30-14:45 **Ferhan Akdeniz** (Akdeniz Un., Antalya, Turkey)
Nucleon densities of Lanthanum isotopes calculated by Skyrme and Gogny models

14:45-15:00 **Magdalena Skurzok** (Jagiellonian Un., Krakow, Poland)
Search for eta-mesic nuclei with WASA at COSY facility

15:00-15:15 **Deepika Pathak** (Guru Nanak Dev Un., India)
Prediction of cluster radioactivity of Z=118 isotopes

15:15-16:00 COFFEE BREAK

Afternoon session 16:00-18:15

Chair: Serkan Akkoyun (Sivas Cumhuriyet Un., Sivas, Turkey)

16:00-16:30 **Chhanda Samanta** (Virginia Military Institute, Virginia, USA)
Binding and bonding of cascade hyperons in nuclei

16:30- 16:45 **Hasan Bircan** (Kutahya Dumlupinar Un., Kutahya, Turkey)
A new parameter set for extended Thomas-Fermi model

16:45- 17:00 **Rajeev Singh** (Institute of Nuclear Physics Polish Academy of Sciences,
Krakow, Poland)
Quantum fluctuations in energy for hot relativistic fermionic gas

17:00-17:15 **Sevki Senturk** (Karadeniz Technical Un., Trabzon, Turkey)
Production cross-section and reaction yield of ^{82}Sr for $^{82}\text{Sr}/^{82}\text{Rb}$ generator

17:15-17:30 **Abderrahmane Yakhelef** (Ferhat Abbas Setif 1 Un., Algeria)
Neutron single particle states in ^{101}Sn by polynomial fits and SM calculations

17:30-17:45 **Fatima Benrachi** (Frères Mentouri Constantine 1 Un., Algeria)
Gamma radiation analysis and radiological hazards assessment in granite samples commonly used in Algerian building constructions

17:45-18:00 **Bouchra Imene Chibane** (Frères Mentouri Constantine 1 Un., Algeria)
A dosimetric comparison of 3D conformal therapy and volumetric intensity modulated arc therapy for the treatment of nasopharyngeal carcinoma

18:00-18:15 **Fatima Zohra Chemingui** (Frères Mentouri Constantine-1 Un., Algeria)
Monte Carlo simulation on human heterogeneous organs

June 3 2021 Thursday

Morning session 10:00 - 12:30

Time Zone Istanbul (GM+3)

Chair: Mahmut Boyukata (Kirikkale Un., Kirikkale, Turkey)

10:00-10:30 **Jameel-Un Nabi** (University of Wah, Punjab, Pakistan)
Spectroscopic study of ${}^9\text{Be}$ (p, γ) ${}^{10}\text{B}$ at astrophysical energy

10:30-11:00 **Valentin O. Nesterenko** (JINR, Dubna, Russia)
Vortical excitations in nuclei: Recent progress

11:00-11:15 **Tuncay Bayram** (Karadeniz Technical Un., Trabzon, Turkey)
Ground-state properties and decay rates of isotopic chain of Molybdenum

11:15-11:30 **BirBikram Singh** (Akal Un., Talwandi Sabo, Bathinda, India)
Clustering phenomenon in the decay of light mass composite nuclei

11:30-11:45 **Nuray Yavuzkanat** (Bitlis Eren Un., Bitlis, Turkey)
Geant4 investigation of the alpha-beta-gamma detector system

11:45-12:00 **Mehana Parameswaran** (Avinashilingam Deemed Un., India)
Spin-orbit splitting of protons and neutrons

12:00-12:15 **Aybaba Hancerliogullari** (Kastomunu Un., Kastamonu, Turkey)
Advanced generation hybrid type pusher D-T fusion plasma fueled rocket modelling

12:15-12:30 **Hanane Mebrek** (Batna-1 Un., Algeria)
Study of the astrophysical ${}^{25}\text{Al}(p, \gamma){}^{26}\text{Si}$ nuclear reaction

12:30-13:30

LUNCH BREAK

Afternoon session 13:30-15:30

Chair: Vakkas Bozkurt (Nigde Omer Halisdemir Un., Nigde, Turkey)

13:30-14:00 **Juergen Gerl** (GSI, Darmstadt, Germany)

Exotic nuclei studied with NUSTAR at FAIR/GSI

14:00-14:15 **Nihal Buyukcizmeci** (Selcuk Un., Konya, Turkey)

Coalescence theory in heavy ion collisions

14:15-14:30 **Ghulam Bary** (Yibin Un., Yibin, China)

Analyses of multi-pion Bose-Einstein correlations for granular sources with coherent droplets

14:30-14:45 **Ercan Yildiz** (Kahramanmaras Sutcu Imam Un., Kahramanmaras, Turkey)

Cross-sections and thermonuclear reaction rates for $^{181}\text{Ta}(\alpha, n)^{184}\text{Re}$ reaction

14:45-15:00 **Iftikhar Benchikh Lehocine** (University Tahri Mohammed Bechar, Algeria)

Shell closure at N, Z = 40 in the vicinity of ^{56}Ni region

15:00- 15:15 **Samiha Benarous** (Nuclear Research Center of Algiers, Algeria)

Spatial distribution of major, minor and trace element in semiarid land of western Algeria

15:15-15:30 **Nazrin Babayeva** (Selcuk Un., Konya, Turkey)

Dosimetric properties of opagis drug: An EPR study

15:30 – 16:00

COFFEE BREAK

Afternoon session 16:00 – 18:15

Chair: Tuncay Bayram (Karadeniz Technical Un., Trabzon, Turkey)

16:00-16:30 **Ali Ihsan Kilic** (Szczecin Un., Husinec, Czechia)

A new approach to nuclear reaction mechanism in dense matter. Thermonuclear and pycnonuclear reactions

16:30-16:45 **Aydin Ghalehasadi** (Tabriz Un., Iran)

Calculation of the photon pair production cross section by artificial neural network

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- 16:45-17:00 **Abderrahim Ait Ben Hammou** (Cadi Ayyad Un., Morocco)
Coriolis contribution to excited states of odd-mass nuclei with deformation-dependent mass formalism
- 17:00-17:15 **Nadjet Laouet** (Frères Mentouri Un., Constantine-1 Algerie)
Proton drip line neighbouring nuclei and nuclear structure
- 17:15-17:30 **Naila Bouchera Bouchelit** (National Polytechnic School of Algiers, Algeria)
Study of column of flow-rig using technical radiotracer
- 17:30-17:45 **Mounia Benchabane** (Ferhat Abbas Setif 1 Un., Algeria)
Minors and trace elements distribution in phosphate deposits using X-ray fluorescence
- 17:45-18:00 **Harjeet Kaur** (Guru Nanak Dev Un., Amritsar, India)
Analysis of two proton radioactivity half-lives of nuclei
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June 4 2021 Friday

Morning session 10:00-12:30 **Time Zone Istanbul (GM+3)**

Chair: Necla Cakmak (Karabuk Un., Karabuk, Turkey)

- 10:00-10:30 **Bahadır Saygi** (Ege Un., Izmir, Turkey)
Chasing $B(E2)_{4_1^+/2_1^+}$ anomaly
- 10:30-11:00 **Alberto Camaiani** (Institute for Nuclear and Radiation Physics, Leuven, Belgium)
Exploring heavy-ion collisions with the FAZIA multi-telescope array
- 11:00-11:15 **Birgul Eren** (Nigde Omer Halisdemir Un., Nigde, Turkey)
Results from the PACE4 Code for fusion evaporation reaction cross-section calculations
- 11:15-11:30 **Mohamed El Adri** (Cadi Ayyad Un., Morocco)
Tensor force effect on the neutron shell closure in Z=114 super-heavy element

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11:30-11:45 **Esra Yuksel** (Yildiz Technical Un., Istanbul, Turkey)
Gamow-Teller resonances and beta decay half-lives of nuclei at finite temperature

11:45-12:00 **Vasanthi Loganathan** (Avinashilingam Institute, India)
Preformation probability of complete binary fragments of ^{294}Og

12:00-12:15 **Aleeddine Lahbas** (ESMaR, Mohammed V Un., In Rabat, Morocco)
Davydov-Chaban Hamiltonian within the formalism of deformation-dependent effective mass for Kratzer potential

12:15-12:30 **Imad El-Ilali** (Cadi Ayyad Un., Morocco)
Excited states of the odd-mass nucleus ^{173}Yb with different deformation-dependent mass coefficients

12:30-13:30 **LUNCH BREAK**

Afternoon session 13:30-15:30

Chair: Sefa Erturk (Nigde Omer Halisdemir Un., Nigde, Turkey)

13:30-14:00 **Takehiko Saito** (RIKEN/GSI/Lanzhou Un., Japan/Germany/China)
Puzzles of hypernuclei

14:00-14:15 **Sonja Orrigo** (IFIC (CSIC-UV), Spain)
Beta decay of the neutron-deficient ^{60}Ge and ^{62}Ge isotopes at RIKEN

14:15-14:30 **Menekse Senyigit** (Ankara Un., Ankara, Turkey)
Comparison of NaI detector efficiency via measurement and Monte Carlo, modelling new scintillators

14:30-14:45 **Serpil Yalcin Kuzu** (Firat Un., Elazığ, Turkey)
Machine learning approach in particle pair investigation

14:45-15:00 **Ayben Karasu Uysal** (KTO Karatay Un., Konya, Turkey)
Diffraction cross-section measurements at the LHC

15:00-15:15 **Esra Uyar** (Gazi Un., Ankara, Turkey)
Investigation of the effect of copper cooling rod on detector efficiency with monte carlo method in HPGe detectors

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15:15-15:30 **Adem Pehlivanli** (Gazi Un. and Kirikkale Un., Turkey)
Investigation of secondary neutrons produced by proton and helium ion beams
in water

15:30-16:00 COFFEE BREAK

Afternoon session 16:00-18:00

Chair: Ismail Hakki Sarpun (Akdeniz Un., Antalya, Turkey)

16:00-16:30 **Serkan Akkoyun** (Sivas Cumhuriyet Un., Sivas, Turkey)
Artificial intelligence: A laboratory for nuclear physics studies

16:30-16:45 **Hatice Duran Yildiz** (Ankara Un., Ankara, Turkey)
Superconducting cavity design for linear accelerator systems and Cern-Atlas
experiment adcos studies

16:45-17:00 **Imad Tagdamte** (Cadi Ayyad Un., Morocco)
The sextic potential within Bohr Hamiltonian for rigid nuclei in the presence of
minimal length

17:00-17:15 **Kuminder Kaur** (Guru Kashi Uni., Talwandi Sabo, India)
Comparative study of gamma treatment on fruit (Kinnow) and vegetable
(Tomato) as an application of nuclear physics

17:15-17:30 **Huseyin Bahtiyar** (Mimar Sinan Fine Arts Un., Istanbul,
Turkey)
Neural network application to the nuclear binding energies and charge radii

17:30-17:45 **Sarbjeet Kaur** (Sri Guru Granth Sahib World Un., Fatehgarh
Sahib, India)
Role of pairing coefficient in the dynamics of compound nuclei $^{24,25}\text{Mg}^*$

17:45-18:15 Closing Remarks
