

Session Program

11-24 Aug 2024



22nd STFC Nuclear Physics Summer School

Student Talks

Monday 12 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Design and development of a gamma radiation detector system for source localisation and mapping

Speaker

Refilwe Setso

19:45–20:00

Artificial Intelligence to improve HPGe detector performance and reliability

Speaker

Thomas Wonderley

20:00–20:15

Analysis of 200,202Hg Coulomb Excitation Data

Speaker

Gregory Willmott

20:15–20:30

Spectroscopy of neutron-deficient Fe isotopes and the development of an electrostatic ion trap for laser spectroscopy

Speaker

Daniel Bettaney

20:30

Tuesday 13 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Simulation of $^{241}\text{Am}^9\text{Be}$ neutron source and its moderation using Geant4**Speaker**

Filippo Falezza

19:45–20:00

Decay spectroscopy of ^{225}Fr **Speaker**

Abdulrahman Alshammari

20:00–20:15

Production of p-nuclides in accreting neutron star common envelopes**Speaker**

Sophie Abrahams

20:15–20:30

Neutron detection for dosimetry during proton radiotherapy**Speaker**

Natthaporn Kamwang

20:30

Wednesday 14 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Nuclear Ouija Board: Solving the $9B(1/2^+)$ mystery through the R-matrix Formalism

Speaker

Alex Brooks

19:45–20:00

The role of K-isomers in superheavy elements

Speaker

Jamie Chadderton

20:00–20:15

Shape co-existence in ^{28}Si

Speaker

Jacob Towers

20:15–20:30

Examining the north-west limit of octupole correlations in the light-actinide region using alpha-decay spectroscopy

Speaker

Ben Hogg

20:30

Thursday 15 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Commissioning of the Isolde Solenoidal Spectrometer**Speaker**

Ben Jones

19:45–20:00

Exotic nuclei: The limits of nuclei**Speaker**

Anthony McFarlane

20:00–20:15

Complete Beta-Gamma Decay Spectroscopy of ^{15}Tb : a Diagnostic Component of the Terbium Theragnostic Quartet**Speaker**

Edward O'Sullivan

20:15–20:30

Towards Novel Medical Isotope Production at HF-ADNeF**Speaker**

Maxwell Conroy

20:30

Friday 16 August

19:00

Student Talks

Session | **Location:** University of Durham

19:00–19:15

Geant4 simulation of charged particle detector array**Speaker**

Abdulaziz Alfehaid

19:15–19:30

The use of the the Trojan Horse Method for nuclear measurnment**Speaker**

Dominik Stajkowski

19:30–19:45

The Fast-Timing Technique for Neutron-Rich Lanthanides**Speaker**

Faye Rowntree

19:45–20:00

 $^{12}\text{C} + ^{12}\text{C}$ sub-barrier fusion with a time-dependent wave-packet method using microscopic potentials**Speaker**

Grant Close

20:00

Sunday 18 August

19:00

Student Talks

Session | **Location:** University of Durham

19:00–19:15

Laser and decay spectroscopy of neutron-rich mercury at ISOLDE

Speaker

Josh Wilson

19:15–19:30

Beta decay spectroscopy of neutron-deficient nuclei

Speaker

Norah Alwadie

19:30–19:45

Measurement of Excited State Lifetimes in Exotic ^{108}Zr using Isomeric Decay Tagging

Speaker

Siddharth Doshi

19:45–20:00

Probing Short Range Correlations via (p,pd) Quasi-Free Scattering reactions

Speaker

Matthew Whitehead

20:00–20:15

Nuclear Physics and Machine Learning

Speaker

Samuel Sullivan

20:15–20:30

Lifetime measurements of low-energy octupole states in radium-224

Speaker

Dylan White

20:30

Monday 19 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Machine Learning for Observable Interpolation and Data Analysis

Speaker

Ryan Ferguson

19:45–20:00

Mapping and Correcting for neutron damage induced energy losses in HPGe detectors

Speaker

Christopher Everett

20:00–20:15

Many body quantum dynamical thermal effects of the Osmium isotopes

Speaker

Nicholas Lightfoot

20:15–20:30

Elucidating Strangeness with Electromagnetic Probes

Speaker

Asli Acar

20:30

Tuesday 20 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Beta-gamma coincidence detection of noble gases for enhanced safety monitoring of spent fuel

Speaker

Sifa Poulton

19:45–20:00

Measuring the electric form factor of the neutron with recoil polarimetry

Speaker

Andrew Cheyne

20:00–20:15

Nuclear Physics Team - AWE's ASP facility

Speaker

Samuel Morley

20:15–20:30

Collinear laser spectroscopy at COLLAPS and analysis of $^{155-175}\text{Tm}$

Speaker

Jack Hughes

20:30

Thursday 22 August

19:30

Student Talks

Session | **Location:** University of Durham

19:30–19:45

Designing Calorimeters for Luminosity Monitoring at the Electron-Ion Collider**Speaker**

Alex Smith

19:45–20:00

Unfolding Jet Observables with Machine Learning**Speaker**

Nicodemos Andreou

20:00–20:15

Inelastic scattering cross section measurement of nat Pb**Speaker**

Renjie Wu

20:15–20:30

Proton-Emitting Isotopes near the N=82 shell closure**Speaker**

Adam McCarter

20:30