

Session Program

30 November 2025 to 5 December 2025



AIP summer meeting 2025

Nuclear and Particle Physics

Building 40, Hope Theatre
University of Wollongong Northfields Avenue Wollongong NSW 2522

Tuesday 2 December

10:40

Nuclear and Particle Physics

Session |

Location: Building 40, Hope Theatre, University of Wollongong Northfields Avenue Wollongong NSW 2522

10:40–10:55

Investigating two-phonon γ -vibrational states in ^{162}Dy through Coulomb excitation

Speaker

Tom Perissinotto

10:55–11:10

Parity Violation as a Tool to Perform Spectroscopy Inside Quantum Materials Using β -NMR

Speaker

Dr David Cortie

11:10–11:25

Investigating the $N = 28$ shell closure with single-nucleon transfer reactions

Speaker

Mr Aditya Babu

11:25–11:40

Searching for triaxial deformation in highly exotic nuclei towards the neutron dripline

Speaker

Luke Johnstone

11:40–11:55

Developing a Plunger Device for Precise Magnetic-Moment Measurements

Speaker

Mr Jack Woodside

11:55–12:10

Machine Learning in Simulation of Radiation for Defence and National Security Applications

Speaker

James Stuchbery

12:40

16:30

Nuclear and Particle Physics

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16:30–16:45

Emergent Symmetry in a Two-Higgs-Doublet Model from Quantum Magic

Speaker

Ewan Wallace

16:45-17:00

Impact of shell model interactions on nuclear responses to WIMP elastic scattering**Speaker**

Raghda Abdel Khaleq

17:00-17:15

Determination of the electromagnetic form factor of the Pion at large Q^2 using lattice QCD**Speaker**

Ian Van Schalkwyk

17:15-17:30

Investigating structural characteristics of deformed, odd-odd nuclei in the $A \sim 100$ mass region**Speaker**

Abhijith Aswathy Gopakumar

17:30-17:45

Enhancing Orbit Correction in Next Generation Lepton Accelerator Storage Rings**Speaker**

Tasman Harvey

18:30

Wednesday 3 December

10:45

Nuclear and Particle Physics

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10:45-11:15 Dark matter detection in condensed systems

Speaker
Jayden Newstead

11:15-11:30
The SABRE South Experiment at the Stawell Underground Physics Laboratory

Speaker
Antoine Cools

11:30-11:45
Warm ingredients in a cold soup: The role of warm and cold dark matter in cosmological structure formation

Speaker
Amrita Mukherjee

11:45-12:00 Bottom-up perspective on baryon number violation

Speaker
Michael Schmidt

12:00-12:15 Searching for new Particles at 95 GeV

Speaker
Navneet Krishnan

12:15-12:30 Low Mass WIMP searches with the Migdal Effect in XLZD

Speaker
Ananthakrishnan Ravindran

12:45