

Session Program

30 November 2025 to 5 December 2025



AIP summer meeting 2025

Medical Physics

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

Thursday 4 December

16:10

Medical Physics

Session |

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

16:10–16:25

Fast pre-insertion dosimetry and source validation for Ru-106/I-125 ophthalmic plaque brachytherapy with 2D pixelated semiconductor detectors

Speaker

Syed Jawad Ali Shah

16:25–16:40

Development of an optimised method for tracking chemical species in Geant4-DNA enabling in-silico radiobiology in a cosmic radiation environment

Speaker

Susanna Guatelli

16:40–16:55

High-fidelity Geant4 simulation of the Elekta Unity MR-LINAC for dose prediction

Speaker

Christopher White

16:55–17:10

A Fibre-Optic Dosimeter for Real-Time Tracking of HDR Brachytherapy Source

Speaker

Khalid Alhamad

17:10–17:25

Developing a very high-energy electron radiotherapy facility at the ANSTO Australian Synchrotron

Speaker

James Cayley

17:25–17:40

A Seed Activity Reconstruction Algorithm for a Novel Fast Pre-Insertion Verification System for I-125 Eye Plaques

Speaker

Adam Marsic

17:40–17:55

Validation of Geant4 fragmentation for broad beam heavy-ion therapy

Speaker

Kristie Elaine Moore

17:55–18:10

Surface-Guided Radiotherapy for Motion Management - from Conventional to Ultra-High Dose Rate Treatments

Speaker

Malin Kügele

18:10

Friday 5 December

10:40

Medical Physics

Session |

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

10:40–10:55

Systematic benchmarking of Monte Carlo Codes for accelerator-based BNCT neutron production targets

Speaker

Sherryn MacLeod

10:55–11:10

Quantum-AI Biophotonic Diagnostics for Point-of-Care Brain Tumor Screening

Speaker

Dr Mansoor Ali Khan

11:10–11:25

Characterisation of angular response in an improved tissue-equivalent microdosimetry probe for proton therapy applications

Speaker

Allegra Villar

11:25–11:40

Development of a simple, silicon based, dose equivalent neutron dosimeter for radiation protection purposes through GEANT4 modelling.

Speaker

Matthew Roberts

11:40–11:55

From palliative to curative microbeam radiation therapy at the Australian Synchrotron: Increasing the irradiated area to achieve complete coverage of the tumor

Speaker

Bernd Frerker

11:55–12:10

Geant4 for medical physics applications: novel developments and next steps

Speaker

Susanna Guatelli

12:10–12:25

Synchrotron Light: A Physics Journey from Laboratory to Cosmos

Speaker

Daniele Pelliccia

12:25–12:40

Computed Tomography Dose Level in Selected Five Principal Hospitals in Ethiopia

Speaker

Gebremedhin Kide Kinfe

12:40