

Session Program

8-10 Apr 2026



IOP Joint APP and HEPP Annual Conference 2026

Parallel Talks

John McIntyre Conference Centre
Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

Wednesday 8 April

15:45

Parallel Talks: Wednesday 1 - dark matter

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

15:45-16:00

Projected Sensitivity of the XLZD Rare Event Observatory to New Physics via Low Energy Electron Recoils

Speaker

Huan Zhang

16:00-16:15

Probing Light Dark Matter with Levitated Quantum Sensors

Speaker

Andrzej Gawdzik

16:15-16:30

Modelling the accidental coincidence background in LUX-ZEPLIN for a light dark matter search

Speaker

Isabelle Darlington

16:30-16:45

QUEST-DMC sensitivity across dark matter interaction types: linking direct detection, colliders, and freeze-out

Speaker

Neda Darvishi

16:45-17:00

Searching for light dark matter with DarkSPHERE

Speaker

Dr Lachlan Milligan

17:00-17:15

Prototype Validation Studies for the DarkSide-20k TPC

Speaker

Angus Thompson

17:15-17:30

Spin-dependent dark matter sensitivity of DarkSide-20k

Speaker

Dr Ash Ritchie-Yates

17:45

15:45

Parallel Talks: Wednesday 2 - collider

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

15:45-16:00

Run 3 measurement of tau identification performance in $t\bar{t}$ events with the GNTau algorithm in ATLAS

Speaker

Sudev Pradhan

16:00-16:15

Constraining top-sector EFT effects with combined associated top-quark production measurements at ATLAS**Speaker**

Betsy Cunnett

16:15-16:30

Gauge-Invariant Longitudinal Modes in Electroweak Parton Shower**Speaker**

Aidin Masouminia

16:30-16:45

Opposite-sign WW production with Run3 data in ATLAS**Speaker**

Alberto Plebani

16:45-17:00

Search for Di-Higgs Pair Production in the $b\bar{b}\tau\tau$ decay channel using Run2+Run3 Data with the ATLAS Detector at the LHC.**Speaker**

Bhupesh Dixit

17:00-17:15

Searching for BSM Higgs bosons in the $b\bar{b}WW$ final state at the ATLAS detector**Speaker**

Rachel Ashby Pickering

17:15-17:30

Analysis of $\Lambda_b \rightarrow \Lambda h+h^-$ decays at LHCb in Run 3**Speaker**

George Hallett

17:45

15:45

Parallel Talks: Wednesday 3 - neutrino**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

15:45-16:00

Improving Uncertainty Estimates from Final State Interactions using the NEUT Event Generator**Speaker**

Tom Peacock

16:00-16:15

Searches for Beyond the Standard Model physics with e^+e^- signatures in MicroBooNE**Speaker**

Joseph Bateman

16:15-16:30

Neutron detection using the T2K ND280 Electromagnetic Calorimeters**Speaker**

Hannah Alarackia-Charles

16:30-16:45

The NOvA Test Beam Program**Speaker**

Emerson Bannister

16:45-17:00 **The NEXT experiment: Results from the NEXT-100 detector**

Speaker

John Waiton

17:45

15:45

Parallel Talks: Wednesday 4 - detectors**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

15:45-16:00

The Beam Momentum Spectrometer Stations for the MUonE experiment**Speaker**

Giorgia Cacciola

16:00-16:15

A Novel Cherenkov Radiator for Particle Identification**Speaker**

Henry James Linton

16:15-16:30

Phase-2 CMS ECAL APD Spike Rejection Studies Using 2021 and 2025 Test Beam Data**Speaker**

Jakub Andrzej Gajownik

16:30-16:45

Materials screening at Boulby Underground Laboratory**Speaker**

Alice Hamer

16:45-17:00

Inter-Channel Timing Variations in RICH MAPMTs**Speaker**

Callum James White

17:00-17:15

Commissioning of the CMS Phase-2 Tracker Cosmic Test Stand**Speaker**

Andrew Mastronikolis

17:15-17:30

Performance studies of the ePIC Barrel Tracking Detector for the Electron-Ion Collider**Speaker**

Athavan Ramalingam

17:45

15:45

Parallel Talks: Wednesday 5 - collider**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

15:45-16:00

Quantum correlated D mesons in LHCb Run 3 data**Speaker**

Ho Sang Lee

16:00-16:15

2l+MET signature from two-component dark matter at the LHC**Speaker**

Shu Chen

16:15-16:30

Simplified Template Cross Section measurements of Higgs Boson production in the diphoton decay channel at CMS**Speaker**

Tom Runting

16:30-16:45

ATLAS Muon Spectrometer Displaced Vertex Searches**Speaker**

Julian Friedrich Wack

16:45-17:00

Search for new physics in final states with semi-visible jets or anomalous signatures using the ATLAS detector**Speaker**

Saashiv Valjee

17:00-17:15

Impact of Hadronic Transport on Identified Particle Production in Pb-Pb Collisions at $\sqrt{s_{NN}} = 5.02$ TeV**Speaker**

Anju Bhasin

17:15-17:30

Dimuon decay of Higgs Boson through VH**Speaker**

Mr Arnav Sunil Avad

17:45

Thursday 9 April

10:45

Parallel Talks: Thursday 1 - detectors

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

10:45-11:00 **The FastRICH ASIC for a time resolved LHCb RICH**

Speaker

George Ramsey

11:00-11:15 **Pulse Shape Analysis for Low Radioactivity Material Screening**

Speaker

Difei Xu

11:15-11:30

The LHCb Mighty Tracker pixel sensor characterisation and multi-module serial powering prototyping

Speaker

Daniel Foulds-Holt

11:30-11:45 **Preparing for DarkSide-20k veto photodetector installation**

Speaker

Isobel Sargeant

11:45-12:00 **RadPix: A High-Voltage CMOS Sensor for the LHCb Upgrade**

Speaker

Karol Hennessy

12:00

10:45

Parallel Talks: Thursday 2 - precision measurements

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

10:45-11:00

Precision Measurement of the Two-Pion Contribution to the Hadronic Vacuum Polarization with KLOE

Speaker

Niels Vestergaard

11:00-11:15

Differential cross-section measurement of $t\bar{t}t\bar{t}$ production with ATLAS using 2022-2024 data

Speaker

Fani Nathalie E. Henry

11:15-11:30 **The MUonE Experiment and First Results from the 2025 Test run**

Speaker

Clement Loic Devanne

11:30-11:45

Analysis of the CP Structure of the Tau Lepton Yukawa Coupling at the CMS Experiment

Speaker

Lucas Russell

11:45-12:00 **Towards Precise Determination of the CKM angle γ** **Speaker**

Marcelo Bovill

12:00

10:45

Parallel Talks: Thursday 3 - neutrinos**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY10:45-11:00 **The helium recycling system for SuperNEMO****Speaker**

Penghui Li

11:00-11:15

Detector and background modelling for neutrinoless double beta decay searches in LEGEND**Speaker**

Toby Dixon

11:15-11:30

Efficient sampling for the precision era of neutrino experiments**Speaker**

Hank Hua

11:30-11:45

Latest collider neutrino measurements with the FASER detector**Speaker**

Sinead Eley

11:45-12:00

Maximising MicroBooNE's sensitivity to Heavy Neutral Leptons produced in the NuMI beam**Speaker**

Magnus Handley

12:00

10:45

Parallel Talks: Thursday 4 - detectors**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

10:45-11:00

Single-Electron Gas Characterisation for Dark Matter Searches using Spherical Proportional Counters**Speaker**

Peter Walters

11:00-11:15

Novel Mass Measurement Methods using the LHCb RICH Detectors**Speaker**

Michael James Kane

11:15-11:30

Cryogenic characterization of the DarkSide-20k veto photo-detector units**Speaker**

Emma Ellingwood

11:30-11:45

Ultra-pure copper electroforming at Boulby deep underground laboratory

Speaker

Giovanni Rogers

11:45-12:00

Tyvek reflectance study for the outer detector of the Hyper-Kamiokande experiment.

Speaker

Sania Lewis

12:00

10:45

Parallel Talks: Thursday 5 - astroparticle

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

10:45-11:00

High Frequency Axion Searches at the University of Manchester

Speaker

Jamie McDonald

11:00-11:15

When Supernova Neutrinos met Liquid Argon: using muons decaying-at-rest to look for MeV-scale electron neutrinos in SBND

Speaker

Lucy Kotsiopoulos

11:15-11:30

Are dark showers observables visible for us?

Speaker

Mr Miguel Angel Avendano Bernal

11:30-11:45

How Sensitive is Cosmic Inflation to Quantum Corrections?

Speaker

Lucien Heurtier

11:45-12:00

The Anatomy of a P-ONE Optical Module

Speaker

Alexia Alexander Wight

12:00

Friday 10 April

11:00

Parallel Talks: Friday 1 - dark matter

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

11:00-11:15

First Measurements of the Effectiveness of Radon Removal in Liquid Xenon via Charcoal Chromatography

Speaker

Simran Dave

11:15-11:30

Using Computer Vision to Reject Instrumental Background in LUX-ZEPLIN and Multi-Vertex Inelastic Dark Matter Signal Searches

Speaker

Catherine Lawes

11:30-11:45

Probing low mass dark matter with superfluid helium

Speaker

Elizabeth Leason

11:45-12:00

Construction Progress of the DarkSide-20k Dark Matter Search Experiment

Speaker

Daria Santone

12:00-12:15

Production of 26 m² of SiPM Detectors for DarkSide-20k

Speaker

Dr Paolo Franchini

12:30

11:00

Parallel Talks: Friday 2 - Collider

Session | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

11:00-11:15

Everything Quantum

Speaker

Ivo Young

11:15-11:30

A Search for Z' Dilepton Resonances Using the ATLAS Detector in Run 3 at the LHC

Speaker

Tom Elliot

11:30-11:45

Measuring the Binned CP Asymmetry in B to K mu mu

Speaker

Juan Jose Juan Castella

11:45-12:00

A search for displaced tau production from long-lived particles at the ATLAS experiment

12:30	<p>Speaker Alex Veltman</p>
11:00	<p>Parallel Talks: Friday 3 - Neutrino Session Location: John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY</p>
	<p>11:00-11:15 Searches for Light Dark Matter and Evidence of Coherent Elastic Neutrino-Nucleus Scattering of Solar Neutrinos with the LUX-ZEPLIN (LZ) Experiment Speaker Leah Wolf</p>
	<p>11:15-11:30 Simulation studies for the nuSTORM facility Speaker WONJONG CHANG</p>
	<p>11:30-11:45 β Backgrounds Using the 1-Electron Channel in SuperNEMO Speaker Gill Turnbull</p>
	<p>11:45-12:00 Latest developments in near detector analyses at T2K Speaker Dominic Langridge</p>
12:30	
11:00	<p>Parallel Talks: Friday 4 - Detectors Session Location: John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY</p>
	<p>11:00-11:15 The LHCb Mighty Tracker: Thermo-mechanical design and prototype testing. Speaker Mr Bilal Ganie</p>
	<p>11:15-11:30 Testing stitched devices for the upcoming ALICE ITS3: results of babyMOSS chip characterisation at a test beam Speaker Alessandro Sturniolo</p>
	<p>11:30-11:45 Benchmarking SRO Performance of CAEN Digitizers Speaker Mr Yuri Venturini</p>
	<p>11:45-12:00 Physics studies for the Muon Collider target system. Speaker William Bishop</p>
	<p>12:00-12:15 Flexible Organic Semiconductor Radiation Sensors for use in Industry and Particle Physics Speaker Albanik Gashi</p>
12:30	

11:00

Parallel Talks: Friday 5 - machine learning / reconstruction**Session** | **Location:** John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Rd, Edinburgh EH16 5AY

11:00-11:15

Particle-Based Representation Learning for Anomaly Detection in the CMS High-Level Trigger**Speaker**

Mehrnoosh Moallemi

11:15-11:30

ML based Jet Calibration for HL-LHC**Speaker**

Snigdho Chakraborty

11:30-11:45

Boosted Top Jet Tagging Based on LundNet**Speaker**

Yuanda Zhu

11:45-12:00

Quantum Computing for Particle Physics: Simulation and Machine Learning**Speaker**

Callum Duffy

12:00-12:15

A Hadronic Tau Preselection in the ATLAS detectors High Level Trigger**Speaker**

Joel Davidson

12:30