

Session Program

22-26 Jun 2026



PASCOS 2026

Particles

Richard Roberts Auditorium
13 Brook Hill, Sheffield S3 7HF

Monday 22 June

09:30

Particles

Session | **Location:** Richard Roberts Auditorium, 13 Brook Hill, Sheffield S3 7HF | **Convener:** Carsten van de Bruck

09:30–10:05 **Axion Physics and Detection**

Speaker

Andreas Ringwald

10:05–10:40

X-ray Smoking Guns from Galactic Center Compact Stars: A New Probe of Inelastic Dark Matter

Speaker

Sebastian Trojanowski

10:40

16:15

Particles

Session | **Location:** Richard Roberts Auditorium, 13 Brook Hill, Sheffield S3 7HF | **Convener:** Andreas Ringwald

16:15–16:50 **Direct Detection of Dark Matter: Status and Prospects**

Speaker

Sally Shaw

16:50–17:25

Direct Searches for New Physics at the LHC: From Run 2 to the HL-LHC Era

Speaker

Iacopo Vivarelli

17:25

Tuesday 23 June

14:15

Particles: Dark Matter

Session | **Location:** Hicks Building, Lecture theatre E | **Conveners:** Christopher McCabe, Adam Brown

14:15-14:35 **DMRadio: A lumped-element, low-mass axion search**

Speaker

Andrew Yi

14:35-14:55 **Beyond 3→2: Towards Realistic SIMP Dark Matter**

Speaker

Halvor Melkild

14:55-15:15

Cornered But Alive: GeV-scale Thermal Dark Matter From Dark Photons

Speaker

David Alonso-González

15:15-15:35 **Heavy dark matter in rapidly evolving massive stars**

Speaker

Giorgio Busoni

15:35-15:55 **A Solar Probe of Dark Matter Decay in the Galaxy**

Speaker

Maximilian Detering

15:55-16:15 **Coffee Break**

16:15-16:35 **Cosmological signals of dark matter semi-annihilation**

Speaker

Alessia Musumeci

16:35-16:55 **Filtered dark matter from strong first order phase transitions**

Speaker

Satumaaria Sukuvaara

16:55-17:15 **No room for monopole dark matter**

Speaker

Théodore Fischer

17:15

14:15

Particles: Neutrino Physics

Session | **Location:** Hicks Building, Lecture Theatre A | **Conveners:** Pasquale Di Bari, IVAN MARTINEZ SOLER

14:15-14:35

Status of three-flavor neutrino oscillations and the lessons from the first JUNO results

Speaker

Ivan Esteban

Location

Hicks Building, Lecture Theatre A

14:35–14:50 First Physics Results from JUNO**Speaker**

Xianguo Lu

Location

Hicks Building, Lecture Theatre A

14:50–15:05 Status and Opportunities of the Hyper-Kamiokande Experiment**Speaker**

George Burton

Location

Hicks Building, Lecture Theatre A

15:05–15:19 Towards the final analysis of the KATRIN data**Speaker**

Karo Erhardt

15:19–15:32 Search for keV Sterile Neutrinos with the KATRIN Experiment**Speaker**

Leo Laschinger

Location

Hicks Building, Lecture Theatre A

15:32–15:45**KATRIN++: Towards a next-generation neutrino mass experiment using tritium beta decay****Speaker**

Svenja Heyns

Location

Hicks Building, Lecture Theatre A

15:45–16:00**A possible solution to the gallium anomaly moving beyond the leptonic wave function factorization****Speaker**

Luca Ferro

Location

Hicks Building, Lecture Theatre A

16:00–16:20 Coffee Break**Location**

Hicks Building, Lecture Theatre A

16:20–16:35 Non-Adiabatic Mixing in Density Matrix Formalism**Speaker**

Shreya Girishkumar Pandit

Location

Hicks Building, Lecture Theatre A

16:35-16:50

From CUORE to CUPID: Toward a Next Generation Search for Neutrinoless Double Beta Decay

Speaker

Francesca Pucci

Location

Hicks Building, Lecture Theatre A

16:50-17:05

Search for the Majorana Nature of Neutrino with the LEGEND Experiment

Speaker

Alex Biondi

Location

Hicks Building, Lecture Theatre A

17:05-17:20

Beyond the Standard Model investigations at CONUS+

Speaker

Dario Piani

Location

Hicks Building, Lecture Theatre A

17:20-17:35

The NUCLEUS experiment for Coherent Elastic Neutrino-Nucleus Scattering

Speaker

Matteo Cappelli

Location

Hicks Building, Lecture Theatre A

17:35

Wednesday 24 June

11:15

Particles

Session | **Location:** Richard Roberts Auditorium, 13 Brook Hill, Sheffield S3 7HF | **Convener:** Sebastian Trojanowski

11:15-11:50

Advancing the Neutrino Frontier to the Megaton Regime and Beyond

Speaker

Francesca Di Lodovico

11:50-12:25

Exploring Sterile Neutrinos and the Dark Sector with MicroBooNE

Speaker

Stefan Soldner-Rembold

12:25

Thursday 25 June

09:10

Particles: joint BSM and Flavour & DM experiments

Session | **Location:** Richard Roberts Auditorium, 13 Brook Hill, Sheffield S3 7HF | **Conveners:** Sarah Williams, Christopher McCabe, William Barter, Adam Brown

09:10–09:30

An exploration of the NMSSM using deep learning to fit hints of new scalars

Speaker

Raymundo Ramos

09:30–09:50

Searches for new physics using unconventional signatures and techniques with the ATLAS detector

Speaker

Sergei CHEKANOV

09:50–10:10

Searches for new physics using conventional signatures with the ATLAS Detector

Speaker

Selaiman RIDOUANI

10:10–10:30

CMS Prompt BSM

Speaker

Laurent Thomas

10:30–10:50

CMS Long-lived BSM

Speaker

Thales Menezes De Oliveira

10:50–11:10

Coffee Break

11:10–11:30

Preparedness for Dark Matter Discovery at SuperCDMS SNOLAB

Speaker

Junwen Xiong

11:30–11:50

Searches for Dark Matter with the ATLAS Experiment at the LHC

Speaker

Bernardo Ricci

11:50–12:10

Dark Matter Searches at PICO

Speaker

Dr Mayank Tripathi

12:10–12:30

Recent results from XENONnT

Speaker

Sana Ouahada

12:30

14:00

Particles

Session | **Location:** Richard Roberts Auditorium, 13 Brook Hill, Sheffield S3 7HF | **Convener:** Francesca Di Lodovico

14:00–14:35 **TBA**

Speaker

Prof. MARTIN BAUER

14:35–15:10 **Latest results from the NA62 experiment**

Speaker

Dr Joel Swallow

15:10–15:45

Measurement of the ratios $R(D^{(*)}) = \mathcal{B}(B \rightarrow D^{(*)} \tau \nu) / \mathcal{B}(B \rightarrow D^{(*)} \ell \nu)$, using semileptonic tagging and leptonic τ decays with the BABAR detector

Speaker

Fergus Wilson

15:45

Friday 26 June

09:10

Particles: Beyond the Standard Model & Flavour Physics

Session | **Location:** Hicks Building, Lecture Theatre E | **Conveners:** William Barter, Sarah Louise Williams

09:10–09:30

CPT-Symmetric Kahler-Dirac Fermions: Implication of the Standard Model and Cosmology

Speaker

Wei-Ning Deng

09:30–09:50

CPV in Heavy Flavour decays

Speaker

Linxuan Zhu

09:50–10:10

Quark and lepton mixing in the Asymptotic Safe Standard Model

Speaker

Zois Gyftopoulos

10:10–10:30

Measuring the neutron Electric Dipole Moment for CP-violation searches beyond the standard model.

Speaker

Katia MICHIELSEN

10:30–10:50

Probing Cosmic Ray Composition and Muon-philic Dark Matter using GeV Muon sources

Speaker

Andrew Michael Levin

10:50–11:10

Coffee Break

11:10–11:30

Cosmic Millicharged Background, Reheating, and Arithmetica Electrōrum

Speaker

Yu-Dai Tsai

11:30–11:50

Searching for screened scalar forces with long-baseline atom interferometers

Speaker

Christopher McCabe

11:50–12:10

Vector Resonances at Muon and Wakefield Colliders

Speaker

Massimo Cipressi

12:10–12:30

Slow force carriers in particle physics and cosmology

12:30

Speaker

Francesco Serra

09:10

Particles: Higgs & Electroweak**Session** | **Location:** Hicks Building, Lecture Theatre A | **Conveners:** Chris Hays, Peter Millington

09:10–09:30

Higgs boson production and decay rate measurements with the ATLAS experiment**Speaker**

Ahmed MARKHOOS

09:30–09:50

V-associated production & vector boson fusion of Higgs bosons as an LHC signature of CP violation**Speaker**

Álvaro Lozano Onrubia

09:50–10:10

Natural Higgs mass from power-law running**Speaker**

KAng-Sin Choi

10:10–10:30

Higgs Criticality: Electroweak Vacuum Metastability as a Window to Beyond the Standard Model Physics**Speaker**

Maximilian Detering

10:30–10:50

Toward a real-time theory of vacuum decay**Speaker**

Alex Jenkins

10:50–11:10

Coffee Break

11:10–11:30

Search for the rare Higgs boson decay $H \rightarrow Z \gamma$ **Speaker**

Xingchen Fan

11:30–11:50

Searches for New Physics in Effective Field Theory Approaches from ATLAS**Speaker**

Oleksii KURDYSH

11:50–12:10

Characterizing LHC-Resonances in extended HEFT**Speaker**

David Cabo Almeida

12:10–12:30

Quantum Entanglement Is Quantum: Insights from Diboson Systems at the LHC**Speaker**

AJAY Kaladharan

12:30