

Session Program

2-5 Apr 2023

2023 IoP Joint APP and HEPP Annual Conference

Parallel stream 2

King's College London, Bush House Arcade (South Central) Arcade Entrance
Bush House, Strand campus, London, WC2B 4BG

Monday 3 April

15:00

Parallel stream 2: Session 1

Session | **Location:** Lecture Theatre 1, Bush House | **Convener:** Darren Price

15:00–15:15 **Status of the FASER Experiment at the LHC and first run-3 results**

Speaker

Josh McFayden

15:15–15:30

Improving Variational Autoencoders for New Physics Detection at the LHC With Normalizing Flows

Speaker

Pratik Jawahar

15:30–15:45

Using Machine Learning to improve the sensitivity of Stau Searches with the ATLAS Detector at the Large Hadron Collider

Speakers

Dominic Jones, Dominic Jones

15:45–16:00

Search for the resonant production of two Higgs bosons in a final state with two photons and two tau leptons

Speaker

Mr Matthew Knight

16:00–16:15

Not all hopes die immediately: Searching for new particles beyond the standard model if they are long-lived, using displaced vertex signatures in ATLAS

Speaker

David Rousso

16:15–16:30

A search for semi-visible jets in non-resonant production mode in ATLAS

Speaker

Sukanya Sinha

16:30

17:00

Parallel stream 2: Session 2

Session | **Location:** Lecture Theatre 1, Bush House | **Convener:** Marcella Bona

17:00–17:15 **Model independent angular analysis of $B \rightarrow D^* \mu \nu$ decays at LHCb**

Speaker

Rizwaan Mohammed

17:15–17:30

Measurement of the branching fraction and CP asymmetry of the decay $B \rightarrow \pi \mu \mu$

Speaker

Rebecca Murta

17:30–17:45

Towards a measurement of charm mixing and CPV using D^0 to $K \pi \pi \pi$ decays at LHCb**Speaker**

Jenny Smallwood

17:45–18:00

Measurement of the CKM angle γ in $B^\pm \rightarrow DK^{*\pm}$ decays at LHCb**Speaker**

Fidan Suljik

18:00–18:15

Search for the Lepton Flavour Violating Decay $L_b \rightarrow L_\mu \mu$ **Speakers**

Paul Nathaniel Swallow, Paul Swallow

18:15–18:30

On the development of the Mu2e Stopping Target Monitor software**Speakers**

Pawel M Plesniak, Pawel Plesniak

18:30–18:45

CKM angle γ measurement at LHCb using partially reconstructed $B \rightarrow D^* h$ with $D^* \rightarrow D \pi^0$ and $D^* \rightarrow D \gamma$ **Speaker**

Seophine Stanislaus

18:45

Wednesday 5 April

11:30

Parallel stream 2: Session 3

Session | **Location:** Lecture Theatre 1, Bush House | **Convener:** Tina Potter

11:30–11:45

Tau leptons-enriched semi-visible jets at the LHC

Speaker

Tobias Fitschen

11:45–12:00

Searches for exclusive Higgs and Z boson decays to a meson and a photon at ATLAS

Speaker

Robert Ward

12:00–12:15

A search for decays of the Higgs boson to invisible particles in ttH and VH final states at the CMS experiment and Run1+2 Higgs to invisible combination

Speaker

Robert White

12:15–12:30

Search for heavy Majorana neutrino production via vector boson scattering with the ATLAS detector

Speaker

Benjamin Wilson

12:30

13:30

Parallel stream 2: Session 4

Session | **Location:** Lecture Theatre 1, Bush House | **Convener:** Victoria Martin

13:30–13:45

Early Run-3 W^\pm/Z cross-section measurements at the ATLAS experiment

Speaker

Mihaela Marinescu

13:45–14:00

Probing jet quenching through hadron+jet measurements with the ALICE experiment

Speaker

Jaime Norman

14:00–14:15

Photon-induced WW production as a test of the electroweak boson self-interactions

Speaker

Joshua Puddefoot

14:15–14:30

Differential cross-section measurement of the production of a top and anti-top quark pair in association with a Z boson with the ATLAS detector

Speaker

Harriet Watson

14:30–14:45

Model-independent high-mass Drell-Yan ditau measurement

Speaker

Luzhan Yue

14:45–15:00

Making measurements reusable: a case study with missing energy at ATLAS

Speaker

Yoran Yeh

15:00