

**Session Program**

**25-29 Aug 2025**

**Lepton-Photon 2025**

***Parallel***

Madison, WI, Monona Convention Center

# Monday 25 August

14:00

## Parallel: Accelerator Technologies 2

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**The US Magnet Development Program (MDP) Roadmap for future particle physics colliders.**

**Speaker**

Stephen Gourlay

14:20–14:40

**800 MHz SRF R&D for FCC**

**Speaker**

Kellen McGee

14:40–15:00

**Rapidly Pulsed Schrotron Acceleration Chain for a Fermilab Sited Muon Collider**

**Speaker**

Kyle Capobianco-Hogan

15:00–15:20

**Modification of Generating Functions For Dynamic Aperture Enlargement**

**Speaker**

Mr Kevin Hamilton

15:30

14:00

## Parallel: Dark Sectors (Direct/Indirect)

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Status of LUX-ZEPLIN (LZ) Experiment**

**Speaker**

Ann Wang

14:20–14:40

**The SABRE South Experiment at the Stawell Underground Physics Laboratory**

14:40–15:00

**First Physics Results from milliQan**

**Speaker**

Sai Neha Santpur

15:00–15:20

**SUB-Millicharge Experiment (SUBMET) at J-PARC**

**Speaker**

Jae Hyeok Yoo

15:30

14:00

## Parallel: Hadron Physics 1

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:30

**$D-\bar{D}$  mixing theory: new results**

**Speaker**

Alexey Petrov

14:30–14:50

**Quantum Tomography in Neutral Meson and Anti-meson System****Speaker**

Kun Cheng

14:50–15:10

**Analysis of  $B \rightarrow VV$  decays under  $\text{SU}(3)_F \otimes \text{SU}(2)_{\text{spin}}$** **Speaker**

Ms Ipsita Ray

15:10–15:30

**Precision measurement of the branching fraction for the decay  $\psi(2S) \rightarrow \tau^+ \tau^-$** **Speaker**

Fabrizio Bianchi

15:30

14:00

**Parallel: Heavy BSM Searches at Colliders 2****Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Self Consistent Thermal Resummation: A Case Study of the Phase Transition in 2HDM****Speaker**

Dr Subhojit Roy

14:20–14:40

**Search for rare decay of SM Higgs to light scalars in the CMS experiment****Speaker**

Niki Saoulidou

14:40–15:00

**Searches for Beyond Standard Model Higgs boson decays (including low mass resonances)****Speakers**

ATLAS Speaker, Evelin Meoni

15:00–15:20

**Searches for additional Higgs bosons (high & low mass) at CMS****Speaker**

Niki Saoulidou

15:30

14:00

**Parallel: Neutrino Physics 2****Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Understanding Cross Section Model Uncertainties in Neutrino Experiments****Speaker**

Anjan Giri

14:20–14:40

**Neutrino-nucleus interactions and the quest for new and precision physics searches in neutrino experiments****Speaker**

Dr Vishvas Pandey

14:40–15:00

**Neutrino cross-section results from T2K****Speaker**

Dr Anna Holin

15:00–15:20

**Neutrino Interaction Measurements with the SBND Experiment****Speaker**

Afroditi Papadopoulou

15:30

14:00

**Parallel: Top Physics 2****Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Quantum Entanglement and Bell Inequality Violation in Semi-Leptonic Top Decays****Speaker**

Arthur Wu

14:20–14:40

**ATLAS results on top,  $t\bar{t}$  and associated cross sections****Speakers**

ATLAS Speaker, Evelin Meoni

14:40–15:00

**Cross section measurements of top quark production****Speaker**

Niki Saoulidou

15:00–15:20

**ATLAS results on top quark mass****Speakers**

ATLAS Speaker, Evelin Meoni

15:30

## Tuesday 26 August

14:00

### Parallel: Exotic Searches 1

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20 **Stealth and RPV SUSY searches with CMS**

**Speaker**

Niki Saoulidou

14:20–14:40 **Recent searches for SUSY particles with CMS with MET**

**Speaker**

Niki Saoulidou

14:40–15:00

**Search for Higgs boson decays into a pair of pseudoscalar particles in the  $\gamma\gamma\tau\tau$  final state using  $pp$  collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

**Speakers**

ATLAS Speaker, Evelin Meoni

15:00–15:20

**Physics results with the CMS Precision Proton Spectrometer and projections for the HL-LHC with PPS2**

**Speaker**

Niki Saoulidou

15:30

14:00

### Parallel: Hadron Physics 1

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20 **Exotic hadron studies in ATLAS**

**Speakers**

ATLAS Speaker, Evelin Meoni

14:20–14:40 **Charmonium(-like) states at BESIII**

**Speaker**

Fabrizio Bianchi

14:40–15:00 **Hadron spectroscopy at Belle and Belle II**

**Speaker**

Steven Robertson

15:00–15:20 **Charmed baryon decays at BESIII**

**Speaker**

Fabrizio Bianchi

15:30

14:00

### Parallel: Higgs 1

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20 **Non-resonant HH and higgs-self couplings measurements by ATLAS**

**Speakers**

ATLAS Speaker, Evelin Meoni

**14:20–14:40 Di-Higgs searches at CMS****Speaker**

Niki Saoulidou

**14:40–15:00 Recent results on measurements of the Higgs boson in ATLAS****Speakers**

ATLAS Speaker, Evelin Meoni

**15:00–15:20 Higgs physics at a 10 TeV Muon Collider****Speakers**

Alessio Gianelle, Davide Zuliani, Donatella Lucchesi, Leonardo Palombini, Lorenzo Sestini, Massimo Casarsa, Paolo Andreetto

15:30

14:00

**Parallel: Instrumentation 2****Session** | **Location:** Madison, WI, Monona Convention Center**14:00–14:20****Operational Experience and Performance with the ATLAS Pixel detector at the Large Hadron Collider at CERN****Speaker**

ATLAS Speaker

**14:20–14:40 Phase-2 Upgrade of the ATLAS Inner Tracker****Speaker**

ATLAS Speaker

**14:40–15:00 The ePIC Silicon Vertex Tracker: Design and Status****Speaker**

Rosario Turrisi

**15:00–15:20****Precision timing at the HL-LHC with the CMS MIP Timing Detector: current progress on validation and production****Speaker**

Niki Saoulidou

15:30

14:00

**Parallel: Quark Flavor 2****Session** | **Location:** Madison, WI, Monona Convention Center**14:00–14:20 Recent results on (semi)-leptonic D decays at BESIII****Speaker**

Fabrizio Bianchi

**14:20–14:40****Measurement of B meson production fractions in proton-proton collisions at 13 TeV using hadronic open-charm and charmonium decays****Speaker**

Taeun Kwon

14:40–15:00

**Measurements of semileptonic and leptonic  $B$  decays at Belle and Belle II**

**Speaker**

Steven Robertson

15:00–15:20

**Recent results from LHCb on charged-current decays of b-hadrons**

**Speaker**

Ching-Hua Li

15:30

## Wednesday 27 August

14:00

### Parallel: Exotic Searches 2

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

#### Searches for Supersymmetry with compressed scenarios

##### Speaker

Niki Saoulidou

14:20–14:40

#### Searches for strong production of supersymmetric particles with the ATLAS detector

##### Speakers

ATLAS Speaker, Evelin Meoni

14:40–15:00

#### Searches in CMS for new physics in final states with leptons

##### Speaker

Niki Saoulidou

15:00–15:20

#### Searches for new physics using leptons with the ATLAS detector

##### Speakers

ATLAS Speaker, Evelin Meoni

15:30

14:00

### Parallel: Hadron Physics 2

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

#### Spin and symmetry properties of all-charm tetraquarks

##### Speaker

Niki Saoulidou

14:20–14:40

#### Light Baryon Spectroscopy at BESIII

##### Speaker

Fabrizio Bianchi

14:40–15:00

#### Spectroscopy of Strange Mesons with COMPASS

##### Speaker

Stefan Wallner

15:00–15:20

#### Exotic hadronic states at LHCb

##### Speaker

Liming Zhang

15:30

14:00

### Parallel: Higgs 2

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

#### Measurements of the Higgs boson properties from diboson final states



**Speaker**

Niki Saoulidou

14:20–14:40

**Higgs CP properties and EFT measurements from ATLAS****Speakers**

ATLAS Speaker, Evelin Meoni

14:40–15:00

**Measurements of Higgs Bosons Decaying to Bottom and Charm Quarks from Vector Boson Fusion Production with the ATLAS Experiment****Speakers**

ATLAS Speaker, Evelin Meoni

15:00–15:20

**Constraints on Higgs light Yukawa couplings****Speaker**

Niki Saoulidou

15:30

14:00

**Parallel: Instrumentation 3****Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Detector challenges at future higgs factories****Speaker**

Grace Cummings

14:20–14:40

**The upgrade of the ATLAS Trigger and Data Acquisition system for the High Luminosity LHC****Speaker**

ATLAS Speaker

14:40–15:00

**first test of a wireless power transmission for HEP experiments****Speaker**

Yan Benhammou

15:00–15:20

**The CMS ME0 Upgrade: Enhancing Forward Muon Reconstruction at the HL-LHC****Speaker**

Niki Saoulidou

15:30

14:00

**Parallel: Quark Flavor 4****Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

**Correlating flavor anomalies and dark matter in the light of scalar leptoquark****Speaker**

Rukmani Mohanta

14:20–14:40

**A search for baryon-number violation in  $B^0$ -meson decays to two baryons.****Speaker**

Fabio Anulli

14:40–15:00

## Heavy flavour hadron production and decays at ATLAS

### Speakers

ATLAS Speaker, Evelin Meoni

15:30

## Thursday 28 August

14:00

### Parallel: Computing AI/ML

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20 **Development of LLMs for DUNE**

**Speaker**

Aleena Rafique

14:20–14:40

### **HGPflow: Hypergraph learning for full event reconstruction at pp and e+e-colliders**

**Speakers**

Etienne Dreyer, Francesco Armando Di Bello, Nilotpal Kakati

14:40–15:00

### **Synthetic Training and Representation Bridging in Reconstruction Domains**

**Speaker**

Wonyong Chung

15:00–15:20

### **An AI Agent for Particle Physics Documentation**

**Speaker**

Abhishikth Mallampalli

15:30

14:00

### Parallel: Exotic Searches 3

**Session** | **Location:** Madison, WI, Monona Convention Center

14:00–14:20

### **Searches for new physics in CMS in events with photons in the final state**

**Speaker**

Niki Saoulidou

14:20–14:40

### **Searches for electroweak production of supersymmetric particles with the ATLAS detector**

**Speakers**

ATLAS Speaker, Evelin Meoni

14:40–15:00

### **Searches in CMS for long-lived particles and other non-conventional signatures**

**Speaker**

Niki Saoulidou

15:00–15:20

### **Searches for displaced decays of long-lived particles in final states with missing transverse momentum using the ATLAS detector**

**Speaker**

ATLAS Speaker

15:30

14:00

**Parallel: Hadron Physics 3****Session** | **Location:** Madison, WI, Monona Convention Center**14:00–14:20** **Light Meson Spectroscopy at BESIII****Speaker**

Fabrizio Bianchi

**14:20–14:40** **Light Meson decays at BESIII****Speaker**

Fabrizio Bianchi

**14:40–15:00** **Measurement of the relative phase between strong and EM decays****Speaker**

Fabrizio Bianchi

**15:00–15:20** **Search for charm rare decays at BESIII****Speaker**

Fabrizio Bianchi

15:30

14:00

**Parallel: Searches at Colliders****Session** | **Location:** Madison, WI, Monona Convention Center**14:00–14:20** **Exploring new physics in the Dark Sector at CMS****Speaker**

Niki Saoulidou

**14:20–14:40** **Heavy QCD axion with enhanced VBS production at Muon Collider****Speaker**

Peiran Li

**14:40–15:00** **Recent Progress of DarkSHINE R&D****Speaker**

Haijun Yang

**15:00–15:20****Searches for hadronically-decaying heavy vector bosons from the ATLAS Experiment****Speakers**

ATLAS Speaker, Evelin Meoni

15:30

14:00

**Parallel: Top Physics 3****Session** | **Location:** Madison, WI, Monona Convention Center**14:00–14:20** **ATLAS results at the  $t\bar{t}$  threshold****Speakers**

ATLAS Speaker, Evelin Meoni

**14:20–14:40** **EFT based searches in the top quark sector****Speaker**

Niki Saoulidou

**14:40–15:00** **ATLAS EFT results in the top sector**

**Speakers**

ATLAS Speaker, Evelin Meoni

15:00–15:20

**Measurements of rare top production and their BSM interpretations**

**Speaker**

Niki Saoulidou

15:30