

Session Program

17-31 Jul 2025



XIV International Conference
on New Frontiers in Physics
17-31 July 2025, OAC, Kolymbari, Crete, Greece

XIV International Conference on New Frontiers in Physics 2025

High Energy Particle Physics

Orthodox Academy of Crete, Kolymbari, Crete, Greece

Thursday 17 July

11:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Pietro Vischia

11:00–11:25

Cabbibo-Kobayashi-Maskawa matrix-related measurements at Belle II

Speaker

Petros Stavroulakis

11:25–11:50

Recent Advances in Studies of Charged Charmonium-like States at BESIII

Speaker

XUHONG LI

11:50–12:15

Performance of the ATLAS Tile Calorimeter in LHC Run 3

Speaker

Rute Pedro

12:15–12:40

HCAL (CMS)

Speaker

Hui Wang

12:40–13:00

Studies of exclusive proton-proton reactions with CBM at FAIR

Speaker

Dr Shreya Roy

13:00

Friday 18 July

09:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Greg Landsberg

09:00–09:30

Machine Learning Optimized Design of Experiments at the frontiers of computation: methods and new perspectives

Speaker

Prof. Pietro Vischia

09:30–10:00

On Final Results From the Muon $g-2$ Experiment at Fermilab

Speaker

Eremey Vladimirovich Valetov

10:00

11:25

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Eremey Vladimirovich Valetov

11:25–11:50

B Physics Results from CMS

Speaker

Greg Landsberg

11:50–12:15

Top-quark production cross sections at higher perturbative orders

Speaker

Prof. Nikolaos Kidonakis

12:15–12:40

Searches for Exotica (CMS)

Speaker

Maria Kotsarini

12:40–13:05

First-forbidden non-unique beta decay of ^{113m}Cd

Speaker

Prof. Vincenzo Caracciolo

13:05

17:00

High Energy Particle Physics

Session | **Location:** Room 2 | **Convener:** Dr Shreya Roy

17:00–17:25

Photoproduction of quarkonia-photon pairs in the Color Glass Condensate framework

Speaker

Marat Siddikov

17:25–17:50

Kaon-nucleon strong interaction in exotic atoms

Speaker

Dr Mihail Antoniu Iliescu

17:50-18:15

Advancing Noble Liquid Calorimetry: The ALLEGRO ECAL Concept for FCC-ee

Speaker

Martina Maria Koppitz

18:15-18:40

Probing Lorentz Invariance Violation in Z Boson Mass Measurements at High-Energy Colliders

Speaker

Dr Zurab Kepuladze

18:40

Monday 21 July

11:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Kun Liu

11:00–11:25 **ePIC Detector and Collaboration**

Speaker

Prof. Bernd Surrow

11:25–11:50 **ATLAS Muon Detectors upgrades for High Luminosity LHC**

Speaker

Marco Sessa

11:50–12:10 **Search for the X17 particle with the PADME experiment**

Speaker

Marco Mancini

12:10–12:35 **Hybrid Baryons and N^* Studies with CLAS12**

Speaker

Dr Lucilla Lanza

12:35–13:05 **Results from the Jefferson Lab MARATHON experiment**

Speaker

Gerassimos Petratos

13:05

Tuesday 22 July

09:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Rute Pedro

09:00–09:30 **ATLAS highlights**

Speaker

Kun Liu

09:30–10:00 **CMS upgrades**

Speaker

Marcello Abbrescia

10:00

12:15

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Daniela Kirilova

12:15–12:35 **Improving ICARUS track reconstruction algorithms**

Speaker

Alessandro Maria Ricci

12:35–13:00 **Overview of the trigger and DAQ systems in CMS**

Speaker

Daniele Trocino

13:00

17:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Michael Eides

17:00–17:25 **Upgrade of the CMS Electromagnetic Calorimeter for HL-LHC**

Speaker

Federica De Ruggi

17:25–17:50 **The Belle II Upgrade Program**

Speaker

Ezio Torassa

17:50–18:15

Probing neutral triple gauge couplings via Z(II)gamma productions with Future Lepton Collider detector simulation and with LHC-ATLAS data

Speaker

Danning Liu

18:15

Wednesday 23 July

09:30

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr David Kapukchyan

09:30–10:00

Recent calculation of the magnetic moment of the muon

Speaker

Zoltan Fodor

10:00

11:30

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Roberto Rossin

11:30–12:00

Energy-momentum trace and Hamiltonian decomposition

Speaker

Prof. Michael Eides

12:00–12:30

Searches for Beyond the Standard Model Particles Decaying to Top Quarks, Higgs Bosons, and Gauge Bosons with CMS

Speaker

Haifa Rejeb Sfar

12:30–13:00

Searches for new phenomena beyond the Standard Model using the ATLAS detector

Speaker

Andrea Pareti

13:00

17:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Francesco Loparco

17:00–17:25

Current Status of the LHCf Experiment and Future Prospects with Proton-Oxygen Collisions

Speaker

Elena Gensini

17:25–17:50

Precision Timing with the CMS MIP Timing Detector for High-Luminosity LHC

Speaker

Prof. Roberto Rossin

17:50

17:50

High Energy Particle Physics

Session | **Location:** Room 3 | **Convener:** Dr Tamas Novak

17:50–18:15

Universal Fake Factor method to estimate hadronic tau backgrounds in ATLAS

	Speaker Gabriela Martinovicova
18:40	18:15–18:40 From ENUBET to nuSCOPE: a monitored and tagged neutrino beam for high precision cross section measurements Speaker Leon Halic
18:40	High Energy Particle Physics Session Location: Room 2 Convener: Prof. Tommaso Dorigo
19:05	18:40–19:05 Charmonium Decays at BESIII Speaker Peilian Liu

Thursday 24 July

11:50

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Andrea Pareti

11:50–12:15 **Muon Detector (CMS)**

Speaker

Ilaria Vai

12:15–12:40

Performance of the ATLAS Muon Spectrometer Detectors during Run3 data taking

Speakers

Arisa Wada, Arisa Wada

12:40–13:05

On the determination of the relative probability of $\Upsilon(5S) \rightarrow B^{(*)}_s \bar{B}^{(*)}_s$ decays.

Speaker

Mikhail Vysotsky

13:05

17:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Mathew Muether

17:00–17:30 **Recent results on EW physics at LHCb**

Speaker

Menglin Xu

17:30–17:55

New measurement of $K^{*+} \rightarrow \pi^{*+} \nu \bar{\nu}$ branching ratio at the NA62 experiment

Speaker

Ilaria Panichi

17:55–18:20

Highlights from the PHENIX Spin Program

Speaker

Ross Corliss

18:20–18:45

Quarkonium production at RHIC

Speaker

Jaroslav Bielcik

18:45

Friday 25 July

11:00
11:25

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Jaroslav Bielcik

11:00–11:25

Latest Results from the ICARUS Experiment at the Short-Baseline Neutrino Program

Speaker

Alessandro Maria Ricci

Monday 28 July

09:30

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Mario Merola

09:30–10:00 **CMS Highlights**

Speaker

Chen Zhou

10:00–10:30 **LHCb overview**

Speaker

Prof. Yanxi Zhang

10:30

11:25

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Yanxi Zhang

11:25–11:55 **Recent progress on charmed meson decays at BESIII**

Speaker

Xu Yingchao

11:55–12:25 **Recent highlights from Belle and Belle II**

Speaker

Mario Merola

12:25–12:55 **Recent results on CP violation in baryon decays at LHCb**

Speaker

Tianze Rong

12:55

17:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Feng Gao

17:00–17:25 **Phase-2 Upgrade of the ATLAS Inner Tracker**

Speaker

Marianna Testa

17:25–17:50 **Upgrade of the ATLAS Tile Calorimeter for High-Luminosity LHC**

Speaker

Arya Aikot

17:50

17:50

High Energy Particle Physics

Session | **Location:** Room 3 | **Convener:** Prof. Laura Fabbri

17:50–18:15 **Multi-Peripheral Models as a Fingerprint for High-Energy Physics**

Speaker

Mr Dario Vaccaro

18:15

18:15

High Energy Particle Physics**Session** | **Location:** Room 2 | **Convener:** Prof. Sonia Kabana

18:15-18:40

Higher-order QED radiative corrections in HEP: the status and prospects**Speaker**

Andrej Arbuzov

18:40

Tuesday 29 July

09:30

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Giacomo Ortona

09:30–10:00

Highlights on top quark physics with the ATLAS experiment at the LHC

Speaker

Barbora Eckerova

10:00

12:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Laszlo Pal Csernai

12:00–12:30

CMS Higgs Results

Speaker

Dr Giacomo Ortona

12:30–13:00

Highlights on Higgs physics with ATLAS

Speaker

Stylianos Angelidakis

13:00

17:20

High Energy Particle Physics

Session | **Location:** Room 2 | **Convener:** Dr Stylianos Angelidakis

17:20–17:40

Implementation of a kinematic fit algorithm in the search for Higgs boson pairs produced at the LHC and detected with ATLAS in the $b\bar{b}\gamma\gamma$ final state

Speaker

Romano Orlandini

17:40

Wednesday 30 July

11:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Dr Marta Tornago

11:00–11:25

LUCID, the ATLAS luminosity detector in LHC Run-3 and its upgrade for HL-LHC

Speaker

Elisa Sanzani

11:25–11:50

Recent results on CPV from $b\bar{b}$ -hadron to charmonium decays at LHCb

Speaker

Xiaofan Hu

11:50–12:15

Detectors - calibration, performance (CMS)

Speaker

Raffaella Radogna

12:15–12:40

Electroweak and QCD Measurements in ATLAS

Speaker

Laura Fabbri

12:40

Thursday 31 July

10:00

High Energy Particle Physics

Session | **Location:** Room 1 | **Convener:** Prof. Daniele De Gruttola

10:00–10:30

Recent Progress of DarkSHINE R&D

Speaker

Kun Liu

10:30

11:00

High Energy Particle Physics

Session | **Location:** Room 1

11:00–11:25

Overview of the ePIC-dRICH detector at the EIC and beam test results

Speaker

Daniele De Gruttola

11:25–11:50

Status and performance of the CMS Electromagnetic Calorimeter in Run 3 of LHC

Speaker

Marta Tornago

11:50

12:15

High Energy Particle Physics

Session | **Location:** Room 1

12:15–12:45

Overview of charmed baryon decays at BESIII (highlight talk)

Speaker

Ying Liu

12:45