

## **Session Program**

**30 August 2022 to 12 September 2022**



# **XI International Conference on New Frontiers in Physics**

## ***High Energy Particle Physics***

Conference venue: OAC conference center, Kolymbari, Crete, Greece. The conference will take place in Crete in physical form, however participation is also possible via internet

# Wednesday 31 August

11:25

## High Energy Particle Physics

Session | Location: Room 1

**11:25-11:50 Performance of ATLAS detector with start of run-3**

**Speaker**  
Pawel Jan Klimek

**11:50-12:20 An overview of more than ten years of operation of the CMS ECAL**

**Speaker**  
Amina Zghiche

12:20

12:20

## High Energy Particle Physics

Session | Location: Room 1

**12:20-12:40 Recent results from Belle II**

**Speaker**  
Dr Riccardo de Sangro

12:40

15:30

## High Energy Particle Physics

Session | Location: Room 3

**15:30-15:50 Deciphering Initial states of high energy heavy-ion collisions using spectators**

**Speaker**  
Dr Vipul Bairathi

**15:50-16:10 Recent spin results from PHENIX**

**Speaker**  
Dr Zhongling Ji

16:50

# Thursday 1 September

09:30

## High Energy Particle Physics

Session | Location: Room 1

09:30-10:00

### Cross sections, couplings, and properties of the Higgs boson - 10th anniversary of the discovery (CMS)

**Speaker**

Linda Finco

10:00-10:30

### Celebrating 10 years of Higgs boson physics at ATLAS

**Speaker**

Brian Moser

10:30

11:00

## High Energy Particle Physics

Session | Location: Room 1

11:00-11:20

### Recent searches for new phenomena with the ATLAS detector

**Speaker**

Dr Eirik Gramstad

11:20-11:40

### Top (CMS)

**Speaker**

Javier Fernandez Menendez

11:40-12:00

### Top quark physics with the ATLAS experiment at the LHC

**Speaker**

Peter Berta

12:00-12:20

### Exotica and Beyond 2 Generations at the CMS Experiment

**Speaker**

Oscar Gonzalez Lopez

12:20-12:40

### Higgs Physics at ILC

**Speaker**

Ivanka Bozovic-Jelisavcic

12:40-13:00

### Short-Baseline neutrino oscillation searches with the ICARUS detector

**Speaker**

Christian Farnese

13:00

15:30

## High Energy Particle Physics

Session | Location: Room 2

15:30-15:50

### Photon-photon fusion and tau g-2 measurement

	<p><b>Speaker</b> Haifeng Li</p>
	<p><b>15:50-16:10</b>    <b>Dark Matter searched in CMS</b></p> <p><b>Speaker</b> Malgorzata Kazana</p>
	<p><b>16:10-16:30</b>    <b>A new Scattering and Neutrino Detector at the LHC (SND@LHC)</b></p> <p><b>Speaker</b> Elena Graverini</p>
	<p><b>16:30-16:50</b></p> <p><b>Directionality for nuclear recoils in a liquid argon Time Projection Chamber</b></p> <p><b>Speaker</b> Paul Zakhary</p>
16:50	
15:30	<p><b>High Energy Particle Physics</b> Session   Location: Room 3</p>
	<p><b>15:30-15:50</b></p> <p><b>Calculation of rescaling factors and nuclear multiplication of muons in extensive air showers</b></p> <p><b>Speaker</b> Dariusz Gora</p>
15:50	
15:30	<p><b>High Energy Particle Physics</b> Session   Location: Room 1</p>
	<p><b>15:30-15:50</b></p> <p><b>Investigation of rare nuclear decays of naturally occurring osmium isotopes accompanied by <math>\gamma</math> quanta.</b></p> <p><b>Speaker</b> Vincenzo Caracciolo</p>
15:50	
16:30	<p><b>High Energy Particle Physics</b> Session   Location: Room 3</p>
	<p><b>16:30-16:50</b></p> <p><b>High precision neutrino cross section measurements with the ENUBET monitored neutrino beam</b></p> <p><b>Speaker</b> Valerio Mascagna</p>
16:50	

## Friday 2 September

09:00

### High Energy Particle Physics

Session | Location: Room 1

09:00–09:30 **DAMA/LIBRA results and perspectives**

**Speaker**

Pierluigi Belli

09:30

11:00

### High Energy Particle Physics

Session | Location: Room 1

11:00–11:20 **The ATLAS Experiment upgrade program**

**Speaker**

Geoffrey Mullier

11:20–11:40

**CMS ECAL upgrade for precision timing and energy measurements at the High-Luminosity LHC**

**Speaker**

Luigi Marchese

11:40

12:20

### High Energy Particle Physics

Session | Location: Room 1

12:20–12:40 **Upgrade of the CMS muon system**

**Speaker**

Simone Calzaferri

12:40

# Monday 5 September

09:00

## High Energy Particle Physics

Session | Location: Room 1

09:00–09:30 **ATLAS highlights**

**Speaker**  
Bill Murray

09:30–10:00 **CMS Highlights**

**Speaker**  
Javier Cuevas

10:00

11:00

## High Energy Particle Physics

Session | Location: Room 1

11:00–11:30 **LHCb highlight**

**Speaker**  
YH Yang

11:30–11:50 **Searches for dark matter with the ATLAS detector**

**Speaker**  
Alex Zeng Wang

11:50

15:30

## High Energy Particle Physics

Session | Location: Room 2

15:30–15:50

**Searches for rare top quark production and decay processes with the ATLAS experiment**

**Speaker**  
Chenliang Wang

15:50–16:10 **Boosted W/Z boson and top tagging in ATLAS**

**Speaker**  
Qibin Liu

16:10–16:30

**Searches for new phenomena in final states with 3rd generation quarks using the ATLAS detector**

**Speaker**  
Meng-Ju Tsai

16:30–16:50 **Recent results from the SND experiment at the VEPP-2000 collider**

**Speaker**  
Leonid Kardapoltsev

16:50

15:50

## High Energy Particle Physics

Session | Location: Room 1

15:50-16:10

### Exploring coherent elastic neutrino-nucleus scattering with NUCLEUS experiment

**Speaker**

Vasile Mihai Ghete

16:10-16:30

### Latest results on $K^+$ to $\pi^+$ $\nu$ $\bar{\nu}$ decay and precision measurements with Kaons at CERN

**Speaker**

Renato Fiorenza

16:30-16:50

### Overview of the NOvA Experiment and the Latest Results

**Speaker**

Prabhjot Singh

16:50

16:10

## High Energy Particle Physics

Session | Location: Room 3

16:10-16:30

### The role of $c$ $\bar{c}$ and $c$ $\bar{c}$ g Fock-states in the coherent photoproduction of $J/\psi$

**Speaker**

Agnieszka Łuszczak

16:30-16:50

### Production of dileptons via photon-photon processes in proton-proton collisions with one forward proton measurement at the LHC

**Speaker**

Marta Luszczak

16:50

## Tuesday 6 September

11:20

### High Energy Particle Physics

Session | Location: Room 1

11:20-11:40 **Highlights from the ANNIE experiment**

**Speaker**

Amanda Weinstein

11:40-12:00 **Pre-Supernova neutrino alarm in Super-Kamiokande**

**Speaker**

Lucas Nascimento Machado

12:00-12:20 **Recent Higgs boson results from ATLAS**

**Speaker**

Soshi Tsuno

12:20-12:40

**Measurements of the mass, width and coupling CP structure of the Higgs-boson with the ATLAS detector**

**Speaker**

Brian Le

12:40-13:00

**Overview of Higgs boson coupling measurements and their interpretations at the ATLAS experiment**

**Speaker**

Georges Aad

13:00

15:30

### High Energy Particle Physics

Session | Location: Room 2

15:30-15:50

**Search for naturally occurring seaborgium with radiopure  $^{116}\text{CdWO}_4$  crystal scintillators**

**Speaker**

Fabio Cappella

15:50-16:10 **Latest results on rare decays with NA62**

**Speaker**

Roberto Piandani

16:10-16:30

**Spectroscopy of heavy-light baryons in quark-diquark picture**

**Speaker**

Ms Pooja Jakhad

16:30



15:30

## High Energy Particle Physics

Session | Location: Room 1

15:30-15:50

### Probing the nature of electroweak symmetry breaking with Higgs boson pair-production at ATLAS

**Speaker**

Alessandra Betti

15:50-16:10

### Measurements of the Higgs boson fiducial and differential cross sections at the ATLAS experiment

**Speaker**

Yasuyuki Horii

16:10-16:30

### Searches for additional Higgs bosons in ATLAS

**Speaker**

Noemi Cavalli

16:30

# Wednesday 7 September

09:50

## High Energy Particle Physics

Session | Location: Room 1

09:50-10:10 **Highlights of the ATLAS top quark precision measurements**

**Speaker**

Adam Rennie

10:10-10:30 **B physics (CMS)**

**Speaker**

Leonardo Lunerti

10:30

11:00

## High Energy Particle Physics

Session | Location: Room 1

11:00-11:25 **Differentiable programming for Experimental Design**

**Speaker**

Dr Pietro Vischia

11:25-11:50 **Machine learning techniques for calorimetry**

**Speaker**

Rajdeep Mohan Chatterjee

11:50-12:15 **First glance on ATLAS data with run-3**

**Speaker**

Stefano Rosati

12:15-12:40

**Overview and innovations of the electronics of the New Small Wheel of the ATLAS Muon Spectrometer**

**Speaker**

Dr Lorne Levinson

12:40-13:00 **Triggers (CMS)**

**Speaker**

Abanti Ranadhir Sahasransu

13:00

15:30

## High Energy Particle Physics

Session | Location: Room 1

15:30-15:50 **Precision Timing with the CMS MIP Timing Detector**

**Speaker**

Patrizia Barria

15:50-16:10 **Jet and MET reconstruction and calibration in ATLAS**

**Speaker**

Romain Bouquet

16:35  
16:50  
17:10

16:10-16:30

### Simulated Detector Performance at the Muon Collider

**Speaker**

Federico Nardi

## High Energy Particle Physics

Session | Location: Room 4

16:50-17:10

### Rare four leptonic $B_d$ meson decays in the Standard model

**Speaker**

Anna Danilina

# Thursday 8 September

12:35

## High Energy Particle Physics

Session | Location: Room 1

12:35-13:00 **Recent Heavy Flavour results from ATLAS**

**Speaker**

Umberto De Sanctis

13:00

15:30

## High Energy Particle Physics

Session | Location: Room 2

15:30-15:50 **Perspectives of tau g-2 measurements with ALICE**

**Speaker**

Nazar Burmasov

15:50-16:10

**Searches for BSM physics using challenging and long-lived signatures with the ATLAS detector**

**Speaker**

Ms Mariia Didenko

16:10-16:30

**Measurements of photons and multijet events with ATLAS**

**Speaker**

Josu Cantero

16:30-16:50

**Spectroscopy of light, strange mesons in Regge phenomenology**

**Speaker**

Juhi Oudichhya

16:50

16:10

## High Energy Particle Physics

Session | Location: Room 1

16:10-16:30 **Wormholes in scalar-tensor theories of modified gravity**

**Speaker**

Victoria Volkova

16:30-16:50

**Scalar-tensor theories, no-go theorem and possibilities to circumvent it**

**Speaker**

Sergey Mironov

16:50

## Friday 9 September

11:00

### High Energy Particle Physics

Session | Location: Room 2

11:00-11:20 **ATLAS searches for supersymmetry with prompt particles**

**Speaker**

Shuhui Huang

11:20-11:40 **ATLAS searches for supersymmetry with long-lived particles**

**Speaker**

K.K. Gan

11:40-12:00

**Dedicated Triggers for Displaced Jets using Timing Information from Electromagnetic Calorimeter at HL-LHC**

**Speaker**

Prabhat Solanki

12:00-12:20

**Precision luminosity measurement at the CMS experiment in Run 2 and prospects for HL-LHC**

**Speaker**

Attila Jozsef Radl

12:20

11:00

### High Energy Particle Physics

Session | Location: Room 4

11:20

12:00

### High Energy Particle Physics

Session | Location: Room 4

12:00-12:20 **Eco-friendly Resistive Plate Chamber detectors for HEP applications**

**Speaker**

Alessandra Pastore

12:20

# Saturday 10 September

09:00

## High Energy Particle Physics

Session | Location: Room 1

09:00-09:30 **Multiquark states at LHCb**

**Speaker**

Mr Zehua Xu

09:30-10:00 **Multiquarks theory**

**Speaker**

Marek Karliner

10:00-10:30 **ATLAS results on exotic hadronic resonances**

**Speaker**

Ivan Yeletsikh

10:30

11:00

## High Energy Particle Physics

Session | Location: Room 1

11:00-11:20 **Recent results from BESIII**

**Speaker**

Vindhyawasini Prasad

11:20-11:40

**First results for searches of exotic decays with NA62 in beam-dump mode**

**Speaker**

Stefan Alexandru Ghinescu

11:40-12:00 **Deeply Virtual Compton Scattering at COMPASS**

**Speaker**

Anatolii Koval

12:00-12:20 **Current Status and Prospects of JUNO**

**Speaker**

Konstantin Schweizer

12:20

# Monday 12 September

14:00

## High Energy Particle Physics

Session | Location: Room 2

14:00-14:20 **ATLAS results on exotic hadronic resonances**

**Speaker**

Ivan Yeletsikh

14:20-14:40

**Kaonic atoms research at the DAFNE Collider: SIDDHARTA-2 and future**

**Speaker**

Luca De Paolis

14:40-15:00

**Open heavy flavor production at RHIC**

**Speaker**

Sonia Kabana

15:00

15:20

## High Energy Particle Physics

Session | Location: Room 2

15:20-15:40

**Exotic Decays of Higgs Boson to Light Long-Lived Mediators at HL-LHC, FCC-hh and a Proposal of Dedicated LLP Detectors for FCC-hh**

**Speaker**

Rhitaja Sengupta

15:40

16:00

## High Energy Particle Physics

Session | Location: Room 2

16:00-16:20

**Low energy neutrinos in Super-Kamiokande**

**Speaker**

Lucas Nascimento Machado

16:20-16:40

**SUSY (CMS)**

**Speaker**

Tribeni Mishra

16:40

17:00

## High Energy Particle Physics

Session | Location: Room 3

17:00-17:20

**Investigating diphoton mass spectrum from quark gluon plasma**

**Speakers**

Mr Gaurang Kuksal, Yogesh Kumar

17:20