

## **Session Program**

**Jul 10 - 22, 2023**



XII International Conference  
on New Frontiers in Physics  
10-23 July 2023, OAC, Kolymbari, Crete, Greece

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

***Cosmology, Astrophysics, Gravity, Mathematical  
Physics***

Orthodox Academy of Crete, Kolymbari, Crete, Greece (Hybrid mode)

Mon, July 10

3:50 PM

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

15:50 - 16:30

Early Galaxies and Primordial Black Holes

Speaker

Alexander Dolgov

4:30 PM

5:35 PM

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

17:35 - 18:10

Vacuum Decay and New Instantons

Speakers

Alexander Sorin, Prof. Alexander Sorin

6:10 PM

Wed, July 12

11:50 AM

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

11:50 - 12:15 DAMA/LIBRA-phase2 results and perspectives

Speaker

Pierluigi Belli

12:15 PM

4:00 PM

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 2

16:00 - 16:20 The time-domain gamma-ray sky seen by the Fermi-LAT

Speaker

Giacomo Principe

16:20 - 16:40 GRB221009A: The brightest GRB ever detected by Fermi-LAT

Speaker

Roberta Pillera

4:40 PM

## Thu, July 13

11:50 AM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

**Session** | **Location:** Room 1

11:50 - 12:15

#### Science with the Fermi Large Area Telescope

**Speaker**

Francesco Loparco

12:15 - 12:40

#### Status and perspective of ICARUS at the Fermilab Short-Baseline Neutrino Program

**Speaker**

Alice Campani

12:40 PM

Mon, July 17

10:00 AM

10:30 AM

**Cosmology, Astrophysics, Gravity, Mathematical Physics**  
Session | Location: Room 1

10:00 - 10:30

**Toward pulsed production of antihydrogen and test of the Weak Equivalence Principle for antimatter**

**Speaker**  
Jakub Zielinski

## Tue, July 18

4:00 PM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

**Session** | **Location:** Room 1

16:00 – 16:20

#### Measurement of the energy spectra of proton, Helium and Boron cosmic-rays with CALET on the International Space Station

**Speakers**

Dr Sandro Gonzi, Dr Sandro Gonzi

16:20 – 16:40

#### The CUPID neutrinoless double-beta decay experiment

**Speaker**

Valentina Dompè

4:40 PM

## Wed, July 19

9:30 AM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

09:30 – 10:00

#### Quasi-stable dark matter and high energy cosmic rays

##### Speaker

Elena Arbuzova

10:00 – 10:30

#### 1/f Fluctuations from amplitude modulation -diversity from Universe to stars and planets

##### Speaker

Masahiro Morikawa

10:30 AM

11:00 AM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

11:00 – 11:25

#### Decaying Turbulence as a fractal curve

##### Speaker

Alexander Migdal

11:25 AM

11:50 AM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

11:50 – 12:15

#### The ANTARES detector, the first undersea neutrino telescope

##### Speaker

Annarita Margiotta

12:15 – 12:40

#### The search for Dark Matter: the DarkSide-20k Experiment

##### Speaker

Simone Sanfilippo

12:40 – 13:00

#### Weighing the vacuum with the Archimedes Experiment

##### Speaker

Valentina Mangano

1:00 PM

4:20 PM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

16:20 – 16:40

#### Spectral-Imaging with QUBIC : Component Map-Making

##### Speaker

Mathias Régnier

16:40 – 17:00

#### Gravastar-like black hole solutions in q-theory

##### Speaker

Maik Selch

5:00 PM

5:00 PM

5:20 PM

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

17:00 – 17:20

Silicon-based cryogenic Photon Detection Units testing for DarkSide-20k experiment

Speaker

Yury Suvorov



## Thu, July 20

7:00 PM

8:00 PM

### Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

19:00 – 20:00

#### Music and Physics - origin of $1/f$ fluctuations in music

##### Speaker

Masahiro Morikawa