

Session Program

6-10 Sept 2021

**Alternative Gravities and Fundamental
Cosmology - ALTECOSMOFUN'21 [VIRTUAL]**

Invited Plenary Session

Monday 6 September

09:15

Invited Plenary Session: LAVINIA HEISENBERG: "Roadmap of gravity"

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Mariusz Dabrowski

10:15

10:15

Invited Plenary Session: ENRIQUE GAZTAÑAGA: "The Black Hole Universe, or the illusion of the Big Bang"

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Mariusz Dabrowski

10:15-11:15

The Black Hole Universe: the perfect cosmological principle

Speaker

Enrique Gaztanaga

11:15

11:30

Invited Plenary Session: JUTTA KUNZ: "Compact Objects in Alternative Gravities"

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Mariusz Dabrowski

11:30-12:30

Compact Objects in Alternative Gravities

Speaker

Jutta Kunz

12:30

16:50

Invited Plenary Session: PAUL C. W. DAVIES: "The gravitational entropy of the Universe"

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Marek Rogatko

17:50

Tuesday 7 September

09:00

Invited Plenary Session: MARTIN KUNZ “Testing gravity and constraining dark energy with Euclid”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Vincenzo Salzano

09:00–10:00 **Testing gravity and constraining dark energy with Euclid**

Speaker
Martin Kunz

10:00

10:00

Invited Plenary Session: JOHN K. WEBB “Varying fine structure constant - Latest developments”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Vincenzo Salzano

10:00–11:00 **Varying fine structure constant - Latest developments**

Speaker
John Webb

11:00

11:30

Invited Plenary Session: IVETTE FUENTES “Quantum Frequency Interferometry: with applications ranging from gravitational wave detection to dark matter searches”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Vincenzo Salzano

11:30–12:30

Quantum Frequency Interferometry: with applications ranging from gravitational wave detection to dark matter searches

Speaker
Prof. Ivette Fuentes

12:30

12:30

Invited Plenary Session: NIAYESH AFSHORDI “Mystery Noise in Gravitational Wave Detectors, as a probe of Fundamental Physics”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Vincenzo Salzano

12:30–13:30

Mystery Noise in Gravitational Wave Detectors, as a probe of Fundamental Physics

Speaker
Niayesh Afshordi

13:30

Wednesday 8 September

09:00

Invited Plenary Session: **ALEXEI A. STAROBINSKY: "Generating peaks in primordial perturbation power spectra"**

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Agnieszka Pollo

10:00

Invited Plenary Session: **ASTRID EICHHORN: "Asymptotic safety - a new symmetry principle for quantum spacetime and (dark) matter"**

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Agnieszka Pollo

11:00

Invited Plenary Session: **ELEONORA DI VALENTINO: "Cosmological Tensions: hints for a new concordance model?"**

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Agnieszka Pollo

11:30

11:30-12:30 **Cosmological tensions: hints for a new concordance model?**

Speaker

Dr Eleonora Di Valentino

12:30

Invited Plenary Session: **NICOLAS YUNES "Probing Fundamental Physics in Extreme Gravity with Gravitational Waves"**

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Andrzej Krolak

16:10

16:10-17:10

Probing Fundamental Physics in Extreme Gravity with Gravitational Waves

Speaker

Prof. Nicolas Yunes

17:10

Friday 10 September

09:00

Invited Plenary Session: FABIO SCARDIGLI: “Generalized uncertainty principle, deformation parameter, and Lorentz symmetry violation”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Emmanuel N. Saridakis

10:00

10:00

Invited Plenary Session: ANNA POLLMANN: “Physics beyond the Standard Model with IceCube”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Emmanuel N. Saridakis

10:00–11:00

Physics beyond the Standard Model with IceCube

Speaker

Anna Pollmann

11:00

11:30

Invited Plenary Session: ROBERTO EMPARAN: “Aspects of traversable wormholes”

Session | **Location:** Institute of Physics @ University of Szczecin, ul. Wielkopolska 15, 70-451 Szczecin (Poland) | **Convener:** Emmanuel N. Saridakis

11:30–12:30

Aspects of traversable wormholes

Speaker

Roberto Emparan

12:30