

# **NEW TRENDS IN PHYSICS - FROM GRAVITATIONAL WAVES TO DARK MATTER**

**Paris 28.11-29.11.2019**

## **THURSDAY 28.11.19**

**910-1000** Jerzy Lewandowski (Un. Warszawski)- Equations of non-expanding horizons and the mystery of black hole uniqueness

**1000-1050** Elias Kiritsis (Un. Paris Diderot)- The holographic renormalization group

**1050-1120 Coffee break**

**1120-1210** Karl Landsteiner (Un. Autonoma de Madrid)- From PT quantum mechanics to PT holography

**1210-1300** Jerzy Lukierski (Un. Wrocławski)- From classical to quantum-deformed twistors

**1300-1350** David Langlois (Un. Paris Diderot)- Dark energy and modified gravity

**1400-1500 Lunch break**

**1500-1540** Andrzej Borowiec (Un. Wrocławski)- Palatini gravity and frame extensions

**1540-1700** Poster session

## **FRIDAY 29.11.19**

**900-950** Piotr Surówka (Max Planck Institute, Dresden) – Lessons from chiral elasticity and hydrodynamics

**950-1030** Patryk Mach (Un. Jagielloński) – Magnetised and not magnetised self-gravitating tori around black hole

**1030-1110** Jacek Tafel (Un. Warszawski) - The Penrose inequality for the perturbed Schwarzschild data

**1110-1130 Coffee break**

**1130- 1210** Vincenzo Salzano (Un. Szczeciński) -Measuring the speed of light with cosmological observations

**1210-1300** Andrzej Królak (Narodowe Centrum Badań Jądrowych)– Observations of gravitational waves by Ligo Virgo detectors

**1300-1350** Richard Kerner (Sorbonne-Universite)– Relativistic epicycles, or new approach to the relativistic two-body problem

**1400-1500 Lunch break**

**1500-1550** Jerzy Kijowski (Centrum Fizyki Teoretycznej PAN) – New approach to Trautman-Bondi energy: how much energy is carried by gravitational waves

**1550 Cocktail**