Session Program

23 May 2023

UK Cosmo at Cambridge

Scientific Talks

Tuesday 23 May

10:00

Scientific Talks: Morning 1
Session |
Location: Department of Applied Mathematics and Theoretical Physics, Wilberforce Road, Cambridge CB3 0WA

10:00–10:15
Dark Energy (and modified gravity) in two body problem: theoretical implications and observational constraints

10:15–10:30 **Radiation from Axion Strings with Adaptive Mesh Refinement**

10:30–10:45 **Growth of structure in regularised 4D Einstein-Gauss-Bonnet**

10:45

11:45

Scientific Talks: Morning 2
Session |
Location: Department of Applied Mathematics and Theoretical Physics, Wilberforce Road, Cambridge CB3 0WA

11:45–12:00 **Cosmology and strong gravity with a subdominant scalar field**

12:00–12:15 **The cosmological constant is probably still zero**

12:15–12:30 **Clockwork Cosmology**

12:30–12:45
How to find the Feynman Rules from any scalar-tensor theory and not collapse in the process

12:45

13:45

Scientific Talks: Afternoon 1
Session |
Location: Department of Applied Mathematics and Theoretical Physics, Wilberforce Road, Cambridge CB3 0WA

13:45–14:00 **Spinning primordial black holes in a matter dominated universe**

14:00–14:15 **Can primordial black holes form without fine-tuning?**

14:15–14:30 **Primordial black holes and stochastic inflation beyond slow roll**

14:30–14:45
Multi-field inflation with large scalar fluctuations: non-Gaussianity and perturbativity

14:45–15:00
Quantum field theory in curved spacetime and the CMB hemispherical power asymmetry

15:00–15:15
Unimodular Hartle-Hawking wave packets and their probability interpretation

15:15–15:30 **Impact of a quantum gravity bounce on cosmological perturbations**

Scientific Talks: Afternoon 2
Session
Location: Department of Applied Mathematics and Theoretical Physics, Wilberforce Road, Cambridge CB3 0WA

16:00–16:15
New Insight on Neutrino Dark Matter Interactions from Small-Scale CMB Observations

16:15–16:30 **Modelling of Astrophysical Systematics for Cosmology with LSST**

16:30–16:45 **The Wide–Angle Power Spectrum**

16:45–17:00 **The observed number counts in luminosity distance space**

17:00–17:15
The angular power spectrum of gravitational-wave transient sources as a probe of the large-scale structure

17:15–17:30
Dictionary Learning: A Novel Approach to Detecting Binary Black Holes in the Presence of Galactic Noise with LISA

15:30
16:00
17:30