

Session Program

17-21 Jun 2024



11th LISA CosWG Workshop

Talks

Departamento de Física e Astronomia - Universidade do Porto
Rua do Campo Alegre 687, Massarelos, 4150-179 Porto, Portugal

Monday 17 June

14:40

Talks: Status of the LISA mission & Red book

Session |**Location:** Departamento de Física e Astronomia - Universidade do Porto, Rua do Campo Alegre 687, Massarelos, 4150-179 Porto, Portugal

14:40–15:20

Update on the status of the LISA mission

Speaker

Dr Jonathan Gair

15:20–16:00

LISA Red book

Speaker

Carlos F. Sopuerta

16:00

16:30

Talks: Recently concluded projects

Session |**Location:** Departamento de Física e Astronomia - Universidade do Porto, Rua do Campo Alegre 687, Massarelos, 4150-179 Porto, Portugal

16:30–17:00

General intro to concluded projects

Speaker

Germano Nardini

17:00–17:30

Phase transitions parameter reconstruction

Speaker

Dr Eric Madge Pimentel

17:30–18:00

Cosmic strings parameter reconstruction

Speaker

Dr Ivan Rybak

18:00–18:30

Inflation parameter reconstruction

Speaker

Dr Matteo Braglia

18:30

Tuesday 18 June

14:30

Talks: Short talks

Session |

Location: Departamento de Física e Astronomia - Universidade do Porto, Rua do Campo Alegre 687, Massarelos, 4150-179 Porto, Portugal

14:30–14:45

Gravitational waves from a first-order phase transition: sound waves and turbulence

Speaker

Alberto Roper Pol

14:45–15:00

TBounce: a new Mathematica tool for cosmological phase transitions and gravitational waves

Speaker

Marco Finetti

15:00–15:15

Characterisation of the power spectrum of acoustically generated gravitational waves with a soft equation of state

Speaker

Lorenzo Giombi

15:15

16:30

Talks: Updates on ongoing projects

Session |

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16:30–17:00

Update on SIGWB project

Speaker

Dr Robert Rosati

17:00–17:30

Update on PBH tools project

Speaker

Dr Cristian Joana

17:30–18:00

Update on additional polarizations project

Speakers

Alberto Mangiagli, Dr Macarena Lagos

18:00–18:30

Update on Standard sirens project

Speaker

Danny LAGHI

18:30

Wednesday 19 June

14:30

Talks: Data analysis + short talks

Session |

Location: Departamento de Física e Astronomia - Universidade do Porto, Rua do Campo Alegre 687, Massarelos, 4150-179 Porto, Portugal

14:30–15:00 **Data analysis**

Speaker

Nikolaos Karnesis

15:00–15:30 **Data analysis**

Speaker

Riccardo Buscicchio

15:30–15:45 **Accelerating SGWBinner code with the JAX framework**

Speaker

Jun'ya Kume

15:45–16:00

Weakly-parametric approach to stochastic background inference in LISA

Speaker

Federico Pozzoli

16:00

16:30

Talks: Lensing + short talks

Session |

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16:30–17:00 **Lensing**

Speaker

Dr Martina Toscani

17:00–17:15

Gravitational wave lensing in wave-optics: a new approach including polarization effects

Speaker

Alice Garoffolo

17:15–17:30

Testing the statistical isotropy of the Universe with stochastic gravitational wave backgrounds

Speaker

Lorenzo Valbusa Dall'Armi

17:30–17:45

Observing Kinematic Anisotropies of the Stochastic Background with LISA

Speaker

Henri Inchauspé

17:45-18:00

Decay of three-dimensional acoustic turbulence and the resulting power spectrum for cosmological gravitational waves

Speaker

Jani Dahl

18:00

Thursday 20 June

14:30

Talks: Synergy with other detectors

Session |

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14:30–14:45

Signals from cosmic strings with gravitational backreaction

Speaker

Jeremy Wachter

14:45–15:00

Cosmic String Source Modelling with Adaptive Mesh Refinement

Speaker

Amelia Drew

15:00–15:30

Challenges and prospects of future Pulsar Timing Array analyses

Speaker

Lorenzo Sperti

15:30–16:00

High frequency gravitational wave detectors

Speaker

Sebastian Ellis

16:00

16:30

Talks: Standard sirens + short talks

Session |

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16:30–17:00

Standard sirens

Speaker

Nicola TAMANINI

17:00–17:15

The dark timbre of gravitational waves

Speaker

Juan Urrutia

17:15–17:30

Hierarchical inference of cosmological and population parameters from gravitational wave data with and without electromagnetic counterparts

Speaker

Matteo Tagliazucchi

17:30–17:45

From Hubble to Bubble - curvature induced phase transitions after inflation

Speaker

Dr Andreas Mantziris

17:45–18:00

Imprints of new physics phenomena: from collider to gravitational waves observables

Speaker

Morais Morais

18:00–18:15

Gravitational Waves from compressional and vortical modes in strong first order phase transitions**Speaker**

José Ricardo Correia

18:15–18:30

Slow first-order phase transitions**Speaker**

Dr Ville Vaskonen

18:30