**Session Program**

**5–9 Jun 2023**


# 10th LISA Cosmology Working Group Workshop

# Talks

University of Stavanger
University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

# Monday 5 June

14:00

## Talks

**Session** |
**Location:** University of Stavanger, University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

14:00–14:30 **Status of the LISA mission**

**Speaker**
Antoine Petiteau

14:30–15:00 **The LISA Red Book**

**Speaker**
Chiara Caprini

15:00–15:30 **Presentation of new CosWG collaborative rules**

**Speaker**
CosWG Chairs

15:30

# Tuesday 6 June

09:00

## Talks

**Session** |
**Location:** University of Stavanger, University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

09:00–09:30 **Gravitational Wave Propagation Beyond GR**

**Speaker**
Tessa Baker

09:30–10:00
**Gravitational wave signals from cosmological phase transitions and cosmic strings**

**Speaker**
Marek Lewicki

10:00–10:15 **Cosmic string parameter estimation with SGWBinner**

**Speaker**
Jeremy Wachter

10:15–10:30 **Update on the cosmic strings parameter estimation project**

**Speaker**
Lara Sousa

10:30

11:00

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11:00–11:15 **The SGWB produced by MHD turbulence in the early universe**

**Speaker**
Alberto Roper Pol

11:15–11:30
**First-order phase transition SGWB in LISA: template databank, reconstruction pipeline and science interpretation**

**Speaker**
Eric Madge

11:30–12:00 **The PBH Review**

**Speaker**
Prof. Juan Garcia-Bellido

12:00–12:30
**PrimBHoles: a public code for the computation of Primordial Black Hole abundances and GW signatures**

**Speaker**
Sebastien Clesse

12:30

14:00

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14:00–14:30

### On the inference of cosmological parameters with gravitational waves

**Speaker**
Walter Del Pozzo

14:30–15:00

### Cosmological constraints from the 3rd observing run of Advanced LIGO, Virgo and KAGRA

**Speaker**
Rachel Gray

15:00–15:30

### LISA data analysis: from measurements to discoveries

**Speaker**
Quentin Baghi

15:30

16:00

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**Session** |
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16:00–16:30

### Lensing of Gravitational Waves

**Speaker**
Macarena Lagos

16:30–16:45

### Parameter estimation for inflationary gravitational wave stochastic backgrounds

**Speaker**
Matteo Braglia

16:45–17:00

### Inflationary Stochastic Gravitational wave Background in LISA

**Speaker**
Jacopo Fumagalli

17:00–17:30

### A review on Astrophysical Stochastic signals measured by LISA

**Speaker**
Nikolaos Karnesis

17:30–18:00

### GWSB anisotropies: Challenges and Opportunities

**Speaker**
Carlo Contaldi

18:00

# Wednesday 7 June

09:00

## Talks

**Session** |
**Location:** University of Stavanger, University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

09:00–09:30 **Cosmology with Einstein Telescope**

**Speaker**
Angelo Ricciardone

09:30

14:00

## Talks

**Session** |
**Location:** University of Stavanger, University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

14:00–14:23
**Constraining the expansion of the Universe with massive black hole binaries**

**Speaker**
Alberto Mangiagli

14:23–14:45 **Gravitational wave cosmology with LISA Standard sirens**

**Speaker**
Danny Laghi

14:45–15:00
**Modified gravitational-wave propagation with extreme mass-ratio inspirals**

**Speaker**
Chang Liu

15:00–15:15
**On the effectiveness of null TDI channels as instrument noise monitors in LISA**

**Speaker**
Olaf Hartwig

15:15–15:30
**Stochastic gravitational wave background reconstruction for a non-equilateral and unequal-noise LISA constellation**

**Speaker**
Marc Lilley

15:30

16:00

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16:00–16:15
**Impact of the noise knowledge uncertainty for the science exploitation of cosmological and astrophysical stochastic gravitational wave background with LISA**

**Speaker**
Martina Muratore

16:15–16:30
**Recovering Primordial Stochastic Gravitational Wave Backgrounds in the LISA Global Fit**

**Speaker**
Robert Rosati

16:30–16:45
**Doppler-boosted anisotropies of SGWB and LISA: a lever of separation from instrumental and confusion noise.**

**Speaker**
Henri Inchauspé

16:45–17:00 **Reconstructing phase transitions from future LISA data**

**Speaker**
Deanna Hooper

17:00–17:15
**Computation of stochastic background from extreme mass ratio inspiral populations for LISA**

**Speaker**
Federico Pozzoli

17:15–17:30 **Parity violation from anisotropies in gravitational waves V modes**

**Speaker**
Giorgio Orlando

17:30

# Thursday 8 June

09:00

## Talks

**Session** |
**Location:** University of Stavanger, University of Stavanger, Math&Physics Department, Building "UiS Kjølv Egelands Hus", Kristine Bonnevies vei 22, 4021 Stavanger

09:00–09:20 **Primordial Gravitational Waves from Axion-Gauge Fields Dynamics**

**Speaker**
Matteo Fasiello

09:20–09:50 **Probing Primordial Black Holes and Inflation with LISA**

**Speaker**
Gabriele Franciolini

09:50

14:10

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14:10–14:30
**Status of hydrodynamical simulations of early universe phase transitions**

**Speaker**
David Weir

14:30–14:45 **Gravitational waves from primordial black holes**

**Speaker**
Hardi Veermae

14:45–15:00
**Primordial Gravitational Waves in non-Minimally Coupled Chromo-Natural Inflation**

**Speaker**
Mr Martino Michelotti

15:00–15:15
**SGWB anisotropies from inflation with non-Bunch-Davies initial states**

**Speaker**
Shingo Akama

15:15–15:30 **Maximal temperature of strongly-coupled dark sectors**

**Speaker**
Helena Kolesova

15:30

16:00

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16:00–16:15 **Improving predictions for thermal bubble nucleation**

**Speaker**
Oliver Gould

16:15–16:30 **General relativistic bubble growth in cosmological phase transitions**

**Speaker**
Lorenzo Giombi

16:30–16:45 **Audible Gravitational Echoes of New Physics**

**Speaker**
António Morais

16:45–17:00
**Correlating new physics searches at colliders with a possible gravitational-wave detection**

**Speaker**
Roman Pasechnik

17:00–17:15
**Cosmological gravitational wave anisotropies from adiabatic and isocurvature perturbations**

**Speaker**
Ema Dimastrogiovanni

17:15