

**EuCAPT Workshop:  
Gravitational wave probes of  
black hole environments**

**Report of Contributions**

Contribution ID: 31

Type: **not specified**

## **Probing ultralight fields with black-hole superradiance: where do we stand and where do we go?**

*Wednesday, June 15, 2022 9:00 AM (40 minutes)*

**Presenter:** BRITO, Richard

Contribution ID: 32

Type: **not specified**

## **Welcome by Organizers, SSAS Director, and EuCAPT Director**

*Wednesday, June 15, 2022 8:45 AM (10 minutes)*

Contribution ID: 33

Type: **not specified**

## **Tidal Love numbers of dressed black holes**

*Wednesday, June 15, 2022 9:40 AM (20 minutes)*

**Presenter:** DE LUCA, Valerio (University of Geneve)

Contribution ID: 34

Type: **not specified**

## **Accretion disks and milliHz gravitational wave sources**

*Wednesday, June 15, 2022 10:30 AM (40 minutes)*

**Presenter:** DERDZINSKI, Andrea

Contribution ID: 35

Type: **not specified**

## **Aberration of gravitational waveforms by peculiar velocities**

*Wednesday, June 15, 2022 11:10 AM (40 minutes)*

**Presenter:** CUSIN, Giulia (università di Ginevra)

Contribution ID: 36

Type: **not specified**

## **Measuring accretion-disk effects with gravitational waves from extreme mass-ratio inspirals**

*Wednesday, June 15, 2022 11:50 AM (20 minutes)*

**Presenter:** ANTONELLI, Andrea (JHU)

Contribution ID: 37

Type: **not specified**

## **Environmental Effects in Superradiant Instabilities**

*Wednesday, June 15, 2022 12:10 PM (20 minutes)*

**Presenter:** CANNIZZARO, Enrico

Contribution ID: **38**

Type: **not specified**

## **LISA observations of GW190521-like binaries in an AGN environment**

*Wednesday, June 15, 2022 2:30 PM (20 minutes)*

**Presenter:** MARSAT, Sylvain

Contribution ID: 39

Type: **not specified**

## **Observability of lensing of gravitational waves from massive black hole binaries with LISA**

*Wednesday, June 15, 2022 2:50 PM (20 minutes)*

**Presenter:** COTESTA, Roberto (Johns Hopkins University)

Contribution ID: 40

Type: **not specified**

## **Pseudospectrum of black holes and compact objects**

*Wednesday, June 15, 2022 3:10 PM (20 minutes)*

**Presenter:** DESTOUNIS, Kyriakos

Contribution ID: 41

Type: **not specified**

## Discussion Session

*Wednesday, June 15, 2022 4:00 PM (1 hour)*

**Presenter:** SBERNA, Laura (Max Planck Institute for Gravitational Physics (Albert Einstein Institute)  
)

Contribution ID: 42

Type: **not specified**

## **Collisionless Dark Matter Spikes: Open questions in formation, evolution and gravitational wave detection**

*Thursday, June 16, 2022 9:00 AM (40 minutes)*

**Presenter:** KAVANAGH, Bradley

Contribution ID: 43

Type: **not specified**

## **Relativistic Corrections and their Impact on Dark Matter Spike detectability with Gravitational Waves**

*Thursday, June 16, 2022 9:40 AM (20 minutes)*

**Presenter:** SPEENEY, Nicholas

Contribution ID: 44

Type: **not specified**

# **Primordial Black Holes in the era of gravitational astronomy**

*Thursday, June 16, 2022 10:30 AM (40 minutes)*

**Presenter:** RIOTTO, Antonio (University of Geneva)

Contribution ID: 45

Type: **not specified**

## **Discs, spikes and clouds: distinguishing environmental effects around binary black holes”**

*Thursday, June 16, 2022 2:30 PM (40 minutes)*

**Presenter:** COLE, Philippa

Contribution ID: 46

Type: **not specified**

## **Ionization of Gravitational Atoms**

*Thursday, June 16, 2022 11:50 AM (20 minutes)*

**Presenter:** TOMASELLI, Gimmi

Contribution ID: 47

Type: **not specified**

## **Dynamical friction of black holes in ultralight dark matter**

*Thursday, June 16, 2022 11:30 AM (20 minutes)*

**Presenter:** VICENTE, Rodrigo

Contribution ID: 48

Type: **not specified**

## Dirty Black Holes

*Thursday, June 16, 2022 3:10 PM (20 minutes)*

**Presenter:** BAMBER, James

Contribution ID: 49

Type: **not specified**

## **Primordial black hole formation during the quark-hadron phase transition**

*Thursday, June 16, 2022 11:10 AM (20 minutes)*

**Presenter:** MUSCO, Ilia (INFN, Rome)

Contribution ID: 50

Type: **not specified**

## **Subsonic accretion ad dynamical friction for a black hole moving through a self-interacting scalar dark matter cloud**

*Thursday, June 16, 2022 12:10 PM (20 minutes)*

**Presenter:** BOUDON, Alexis

Contribution ID: 51

Type: **not specified**

## **Discussion Session: Environmental effects VS modified gravity**

*Thursday, June 16, 2022 5:10 PM (1 hour)*

**Presenters:** BARAUSSE, Enrico; FERREIRA, Pedro

Contribution ID: 52

Type: **not specified**

**TBA**

Contribution ID: 53

Type: **not specified**

## Searches for dark matter signals with gravitational-wave detectors

*Friday, June 17, 2022 9:40 AM (20 minutes)*

**Presenter:** PICCINNI, Ornella Juliana (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 54

Type: **not specified**

## **Black holes in scalar field**

*Friday, June 17, 2022 9:00 AM (40 minutes)*

**Presenter:** IKEDA, Taishi

Contribution ID: 55

Type: **not specified**

## **Covariant formulation of mechanics: drag forces**

*Friday, June 17, 2022 10:30 AM (20 minutes)*

**Presenter:** CORREIA, Miguel (CERN)

Contribution ID: 56

Type: **not specified**

## **Tidal resonances in EMRIs**

*Friday, June 17, 2022 10:50 AM (20 minutes)*

**Presenter:** PRITI, Gupta

Contribution ID: 57

Type: **not specified**

## **Black holes in galaxies: Environmental impact on gravitational-wave generation and propagation**

*Friday, June 17, 2022 11:10 AM (20 minutes)*

**Presenter:** DUQUE, Francisco

Contribution ID: 58

Type: **not specified**

## **Accretion disks around supermassive black-hole binaries can break**

*Friday, June 17, 2022 2:10 PM (20 minutes)*

**Presenter:** GEROSA, Davide (University of Milano-Bicocca)

Contribution ID: 59

Type: **not specified**

## **Black-hole spin alignment and disk breaking: consequences for LISA**

*Friday, June 17, 2022 2:30 PM (20 minutes)*

**Presenter:** STEINLE, Nathan

Contribution ID: **60**

Type: **not specified**

## **Data analysis methods to probe black hole mergers: Einstein Telescope, primordial events, and pulsar timing arrays**

*Friday, June 17, 2022 3:10 PM (20 minutes)*

**Presenter:** GONCHAROV, Boris

Contribution ID: **61**

Type: **not specified**

## **Wrap-up discussion**

*Friday, June 17, 2022 3:30 PM (20 minutes)*

Contribution ID: 62

Type: **not specified**

## **The scientific analysis of extreme-mass-ratio inspirals**

*Wednesday, June 15, 2022 5:00 PM (40 minutes)*

**Presenter:** CHUA, Alvin

Contribution ID: **63**

Type: **not specified**

## **Soliton boson stars as compact objects**

*Friday, June 17, 2022 11:30 AM (20 minutes)*

**Presenter:** BOSKOVIC, Mateja

Contribution ID: **64**

Type: **not specified**

## **Probing black holes with quasi-normal modes**

*Friday, June 17, 2022 11:50 AM (20 minutes)*

**Presenter:** VÖLKEL, Sebastian (SISSA and IFPU)

Contribution ID: 65

Type: **not specified**

## **Comparing baryonic and dark matter effects in Intermediate Mass Ratio Inspirals**

*Friday, June 17, 2022 2:50 PM (20 minutes)*

**Presenter:** BECKER, Niklas (Goethe University Frankfurt)

Contribution ID: 66

Type: **not specified**

## **Environmental effects and matter systematics for LISA**

*Thursday, June 16, 2022 4:45 PM (25 minutes)*

**Presenter:** BARAUSSE, Enrico