

**ATHEXIS - Athens**  
**Symposium on Exploring the**  
**Universe**

**Report of Contributions**

Contribution ID: 33

Type: **not specified**

# The cosmological axion domain wall problem

*Monday, 10 June 2024 09:30 (30 minutes)*

**Presenter:** SARKAR, Subir (University of Oxford)

**Session Classification:** Plenary talks

Contribution ID: 34

Type: **not specified**

## **Coherent and incoherent dynamics of Fuzzy Dark Matter .**

*Monday, 10 June 2024 10:00 (30 minutes)*

**Presenter:** RIGOPOULOS, Gerasimos (Newcastle University)

**Session Classification:** Plenary talks

Contribution ID: 35

Type: **not specified**

## **Pre-merger & post-merger phenomena in compact binary mergers**

*Monday, 10 June 2024 10:30 (30 minutes)*

**Presenter:** KOKKOTAS, Kostas

**Session Classification:** Plenary talks

Contribution ID: 36

Type: **not specified**

## **Pulsar Polarization Array**

*Monday, 10 June 2024 11:30 (30 minutes)*

**Presenter:** LIU, Tao (The Hong Kong University of Science and Technology (HK))

**Session Classification:** Plenary talks

Contribution ID: 37

Type: **not specified**

## Diffuse Axion Background

*Monday, 10 June 2024 12:00 (30 minutes)*

**Presenter:** EBY, Joshua

**Session Classification:** Plenary talks

Contribution ID: **38**

Type: **not specified**

## **Hunting for dark matter with its high-energy fluxes**

*Monday, 10 June 2024 12:30 (30 minutes)*

**Presenter:** SALA, Filippo

**Session Classification:** Plenary talks

Contribution ID: 39

Type: **not specified**

## **Tensions and anomalies in cosmology**

*Monday, 10 June 2024 15:00 (30 minutes)*

**Presenter:** DE CRUZ PÉREZ, Javier (Universidad Complutense de Madrid)

**Session Classification:** Plenary talks



Contribution ID: 40

Type: **not specified**

## Finite volume effects in QFT and cosmic bounce

*Monday, 10 June 2024 15:30 (30 minutes)*

**Presenter:** ALEXANDRE, Jean

**Session Classification:** Plenary talks

Contribution ID: 41

Type: **not specified**

## Investigating Dark Matter: Insights from Stars

*Monday, 10 June 2024 16:00 (30 minutes)*

**Presenter:** LOPES, Ildio

**Session Classification:** Plenary talks

Contribution ID: 42

Type: **not specified**

## **Relic Background boosted in cosmic reservoirs**

*Monday, 10 June 2024 17:00 (15 minutes)*

**Presenter:** DE MARCHI, Andrea Giovanni

**Session Classification:** Short talks

Contribution ID: 43

Type: **not specified**

## **Cosmology from SKA observatory precursors**

*Monday, 10 June 2024 17:15 (15 minutes)*

**Presenter:** ASOREY BARREIRO, Jacobo (Universidad Complutense de Madrid and IPARCOS)

**Session Classification:** Short talks

Contribution ID: 44

Type: **not specified**

## **Explaining the broken power-law in JWST counts**

*Monday, 10 June 2024 17:30 (15 minutes)*

**Presenter:** Dr MANZONI, Giorgio

**Session Classification:** Short talks

Contribution ID: 45

Type: **not specified**

## **Non-adiabatic inflation**

*Tuesday, 11 June 2024 09:30 (30 minutes)*

**Presenter:** WANDS, David

**Session Classification:** Plenary talks

Contribution ID: 46

Type: **not specified**

## **The impact of modifications to gravity on inhomogeneous cosmologies**

*Tuesday, 11 June 2024 10:00 (30 minutes)*

**Presenter:** CLOUGH, Katy

**Session Classification:** Plenary talks

Contribution ID: 47

Type: **not specified**

## **Non-perturbative physics of inflation**

*Tuesday, 11 June 2024 10:30 (30 minutes)*

**Presenter:** RENAUX-PETEL, Sébastien

**Session Classification:** Plenary talks



Contribution ID: 48

Type: **not specified**

## **LIGO - Virgo - KAGRA stochastic searches and results.**

*Tuesday, 11 June 2024 11:30 (30 minutes)*

**Presenter:** SURESH, Jishnu (Université catholique de Louvain)

**Session Classification:** Plenary talks

Contribution ID: 49

Type: **not specified**

## **Mechanisms for primordial black hole formation from single field inflation**

*Tuesday, 11 June 2024 12:00 (30 minutes)*

**Presenter:** BALLESTEROS, Guillermo (IFT UAM-CSIC)

**Session Classification:** Plenary talks

Contribution ID: 50

Type: **not specified**

# **Non-Gaussianity of the curvature perturbation and its impact on the primordial black hole formation**

*Tuesday, 11 June 2024 12:30 (30 minutes)*

**Presenter:** PI, Shi (Institute of Theoretical Physics, Chinese Academy of Sciences)

**Session Classification:** Plenary talks

Contribution ID: 51

Type: **not specified**

## Entanglement in an expanding universe

*Tuesday, 11 June 2024 15:00 (30 minutes)*

**Presenter:** TETRADIS, Nikolaos (National and Kapodistrian University of Athens (GR))

**Session Classification:** Plenary talks

Contribution ID: 52

Type: **not specified**

## **Like a bridge over troubled water: NEDE and the Hubble tension**

*Tuesday, 11 June 2024 15:30 (30 minutes)*

**Presenter:** SLOTH, Martin Snoager

**Session Classification:** Plenary talks

Contribution ID: 53

Type: **not specified**

## **On how BAO shape the late-time solutions to the $H_0$ tension, and the $w\Lambda\text{CDM}$**

*Tuesday, 11 June 2024 16:00 (30 minutes)*

**Presenter:** GÓMEZ-VALENT, Adrià

**Session Classification:** Plenary talks

Contribution ID: 54

Type: **not specified**

## **Gravitational particle production and freeze-in at stronger coupling**

*Tuesday, 11 June 2024 17:00 (30 minutes)*

**Presenter:** LEBEDEV, Oleg

**Session Classification:** Plenary talks

Contribution ID: 55

Type: **not specified**

## Minimal & Nonminimal Dark Matter

*Tuesday, 11 June 2024 17:30 (30 minutes)*

**Presenter:** SOCHA, Anna (LPENS)

**Session Classification:** Plenary talks



Contribution ID: 56

Type: **not specified**

## **Cosmological correlators with double massive exchanges**

*Tuesday, 11 June 2024 18:00 (20 minutes)*

**Presenter:** AOKI, Shuntaro (IBS CTPU)

**Session Classification:** Short talks

Contribution ID: 57

Type: **not specified**

## **Explaining nonlinearities in black hole ringdowns from symmetries**

*Wednesday, 12 June 2024 09:30 (30 minutes)*

**Presenter:** RIOTTO, Antonio Walter (Universite de Geneve (CH))

**Session Classification:** Plenary talks

Contribution ID: 58

Type: **not specified**

## **A stretched horizon effective field theory understanding of black hole echoes**

*Wednesday, 12 June 2024 10:00 (30 minutes)*

**Presenter:** PATIL, Subodh

**Session Classification:** Plenary talks

Contribution ID: 59

Type: **not specified**

## What's inside a black hole ?

*Wednesday, 12 June 2024 10:30 (30 minutes)*

**Presenter:** BRUSTEIN, Ramy (Ben-Gurion University of the Negev (IL))

**Session Classification:** Plenary talks

Contribution ID: **60**

Type: **not specified**

## **Dynamical friction, dark matter and gravitational wave signals**

*Wednesday, 12 June 2024 11:30 (30 minutes)*

**Presenter:** DESJACQUES, Vincent (Technion)

**Session Classification:** Plenary talks

Contribution ID: **61**

Type: **not specified**

## **The Black Hole Formation – Null Geodesic Correspondence**

*Wednesday, 12 June 2024 12:00 (30 minutes)*

**Presenter:** PERRONE, Davide (Universite de Geneve (CH))

**Session Classification:** Plenary talks

Contribution ID: 62

Type: **not specified**

## Testing dark environments with gravitational waves

**Presenter:** PEREZ-GARCIA, M. Angeles

**Session Classification:** Plenary talks

Contribution ID: 63

Type: **not specified**

# Connecting the baryons to the dark matter of the Universe

*Thursday, 13 June 2024 09:30 (30 minutes)*

**Presenter:** IBARRA, Alejandro (Technical University of Munich)

**Session Classification:** Plenary talks



Contribution ID: **64**

Type: **not specified**

## **Status of the LUXZEPLIN dark matter experiment**

*Thursday, 13 June 2024 10:00 (30 minutes)*

**Presenter:** AL MUSALHI, Aiham (UCL)

**Session Classification:** Plenary talks

Contribution ID: 65

Type: **not specified**

## Searching for Dark Matter in Gamma Rays

*Thursday, 13 June 2024 10:30 (30 minutes)*

**Presenter:** CHOLIS, Ilias (Oakland University)

**Session Classification:** Plenary talks

Contribution ID: 66

Type: **not specified**

## **Exploring the early universe via high energy nuclear collisions on the Earth**

*Thursday, 13 June 2024 11:30 (30 minutes)*

**Presenter:** JALLIAN-MARIAN, Jamal (Baruch College (US))

**Session Classification:** Plenary talks

Contribution ID: 67

Type: **not specified**

## Minimal sterile neutrino dark matter

*Thursday, 13 June 2024 12:00 (30 minutes)*

**Presenter:** BRINGMANN, Torsten (University of Oslo (NO))

**Session Classification:** Plenary talks

Contribution ID: **68**

Type: **not specified**

## **Cosmology with broken diffeomorphisms**

*Thursday, 13 June 2024 12:30 (30 minutes)*

**Presenter:** LOPEZ MAROTO, ANTONIO

**Session Classification:** Plenary talks

Contribution ID: 69

Type: **not specified**

## **Constraining primordial black holes of asteroid masses by observation of stars in dwarf galaxies**

*Thursday, 13 June 2024 15:00 (30 minutes)*

**Presenter:** TINYAKOV, Peter (Universite Libre de Bruxelles)

**Session Classification:** Plenary talks

Contribution ID: 70

Type: **not specified**

## **On the early dressing of primordial black holes by particle dark matter in the radiation era**

*Thursday, 13 June 2024 15:30 (30 minutes)*

**Presenter:** LAVALLE, Julien (LUPM (CNRS / Univ. Montpellier))

**Session Classification:** Plenary talks

Contribution ID: 71

Type: **not specified**

## **Unitarity in the non-relativistic regime and implications for dark matter**

*Thursday, 13 June 2024 16:00 (30 minutes)*

**Presenter:** FLORES, Marcos (LPENS)

**Session Classification:** Plenary talks



Contribution ID: 72

Type: **not specified**

## **Condensed dark matter with a Yukawa interaction**

*Thursday, 13 June 2024 17:00 (30 minutes)*

**Presenter:** VANDECASTEELE, Jerome

**Session Classification:** Plenary talks

Contribution ID: 73

Type: **not specified**

## **Excited bound states and their role in dark matter production**

*Thursday, 13 June 2024 17:30 (30 minutes)*

**Presenter:** LEDERER, Stefan

**Session Classification:** Plenary talks

Contribution ID: 74

Type: **not specified**

## Supersymmetric Dark Matter

**Presenter:** SPANOS, Vassilis (Department of Physics National and Kapodistrian University of Athens)

**Session Classification:** Plenary talks

Contribution ID: 75

Type: **not specified**

# Applications of the Tunneling Potential Formalism

*Friday, 14 June 2024 09:30 (30 minutes)*

**Presenter:** ESPINOSA SEDANO, Jose Ramon (ICREA / IFAE Barcelona (ES))

**Session Classification:** Plenary talks

Contribution ID: 76

Type: **not specified**

## **On the Effective Field Theory of Large Scale Structure**

*Friday, 14 June 2024 10:30 (30 minutes)*

**Presenter:** SENATORE, Leonardo

**Session Classification:** Plenary talks

Contribution ID: 77

Type: **not specified**

## **Peering Beyond the Standard Model at the LHC: The Odyssey For Anomalously Ionizing Messengers of New Physics with MoEDAL-MAPP**

*Friday, 14 June 2024 11:30 (30 minutes)*

**Presenter:** STAELENS, Michael Anthony (Instituto de Física Corpuscular (IFIC), Universitat de València-CSIC)

**Session Classification:** Plenary talks

Contribution ID: 78

Type: **not specified**

## **A parity-violating Universe? Cosmic Birefringence (and more).**

*Friday, 14 June 2024 10:00 (30 minutes)*

**Presenter:** BARTOLO, Nicola

**Session Classification:** Plenary talks

Contribution ID: 79

Type: **not specified**

## **Search for cosmological phase transitions through their gravitational wave signals**

*Friday, 14 June 2024 12:00 (30 minutes)*

**Presenter:** LEWICKI, Marek (University of Warsaw)

**Session Classification:** Plenary talks



Contribution ID: **80**

Type: **not specified**

## **Fundamental fields, scalar charges and Extreme Mass Ratio Inspirals**

*Friday, 14 June 2024 12:30 (30 minutes)*

**Presenter:** MASELLI, Andrea

**Session Classification:** Plenary talks

Contribution ID: **81**

Type: **not specified**

# **Gravitational Wave Discoveries Enabled by Machine Learning**

*Friday, 14 June 2024 15:00 (30 minutes)*

**Presenter:** STERGIOULAS, Nikolaos (Aristotle University of Thessaloniki)

**Session Classification:** Plenary talks

Contribution ID: 82

Type: **not specified**

## **Probing massive black holes with gravitational waves**

*Friday, 14 June 2024 15:30 (30 minutes)*

**Presenter:** KRITOS, Konstantinos

**Session Classification:** Plenary talks

Contribution ID: 83

Type: **not specified**

## Realising dark matter via dark branes

*Friday, 14 June 2024 16:00 (30 minutes)*

**Presenter:** KOUTROULIS, Fotios (Warsaw University)

**Session Classification:** Plenary talks

Contribution ID: 84

Type: **not specified**

## **Radiation backreaction during dark-matter freeze-out via metastable bound states**

*Friday, 14 June 2024 17:00 (20 minutes)*

**Presenter:** VASILAKI, Christiana

**Session Classification:** Short talks

Contribution ID: 85

Type: **not specified**

## **Imprints of energy injection by compact dark stars during reionization**

*Friday, 14 June 2024 17:20 (20 minutes)*

**Presenter:** BETANCOURT KAMENETSKAIA, Boris (Technical University of Munich)

**Session Classification:** Short talks

Contribution ID: 86

Type: **not specified**

## **Gravitational Wave Detection in O3 LIGO-Virgo data with the AresGW Deep Learning Code**

*Friday, 14 June 2024 17:40 (20 minutes)*

**Presenter:** KOLONIARI, Alexandra Eleni (Aristotle University of Thessaloniki)

**Session Classification:** Short talks