



The Galileo Galilei Institute for Theoretical Physics  
Arcetri, Florence

# Axions across boundaries between Particle Physics, Astrophysics, Cosmology and forefront Detection Technologies

Apr 26, 2023 - Jun 09, 2023

The purpose of this workshop is to bring together scientists with different backgrounds and expertise to discuss open problems, recent developments and future directions in axion physics, a field that is notoriously replete with interdisciplinary connections. The aim is to foster a fruitful cross breeding between different theoretical areas, with a focus on certain open issues in axion particle physics, astrophysics and cosmology. From the experimental side, a blossoming of potentially game-changing ideas, with an exciting crossover from experimental particle physics to materials science and cutting-edge technologies is inspiring new methods for axion searches. The interaction between the experimental and theoretical communities will foster the merging of 'how to search' with 'where to search' into optimized strategies to hunt for the axion.

## Topics and Schedule:

- Training week (1st week)
- Axion astrophysics (2nd & 3rd weeks)
- Axion cosmology (3rd & 4th weeks)
- Axions in particle physics (4th & 5th weeks)
- Axion experiments (5th & 6th weeks)
- Conference week (7th week)

## Organizing Committee:

Gianpaolo Carosi, LLNL  
Kiwoon Choi, IBS, Daejeon, CTPU  
Luca Di Luzio, University of Padua and INFN  
Babette Döbrich, CERN  
Inma Domínguez, University of Granada  
Maurizio Giannotti, Barry University  
Igor Garcia Irastorza, University of Zaragoza  
Enrico Nardi, INFN - LNF  
Andreas Ringwald, DESY  
Pierre Sikivie, University of Florida  
Julia Vogel, LLNL & University of Zaragoza

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