QFC2024- Quantum gases, fundamental interactions and cosmology

Oct 23 – 26, 2024
Aula Gerace
Europe/Rome timezone

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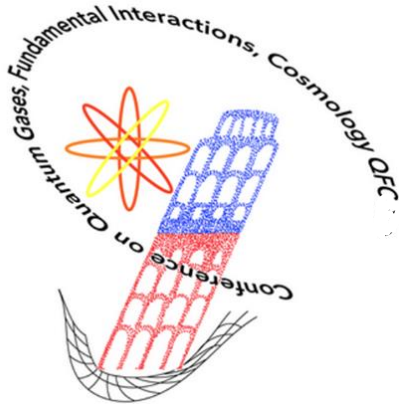

The **Conference on Quantum gases, fundamental interactions and cosmology- Fourth Edition (QFC 2024)** will be held in Pisa from 23 to 25 October 2024.

After QFC2017, QFC2019 and QFC2022 (see the menu on the left for infos), the Conference will be in its third edition of a series of appointments to be held each second year.

Aim of the conference is to bring together scientists in both experimental and theoretical physics from the fields of ultracold quantum gases, fundamental interactions, and cosmology, with the desire of sharing and brainstorming on challenging open common problems, which can be zoomed in and out via a cross-disciplinary approach.

The mutual frontiers among these three apparently separated disciplines have been recently blossoming with new innovative, cutting edge research. To the well-established connections between cosmology and high-energy physics, current bright examples are the research activities in analogue gravity and superfluid analogies of cosmological phenomena, and of quantum simulations of lattice gauge theories using ultracold atoms in optical lattices. We intend to use this momentum and opportunities to establish strong collaborations among participants and leading groups to open new pathways leading to breakthrough results, in this spirit, keynote speakers of the first and second editions have been invited to join the Scientific Advisory Board.

The QFC2024 edition will deal with two broad interdisciplinary areas:

T1. Phenomenology of Quantum Gravity
T2. Emergent methodologies for Interdisciplinary Science

Each of these area of research will be discussed from the three perspectives of Quantum gases (Q), Fundamental interactions (F) and Cosmology (C).

https://agenda.infn.it/event/38093/

Committees

QFC24 Local Organizing Committee

Marilù Chiofalo (University of Pisa/INFN) – **Chair**
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Steve Shore (University of Pisa)
Laura Elisa Marcucci (University of Pisa/INFN)

and keynote Speakers of previous editions, who kindly agreed to join:

Gianfranco Bertone (GRAPPA, University of Amsterdam, NL)
Volker Bromm (University of Texas, USA)
Iacopo Carusotto (University of Trento, Italy)
Eleonora Di Valentino (Manchester University)
John Ellis (Imperial College, London)
Ivette Fuentes de Gilmore (University of Southampton, UK and Emmy Network)
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