

# **GraSP23 || GravityShapePisa 2023**

**Tuesday, 24 October 2023 - Friday, 27 October 2023**

**Università di Pisa - Dipartimento di Fisica**

## **Scientific Program**

## TOPICS COVERED IN THE CONFERENCE

### Black Holes

Present and future detectors will allow to observe new gravitational signals from these objects. We will discuss how to extrapolate better constraints on gravity theories, black holes population studies and advanced data analysis techniques.

### Neutron Stars

Topics related to neutron stars will be covered, both from a theoretical and observational point of view. The discussion, then, will focus on the prospects of their observation, the theories describing their mysterious composition, and their role in multimessenger astronomy.

### Gravity in the Solar System

Topics related to the in-depth study of gravity in the Solar System will be treated. We will discuss terrestrial and local gravity measurements and their role in validating or constraining extended theories of gravity, Lorentz violation, Gravitomagnetism, and the Lense-Thirring effect.

### Guided tour of Virgo

On the last day (Friday, 27 October), the conference will be held at Virgo, Cascina (PI). A guided tour of the Gravitational Waves detector has been organised in the afternoon (from ~3.00 pm to ~5.00 pm). Coaches are available for guests. They will leave from Parcheggio Paparelli (Via A. Paparelli 51, Pisa), a large parking spot close to the Physics Department, at 8.20 am. Two possible solutions are available for the way back:

Coach leaving at 1:00 pm, before lunch;

Coach leaving at ~5:00 pm, after the guided tour of VIRGO.

Lunch will be held in the very nice and very good tasting Virgo canteen (10 € per person, not covered by the conference).