

Welcome to the SIGRAV International School 2022

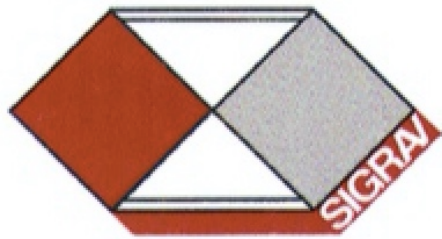
Fulvio Ricci

SIGRAV president and INFN Roma

Cosmology: from theory to observation
online school

Vietri sul mare (Salerno, Italy)

14 – 18 February 2022



What is SIGRAV

SIGRAV is the ***Italian Society of General Relativity and Gravitation***

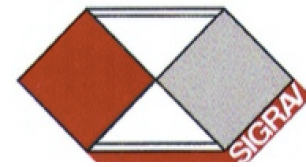
It is a no-profit organization, founded in 1990 with the aim to promote the research on GR, Gravitation and Relativistic Astrophysics.

SIGRAV is active in organizing and sponsoring conferences and workshops and international schools, to form the new generation of researchers in the field

SIGRAV signed a cooperation agreement (MoU) with ***the Gravitational Physics Division of the European Physical Society***

SIGRAV operate in connection with other national societies as those in Russia, Poland, Greece, Spain, Portugal and ISGRG.

SIGRAV School 2020 -- Vietri



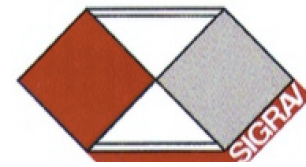
- In 2020 we had the chance to organise the school in presence in Vietri (Salerno – Italy)



*Gravity: General Relativity and Beyond. Astrophysics,
Cosmology and Gravitational Waves*

- *General Relativity and Its Modifications*
(L. Heisenberg, ETH Zurich, CH → S. Capozziello, Univ. Federico II - Naples)
- *Testing Gravity*
(P. Pani, Sapienza Univ. Rome, IT)
- *Cosmology Beyond General Relativity*
(T. Baker, Q.M.U. London, UK)
- *Primordial Gravitational Waves*
(S. Matarrese, Univ. Padova, IT)

SIGRAV school 2021 – online



<https://agenda.infn.it/event/23750/>

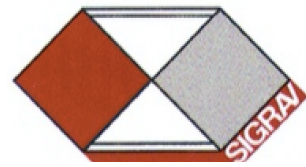
SIGRAV School 2021



SIGRAV School 2021 -- online
*Gravity of compact astrophysical objects and
Gravitational Waves*

- Physics of compact objects within the framework of GR and beyond,
(**L. Gualtieri** - Roma Sapienza)
- Astrophysics and detection of gravitational wave sources,
(**A. Sesana** - Milano Bicocca)
- Data analysis and General Relativity tests
(**W. Del Pozzo** - Università Pisa)
- Multimessenger Astronomy with Gravitational Waves and Electromagnetic Signals,
(**M. Branchesi** - GSSI)

The 2022 SIGRAV school --online



- This school is sponsored by the Italian ***Istituto Nazionale di Fisica Nucleare – INFN*** and ***European Gravitational Observatory - EGO***



- The international school, organised by the **Italian Society of General Relativity and Gravitation (SIGRAV)**, aims at providing robust and deep knowledge of Cosmology in the context of General Relativity and its possible modifications, with particular attention to phenomenological consequences and observations.
- The School is based on four courses and two lectures focused on specific topics

Lectures and focused talks

- Early Universe, Inflation and Primordial Gravitational Waves
Mairi Sakellariadou (King's College)
- Observational perspectives for the Cosmic Microwave Background
Paolo de Bernardis (Sapienza Univ. di Roma)
- Neutrino Cosmology and Dark Matter
Massimiliano Lattanzi (INFN)
- Modified gravity cosmology
Emmanuel Saridakis (National Observatory of Athens)

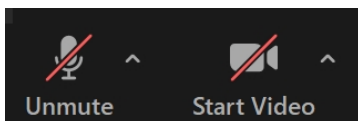
- Machine learning in cosmology (*focused talk*)
Nicoletta Krachmalnicoff (SISSA)
- Cosmic Microwave Background phenomenology (*focused talk*)
Erminia Calabrese (University of Cardiff)



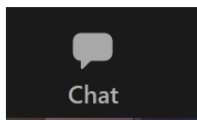
Few recommendations

During classes:

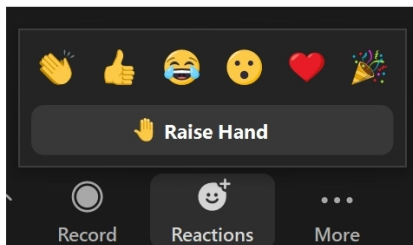
mute your audio and turn off your camera



you can ask questions in the chat, they will be read at the end of the lesson



you can raise your hand, at the end of the lesson you will be called to ask your question

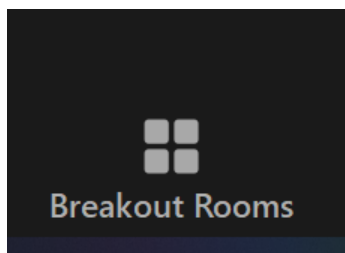


During coffee breaks:

You can select the icon “**Breakout rooms**” and access one rooms to talk with other school participants.

These rooms are not moderated.

When the lessons are about to start, the coffee break rooms will be closed and you will return to the main school room



Time table at
<https://agenda.infn.it/event/28785/>

Let's start !!!