Contribution ID: **219** Type: **Poster**

Gravitational waves and galaxies to constrain the Hubble constant

The rapid development of gravitational wave astronomy, along with information coming from present and future galaxy surveys, has the potential to shed light on many open questions in Astrophysics and Cosmology. The combination of gravitational wave and galaxy survey datasets is especially able to provide new and unique constraints on the dynamics of the Universe. In this work, we focus on correlating dark sirens (merging black hole binaries) with galaxy catalogs to constrain the Hubble constant H_0. More specifically, with respect to the current state of the art, we aim at proposing a more refined and effective treatment of the galaxy catalog contribution and involving third-generation gravitational wave detectors in this very same methodology.

Primary author: BOSI, Michele (University of Trento / SISSA)

Co-authors: Prof. LAPI, Andrea (SISSA); Prof. BACCIGALUPI, Carlo (SISSA); Dr BOCO, Lumen (SISSA)