



Contribution ID: 44

Type: **Invited Talk**

Determination of microscopic dynamics of dense matter from gravitational and electromagnetic observations

Wednesday, 18 September 2024 11:40 (25 minutes)

The availability of accurate astronomical data collected by electromagnetic observatories and gravitational-wave (GW) interferometers, supplemented by the information obtained from Earth-based laboratory experiments, has opened a new era for the investigation of nuclear dynamics in dense matter. Besides being a valuable source of information on average properties, such as the Equation of State (EOS), the new data will provide an unprecedented opportunity to constrain the underlying dynamical models at supranuclear density. I will report the results of a recent analysis, suggesting that the advent third-generation GW interferometers will allow a reliable determination of the strength of irreducible repulsive interactions involving three nucleons, which are known to drive the stiffness of the EOS at large density.

Primary author: BENHAR, Omar (Istituto Nazionale di Fisica Nucleare)**Presenter:** BENHAR, Omar (Istituto Nazionale di Fisica Nucleare)**Session Classification:** MultiMessenger**Track Classification:** MultiMessenger