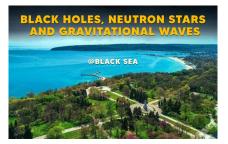
Black Holes, Neutron Stars, and Gravitational Waves @ Black Sea



Contribution ID: 44

Type: Oral presentation

Simulating and Interpreting the Multimessenger Picture of Neutron Star Mergers

Wednesday 18 June 2025 12:00 (30 minutes)

The correct interpretation of multimessenger data obtained from binary neutron star mergers, including gravitational waves and electromagnetic signals, requires accurate theoretical predictions that can be crosscorrelated with observations. These models can be constructed by combining ab initio numerical-relativity simulations with derived analytical knowledge. In addition, an efficient Bayesian framework for multimessenger analysis is indispensable for extracting meaningful information from observational data. We will discuss how numerical-relativity simulations and multimessenger data analysis go hand in hand to provide valuable insights into neutron star mergers and

fundamental physics principles.

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