

PerAPS

2025

21

VENERDÌ

NOVEMBRE



A.D. 1308  
unipg

DIPARTIMENTO  
DI FISICA E GEOLOGIA



ORE 15:00 – AULA C

# Binary Neutron Stars: from macroscopic collisions to microphysics

Luciano Rezzolla



I will discuss the recent rapid progress made in modeling these systems and show how the gravitational signal can provide tight constraints on the equation of state, sound speed, and the occurrence of phase transitions. Finally, I will discuss a novel and tight correlation between the ratio of the energy and angular-momentum losses in the late-time portion of the post-merger signal, i.e., the "long ringdown", and the properties of the EOS at the highest pressures and densities in neutron-star cores.