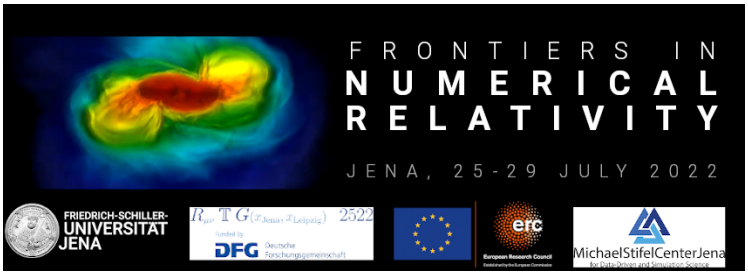

Contribution ID: **19** Type: **not specified**

Mergers of Exotic Compact Objects

Thursday, 28 July 2022 18:15 (15 minutes)

We are in the era of gravitational wave (GW) astronomy, with the rapidly growing catalogue of gravitational wave events detected by the LIGO-Virgo collaboration. These detections allow us to study the strong regime of gravity through GW signals produced by the coalescence of compact objects. In this talk, I will present our numerical simulations on the coalescence of binary Exotic Compact Objects, considering two different types of binaries: boson stars and fermion-boson stars (a model for neutron stars that contain a small fraction of dark matter). These binaries lead to different dynamics and gravitational signatures during their coalescence respect to standard compact objects, which might be crucial to distinguish them from other binaries with current/future detections by ground-based interferometers.

Presenter: Dr BEZARES, Miguel (SISSA)

Session Classification: Short talks