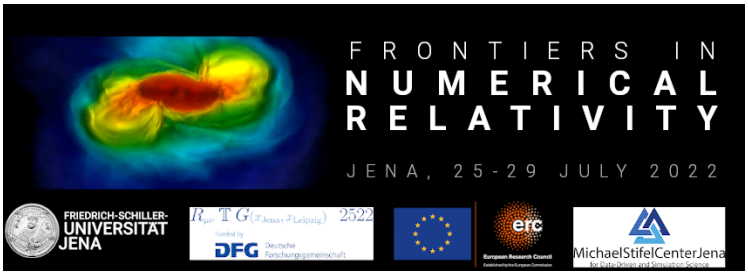

Contribution ID: **55** Type: **not specified**

Merger dynamics of binary Boson stars

Thursday, 28 July 2022 18:45 (15 minutes)

Particle physics models of dark matter, and extensions to the Standard Model, predict the existence of a large abundance of light scalar degrees of freedom in the universe. From a diffuse cloud, these can form into clumps of energy - boson stars. Additionally, due to their high compactness, close to that of black holes, these solutions serve as test beds to study the non-linear dynamics of a large class of ultra-compact objects. We outline a method to obtain constraint satisfying binary Boson star initial data, and discuss the dynamics of merging binaries, focusing specifically on the formation of rotating Boson star remnants.

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Session Classification: Short talks