



Contribution ID: 84

Type: **not specified**

Unraveling the origin of Black Holes from effective spin measurements

Wednesday 2 December 2020 14:00 (30 minutes)

The remarkable discovery of gravitational waves from binary black hole mergers has given us a new way to study our universe. The origin of the black hole binaries remains unclear, I investigate whether information on the effective spin of binary black hole mergers from the LIGO-Virgo gravitational wave detections can be used to discriminate primordial versus astrophysical black holes. I will also present the posterior probability density for a possible mixture of astrophysical and primordial BHs as emerging from current data, and calculate the number of future mergers needed to discriminate different spin and alignment models at a given level of significance.

Presenter: FERNANDEZ, Nicolas (University of Illinois at Urbana-Champaign)

Session Classification: Dark matter