Contribution ID: **4** Type: **not specified**

Highly accurate simulations of asymmetric black-hole scattering and cross validation of effective-one-body models

Thursday 4 September 2025 09:30 (20 minutes)

The study of unbound binary-black-hole encounters provides a gauge-invariant approach to exploring strong-field gravitational interactions in two-body systems, which can subsequently inform waveform models for bound orbits. In this talk, we compare our NR scattering angle results from the Spectral Einstein Code (SpEC) to the post-Minkowskian PM-based effective-one-body (EOB) closed-form models SEOB-PM and wEOB and the post-Newtonian-based EOB evolution models SEOBNRv5 and TEOBResumS-Dalí.

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Session Classification: Contributed talks