

Invited Talk: Caio Macedo (Title: Black holes and bosonic fields: modes and binary systems)

Friday, 30 May 2025 13:30 (45 minutes)

Title: Black holes and bosonic fields: modes and binary systems

Abstract

Bosonic fields around rotating black holes can grow exponentially due to superradiant instabilities, producing detectable dynamical signatures in gravitational waves. We explore relativistic configurations of bosonic fields and black holes, analyzing their quasinormal modes and inspiral dynamics. Our findings provide key insights into potential observational signatures for next-generation gravitational wave detectors.