Contribution ID : **31**   Type : **not specified**

Perturbative gauge invariants in the Hamiltonian formalism for spherically symmetric backgrounds

Wednesday, 16 October 2024 15:20 (20)

The Hamiltonian formalism of perturbation theory in general relativity is a powerful tool for exploring physical aspects beyond the mathematical formulation of an astrophysical system. Its broad range of applications makes the analysis of spherically symmetric backgrounds particularly interesting. The Loop Quantum Gravity group at IEM-CSIC has focused on studying the final stages of supermassive black hole coalescence. This approach provides an opportunity to investigate quantum aspects, such as gravitational radiation. In this context, we aim to present a compelling method for identifying perturbative gauge invariants within the Hamiltonian formalism. These quantities may lead to predictions with implications for fundamental physics, including potential consequences for the LISA interferometer.

Presenter(s) :   MÍNGUEZ-SÁNCHEZ, Andrés (IEM-CSIC)

Session Classification :   Contributed Talks + Roadmap for the Spanish contribution to LISA