Measuring scalar charge with extreme mass ratio inspirals

Thursday, 24 October 2024 15:30 (30 minutes)

I will first discuss under which circumstances can black holes carry scalar charge and how such charge would scale with the mass of the black hole. I will use this insight to argue that EMRIs are an ideal system for searches of new fundamental scalars and lay out the framework for modelling EMRIs. I will then present forecasts on LISA's ability to measure scalar charge.

Primary author: SOTIRIOU, Thomas (University of Nottingham)Presenter: SOTIRIOU, Thomas (University of Nottingham)Session Classification: Fundamental Physics