

Contributed Talk

Name: Benjamin Berczi

Position: PhD Student

Affiliation: University of Nottingham

Title: Gravitational collapse of quantum fields

Abstract: Semiclassical black holes have been in the forefront of research for decades, in various shapes and forms. We have developed a formalism using which a genuine 4D quantum scalar field can be numerically simulated to collapse into a black hole. The new formalism utilises the notion of coherent states to relate the semiclassical simulation to the well-studied classical one. Thus the classical scenarios are easily replicated and also the new quantum effects can be separated straightforwardly.