February 12, 2020, Seminar 2nd floor, 18:00-19:00

Speaker: Ettore Minguzzi (University of Florence, Italy)

Title: A gravitational collapse singularity theorem that improves Penrose's

Abstract: The global hyperbolicity assumption present in gravitational collapse singularity theorems is in tension with the quantum mechanical phenomenon of black hole evaporation. In this work I show that the causality conditions in Penrose's theorem can be almost completely removed. As a result, it is possible to infer the formation of spacetime singularities even in absence of predictability and hence compatibly with quatum field theory and black hole evaporation.