Contributed Talk

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Title: Investigating an alternative Hamiltonian derivation of the Ashtekar-Olmedo-Singh black hole solution

Abstract: Recently, a new proposal has been put forward for the computation of the effective equations governing the dynamics of an uncharged, nonrotating black hole in the framework of loop quantum cosmology. The key premise is to define the parameters that regulate the introduction of quantum effects in the system as suitable functions of two constants of motion, breaking the decoupling between two sectors of phase space that had previously been considered independent. In this talk, I will discuss the motivations and consequences of this choice and examine some of the features of the resulting model, seeking similarities and possible differences with respect to the original works by Ashtekar, Olmedo and Singh.