

Entropy versus the Action in Causal Set Theory

mardi 17 janvier 2023 11:40 (50 minutes)

The quantum partition function of causal set quantum gravity is a phase weighted sum over all locally finite posets or causal sets. As the size n of the causal sets grows, however, the overwhelmingly dominant entropic contribution comes from a class of causal sets that look nothing like continuum spacetime. A long standing question has been whether this entropy can be overcome in the large n , classical limit by the discrete Einstein-Hilbert Action, to give spacetime-like causal sets a fighting chance. I will discuss recent progress on this as well as some of the open strands of questions that still remain.

Orateur: SURYA, Sumati (Raman Research Institute)