

Volume complexity of dS bubbles

Thursday, 30 November 2023 16:45 (15 minutes)

Holographic complexity is conjectured to probe the evolution of spacetime. For black holes in anti-de Sitter (AdS) spacetime the growth rate of complexity approaches a constant value at late times, while in de Sitter (dS) spacetime it diverges at a finite critical time. In this talk, we consider geometries interpolating between AdS and dS. In particular, we discuss the evolution of volume complexity in a class of three-dimensional asymptotically anti-de Sitter geometries including dynamical bubbles of de Sitter in their interior. According to the dynamics of the bubble, complexity qualitatively behaves either as in the AdS black hole or as in the dS case. We conclude with some remarks about the possible dual interpretation.

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Session Classification: Parallel Session A