Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

de Sitter quantum gravity: holography and compactification
(Zoom Seminar)

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Date: August 16, 2021

Time: 5.00 pm IST

Zoom link shall be shared separately

In this talk we review recent progress in formulating quantum gravity in de Sitter spacetime. First we will discuss a generalization of the TTbar deformation that includes a cosmological constant; applying it to a conformal field theory leads to a holographic description of the de Sitter static patch (or the dS/dS patch). In the second part of the talk we will present de Sitter solutions obtained by compactifications of M-theory with minimal ingredients. We argue that M-theory on a hyperbolic manifold with small closed geodesics supporting Casimir energy, along with a single classical source (7-form flux), contains a 3-term structure for volume stabilization at positive potential energy.

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