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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title : Extremal surfaces, de Sitter entropy and entanglement in ghost theories

Speaker : Narayan K, Chennai Mathematical Institute

Date : Thursday, February 6, 2020

Time : 4:00 pm

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : We describe connected timelike codim-2 extremal surfaces stretching between the future and past boundaries in the static coordinatization of de Sitter space. These are analogous to rotated versions of certain surfaces in the AdS black hole. The existence of these surfaces via the dS/CFT framework suggests the speculation that dS4 is dual to two copies of ghost-like CFTs in a thermofield-double-type entangled state. In studies of entanglement in ghost theories and "ghost-spin" chains, we show that similar entangled states in two copies of ghost-spin ensembles always have positive norm and positive entanglement.