



ICTS Thesis Defense Seminar

Title : Holography of Information in de Sitter Quantum Gravity

Speaker : Tuneer Chakraborty (ICTS-TIFR, Bengaluru)

Date : Friday, 29 November 2024

Time : 11:30 AM (IST)

Abstract : Based on the asymptotic structure of the Hilbert space of Quantum Gravity around a de Sitter (dS_{d+1}) background, we propose a novel path-integral based norm structure. Due to the $\text{diff} \times \text{Weyl}$ symmetry of the state wave functionals at late times, the integrand is gauge fixed via a Faddeev-Popov procedure. A residual gauge freedom persists which is found to correspond to the conformal group $SO(1, d + 1)$. This freedom is further fixed by a point-fixing procedure within the state wave functionals. This norm is shown to reduce to Higuchi's group-average prescription in the non-gravitational limit. A novel definition of cosmological correlators is proposed which takes care of fixing large diffeomorphisms in the spherical dS slice. It is further shown that knowledge of all such correlators in a finite sub region of the late time slice is enough to completely deduce all cosmological observables in that state

Venue : Emmy Noether Seminar Room

Zoom Link: <https://icts-res-in.zoom.us/j/93538306651?pwd=4lojHEXArePgkaruMa3vbqsQqQNXuy.1>

Meeting ID: 935 3830 6651

Passcode: 863914