

Extreme Universe

The 23rd COLLOQUIUM

March 14th (Thu.) ONLINE

TALK 16:00 - 17:00 (JST)

March 14th (Thu.) 12:30 - 13:30 (IST)

March 14th (Thu.) 7:00 - 8:00 (UTC)

ONLINE COFFEE TIME

17:00 - 18:00 (JST)

Registration required (click [HERE](#))

Extreme Universe, JAPAN



Speaker

Prof. Suvrat Raju

ICTS TIFR Bengaluru

Title

How is quantum information localized
in quantum gravity?

Abstract

A careful analysis of the gravitational constraints reveals that quantum gravity localizes information differently from ordinary quantum field theories --- an effect called the holography of information. We review the results obtained so far for asymptotically flat spacetimes, asymptotically anti-de Sitter spacetimes, and asymptotically de Sitter spacetimes. About some simple states, it is surprising that these effects are visible in perturbation theory. In a different regime, we explain the significance of the holography of information for understanding black-hole evaporation and the information paradox. We discuss several interesting open questions.



Collaboration

2024