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Department of
Theoretical Physics

Quantum Space-Time Seminar

Edge Modes on String Horizons

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Date and time: **11:30 AM, 02 Mar, 2026**
Venue: **A304**

Zoom link will be sent separately.

Abstract: For a quantum field of arbitrary mass and spin in the static patch of de Sitter spacetime, the Euclidean partition function receives contributions from edge modes localized on the horizon, expressible in terms of the Harish-Chandra character of the de Sitter group. Considering the flat limit and summing over all string fields, we obtain the partition function of edge modes in string theory near the Minkowski-Rindler horizon. Application of the Kronecker limit formula naturally yields a modular invariant one-loop partition function. The resulting expression generalizes the edge contribution of a massive vector boson in a spontaneously broken gauge theory to the infinite tower in string theory. It is naturally ultraviolet finite and amenable to a state-counting interpretation.

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