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Charged quantum-corrected black holes in dS3

Thursday 5 September 2024 14:50 (20 minutes)

In this talk, I will present methods to construct exact solution to the semiclassical back-reaction problem in (2+1)-dimensional asymptotically de Sitter spacetime within the formalism of braneworld holography. In particular, starting from an AdS_4 C-Metric, I will describe how to construct a black hole solution that localises on an end-of-the-world brane which. From the lower-dimensional perspective, the black hole can be interpreted as the solution to an higher curvature theory of gravity sourced by a CFT. I will, then, allow for electric and magnetic charge in the bulk, and study their counterintuitive effects on the brane, together with the enriched horizon structure of the geometry. We conclude by describing how the thermodynamics of the bulk system doubles as thermodynamics of the brane solution.

Link to publication (if applicable)

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