



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Black Holes, Holography, and Entanglement”

Abstract

Black holes have been instrumental in paving the way toward a quantum theory of gravity. Their elegant mathematical formulation has revealed that black holes behave as thermodynamic objects, which subsequently motivated the holographic principle. Its concrete realization, the gauge/gravity duality, offers a framework for elucidating the fundamental nature of spacetime, once we understand the map between the two sides of the duality sufficiently well. Research over the last decade has offered tantalizing hints that quantum entanglement plays a foundational role, ushering in more mysteries. This talk will give a broad-brush perspective on these themes and motivate considering a time-dependent context in order to gain further insight.

Wednesday, April 04, 2018

3:30 p.m.

BWC - Room A104