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Speaker: Netta Engelhardt

Title: The Black Hole Information Problem in the Age of Holographic Entanglement Entropy

Abstract: The black hole information paradox — whether information escapes an evaporating black hole or not — remains one of the greatest unsolved mysteries of theoretical physics. The apparent conflict between validity of semiclassical gravity and unitarity of quantum mechanics has long been expected to find its resolution in the deep quantum gravity regime. Recent developments in the holographic dictionary and in particular its application to entanglement, however, have shown that a semiclassical gravity analysis has a hallmark feature of unitary evolution. I will describe this recent progress and discuss some potential new avenues for working towards a resolution of the information paradox.