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Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR

The Tata - Infosys Lecture Series

Black Hole Thermodynamics and the Information Paradox in 2d CFT

Jared Kaplan
(John Hopkins Univ.)

Date: Nov 28,29, 2017
Time: 11:30 am

Date: Nov 30, 2017
Time: 10:00 am

Venue: A-304, TIFR

I will discuss how black hole thermodynamics in 2+1 dimensional gravity arises universally from 1+1 dimensional conformal field theory at large central charge. The black hole information paradox in AdS/CFT can be cast as a series of more or less tractable sub-problems. I will explain how many of these can also be addressed in the case of 2d CFT by computing non-perturbative effects in G_N expansion. Finally, I will discuss how it's possible to reconstruct exact candidate bulk field operators in AdS_3. By examining the correlators of these bulk fields we will see how computable non-perturbative effects in quantum gravity lead to the breakdown of bulk locality.

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