

TATA-INFOSYS LECTURE SERIES:

Simon Caron-Huot (McGill)



Lecture 1 (Wed, 21 Jan, 11:00am - 1:00pm,
A 304)

Lecture 2 (Thu, 22 Jan, 2:30pm - 4:30pm,
AG 80)

Lecture 3 (Fri, 23 Jan, 11:00am - 1:00pm,
A 304)

Bulk locality and AdS/CFT holography

The celebrated AdS/CFT correspondence predicts that extra dimensions of space with dynamical gravity can emerge from a strongly interacting quantum systems living at the "boundary". I will discuss three aspects of the emergence of local bulk physics: 1. How general properties of the boundary conformal field theory constrain local scattering experiments in the bulk; 2. Why these restrict the dynamics of the bulk metric to be as described by General Relativity; 3. Simple (thought) experiments that can measure a non-AdS bulk geometry from the boundary, including new signatures of causality in a general geometry.

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