



## PHYSICS AND ASTRONOMY SEMINAR

# Dr. Diego Hofman

Stanford University

# “Warped Conformal Field Theory”

### Abstract

I'll discuss two-dimensional field theories that, while translationally invariant, are not Lorentz invariant. They have left (but not right) scaling symmetry. These theories have appeared in the context of AdS/CFT as holographic duals of warped AdS backgrounds in Topologically Massive Gravity, TsT deformations of exact string theory solutions and Kerr/CFT duality. I'll show that, as in the usual CFT case, these global symmetries extended to an infinite dimensional algebra. Furthermore, I'll explain that these symmetries are enough to show the existence of a Cardy-like formula for the asymptotic density of states. This purely field theoretic result matches calculations of the Bekenstein-Hawking entropy of black holes in the bulk dual. If there is time, I'll discuss how the extra symmetries might arise from the spectrum of strings on TsT deformed AdS spaces.

Thursday, April 25, 2013

11:00 a.m.

Elliott Building

Room 160