

Tuesday, February 24th @ 2pm
Schwinger Lounge

“Fortuity in the D1D5 system”

Haoyu Zhang (USC)

Abstract: Recent work has highlighted a sharp distinction among BPS microstates in AdS/CFT at finite N :*fortuitous* states, which cease to be BPS as the gravitational coupling is decreased, in contrast with *monotone* states. Chang and Lin proposed that fortuitous states account for the black hole entropy, while monotone states account for the entropy of smooth horizonless geometries. In this talk, I will test and further refine the fortuity proposal in the D1–D5 system. I will present the evidence and implication of the R-charge concentration conjecture: that all fortuitous states concentrate in a single space of the supercharge cochain complex. I'll also discuss the interplay of fortuity and global symmetry.