Physics Seminar: Surya Raghavendran
Wednesday, April 3·2:00 – 3:00pm

Location: 313

Title: Twisted eleven-dimensional supergravity and exceptional simple infinite dimensional super-Lie algebras

Abstract: I will describe a holomorphic-topological field theory in eleven-dimensions which captures a 1/16-BPS subsector of eleven-dimensional supergravity. Remarkably, symmetries of the theory on flat space and on twisted versions of the $AdS_4 \times S^7$ and $AdS_7 \times S^4$ backgrounds recover three of the five infinite dimensional exceptional simple super-Lie algebras. I will discuss some applications of this fact, including character formulae for indices counting multigravitons and the contours of a program to holographically describe 1/16-BPS local operators in the 6d (2,0) SCFTs of type A_{N-1}. This talk is based on joint work, much in progress, with Ingmar Saberi and Brian Williams.