

Tuesday, April 4 @ 4:00 PM

Physics & Astronomy Building (PAB) 4-330

AdS₄ black holes from M-theory

Chiara Toldo (Columbia University)

This talk deals with AdS black holes arising as solutions of four dimensional supergravity admitting an embedding in M-theory. Supersymmetric AdS₄ black holes with spherical horizon were discovered quite recently and have lately attracted some attention, given that their entropy was successfully reproduced via the computation of the twisted Witten index in ABJM theory. After reviewing recent progress in the analysis of supersymmetric and non supersymmetric configurations, I will discuss some ongoing work on a class of new solutions arising from M-theory on 7d Sasaki-Einstein coset manifolds. Such thermal black holes are characterized by charged scalars and massive vector fields. The analysis of the stability of probes in such a background gives insight on the possible existence of stable of multi-center black holes in anti-de Sitter, relevant for the holographic description of the glass phase transition.