NEW YORK CITY COLLEGE OF TECHNOLOGY
Physics Department
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M-Theory Solutions

Presented by:

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Abstract

I will discuss a class of solutions of M-theory (11-dimensional supergravity). These solutions have half the maximal supersymmetry and a particular metric isometry. The same metric isometry yields a subclass describing the deformation of M2 branes, a subclass describing the deformations of M5 branes by intersecting M2 & M5 branes, and many more solutions depending on the value of a real numerical parameter. From the point of view of the AdS/CFT correspondence (gauge gravity duality) the M2 deformations are dual to a deformation of ABJM theory, the unique maximally symmetric 3D CFT. The other subclass is dual to a deformation of the unknown 6D M5 brane CFT. For generic values of the parameter, the dual is a 2D CFT. I will provide some context and background in M-theory and the gauge gravity duality.