

N=2 seven-dimensional SO(4) gauged supergravity from eleven dimensions

Wednesday, May 20, 2015 3:30 PM (30 minutes)

A consistent reduction ansatz of eleven-dimensional supergravity to $N = 2$ $SO(4)$ seven-dimensional gauged supergravity is constructed. The resulting seven-dimensional theory admits a topological mass term for the three-form field and a maximally supersymmetric AdS_7 critical point. This is in contrast to the gauged supergravity without topological mass admitting a half-supersymmetric domain wall vacuum. The AdS_7 critical point corresponds to $N = (1, 0)$ superconformal field theory in six dimensions according to the AdS/CFT correspondence. The reduction ansatz is obtained from a truncation of the consistent S^4 reduction giving rise to the maximal $N = 4$ $SO(5)$ gauged supergravity, so the consistency is guaranteed by the consistency of the S^4 reduction.

Primary author: Dr KARNDUMRI, Parinya (Department of Physics, Faculty of Science, Chulalongkorn University)

Presenter: Dr KARNDUMRI, Parinya (Department of Physics, Faculty of Science, Chulalongkorn University)

Session Classification: High-Energy and Particle Physics

Track Classification: High Energy and Particle Physics