

Type IIB gauged supergravities and M2-brane twisted torus bundles

Wednesday 17 January 2024 12:00 (30 minutes)

In this talk, we propose that the M2-brane with fluxes and monodromy is able to reproduce at low energies the type IIB gauged supergravities in 9d. The worldvolume description of these M2-branes with nonvanishing winding on a torus is known. They have good quantum properties, such as the discreteness of the supersymmetric spectrum. Their global description is given in terms of twisted torus bundles with monodromy contained in $SL(2, Z)$. We found a relation between the equivalence classes of twisted torus bundles and the gauging of the symmetry on type IIB supergravities in 9d. We briefly mentioned the relation of this quantum description to other ones given previously in terms of F-theory.

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