

## Abstract

After reviewing the main mathematical tools relevant to the formulation of a supergravity theory, both in its ungauged and gauged version, two specific examples are presented. In the first example, the  $D = 4$   $\mathcal{N} = 3$   $SO(3) \times SU(3)$  gauged model inspired by the  $AdS_4 \times N^{0,1,0}$  compactification of M-theory is constructed. Two inequivalent  $(SU(1,1)/U(1))^3$  truncations, obtained from singlets with respect to two different discrete groups, are discussed in detail. In the second example, a maximal  $D = 4$   $\mathcal{N} = 8$   $SO(1,1) \times SO(6) \ltimes \mathbb{R}^{12}$  dyonically gauged supergravity is studied. An  $\mathcal{N} = 1$  truncation with respect to a  $\mathbb{Z}_2^3$  discrete group is discussed. Both models share the property of having families of perturbatively stable vacua parameterized by supersymmetry breaking flat directions corresponding holographically to perturbatively stable non-supersymmetric conformal manifolds. In the latter example, a two-parameter family is uplifted to type IIB supergravity and pieces of evidence for non-perturbative stability of the conformal manifold are presented.