

Ryosuke Suda "Model building by Coset space dimensional reduction using eight-dimensional coset spaces"

Wednesday, 8 November 2023 10:50 (25 minutes)

We investigate the twelve-dimensional gauge-Higgs unification models with an eight-dimensional coset space. For each model, we apply the coset space dimensional reduction procedure and examine the particle contents of the resulting four-dimensional theory. Then, some twelve-dimensional $SO(18)$ gauge theories lead to models of the $SO(10) \times U(1)$ grand unified theory in four dimensions, where fermions of the Standard Model appear in multiple generations along with scalars that may break the electroweak symmetry. The representations of the obtained scalars and fermions are summarized. (arXiv:2305.01421 [hep-ph])

Session Classification: Short talks