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The Hierarchy Problem within models of Large Extra Dimensions

## Abstract

In this talks, an introduction to the basic models of Large Extra dimensions will be presented, followed by a description of the Gauge-Higgs unification mechanism within these models. Starting with an Einstein-Yang-Mills theory in 4+d dimensions, it is shown that the Higgs mass can protected from quadratic divergences by an exact gauge symmetry at energies beyond the cut-off, when identified with the extra components of the gauge field. The proposed model also provides a link between fermion chirality and electroweak symmetry breaking in four dimensions.