27th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY2019)

Contribution ID: 64 Type: Oral

Supersymmetric Super-GUT Models

Monday, 20 May 2019 16:40 (20 minutes)

Although SUSY is less natural than hoped, it is still able to explain several correlations beyond the standard model. A persistently appealing feature of supersymmetry is that it leads to gauge coupling unification, which suggests that the forces unify. For even minimal supersymmetric SU(5) unification, there are previously unexplored avenues. I will focus on the effect of pushing the boundary scale of supersymmetric models beyond the GUT scale in the context of minimal SU(5) unification. If right-handed neutrinos are included in these models, CP and flavor violation in the low-scale is unavoidable and could be seen in future experiments looking for EDM's and mu-> e gamma. For pure gravity mediation models, including higher dimensional operators can lead to dimension-six proton decay visible at Hyper-Kamiokande and to new possible dark matter candidates.

Primary author: Prof. EVANS, Jason L. (Korea Institute for Advanced Study)

Presenter: Prof. EVANS, Jason L. (Korea Institute for Advanced Study)

Session Classification: Unification of Forces

Track Classification: Unification of Forces