

# PASCOS 2016: 22nd International Symposium on Particles, Strings and Cosmology



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## Gauge Coupling Unification in Gauge-Higgs Grand Unification

*Wednesday 13 July 2016 10:40 (20 minutes)*

Recently an  $SO(11)$  gauge-Higgs grand unified theory (GHGUT) in 5D Randall-Sundrum warped space was proposed in PTEP(2015)111B01(arXiv:1504.03817). In this framework, the 4D SM bosons and fermions are naturally realized by the  $SO(11)$  bulk gauge boson and  $SO(11)$  spinor bulk fermions, respectively. GHGUT leads to gauge coupling unification, so it is inevitable to discuss the renormalization group evolution for SM gauge coupling constants because the value of the Weinberg angle from GUT prediction does not agree with its low-energy observation data. In this talk, I will discuss SM gauge coupling unification in the  $SO(11)$  GHGUT by using 4D renormalization group equations. This talk is based on PTEP(2016)043B02(arXiv:1512.05559).

### Summary

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