

# International Workshop on Grand Unified Theories: Current Status and Future Prospects



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## Building a model by coset space dimensional reduction using 10 dimensional coset spaces

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Most of the free parameters in the SM are contained in the Higgs potential terms and the Yukawa coupling terms, i.e the Higgs associated terms. This fact suggests that if the origin of the Higgs particle results in a more fundamental model, this model would be described by fewer free parameters. One of the candidates of the model that gives origin of the Higgs particles is a gauge-Higgs unification model. Among these ideas we are interested in gauge-Higgs unification models based on the coset space dimensional reduction(CSDR) scheme. In CSDR, we assume the fundamental model is gauge theory in higher dimensional space-time that has extra dimensions of coset space structure. we investigate models based on CSDR scheme using 10 dimensional coset spaces.

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