Towards Gauge coupling unification in 3 − 3 − 3 − 1 Models

Chandan Hati

We will discuss the aspects of gauge coupling unification for a realistic theory based on 3-3-3-1 gauge group which requires the number of families to match the number of colors. In the most simple realization neutrino masses arise from a canonical seesaw mechanism. To drive the symmetry breaking to the Standard Model one can also introduce either a left-right symmetric theory or a 3-3-1 symmetry as an intermediate symmetry. Such scenarios can harbor a plethora of interesting new physics scenarios.