

Renormalization of minimally doubled fermions

Friday 23 July 2010 11:30 (30 minutes)

Minimally doubled fermions have been proposed as a strictly local discretization of the QCD quark action, which also preserves chiral symmetry at finite cut-off. We study the renormalization and mixing properties of two particular realizations of minimally doubled fermions in lattice perturbation theory at one loop. We also construct conserved axial-vector currents, which have a simple form involving only nearest-neighbors sites.

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