Lattice2010



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Pairs of massless quarks on the lattice from staggered fermions

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A version of overlap fermions built from staggered rather than Wilson fermions is presented. It has the remarkable property of reducing the 4 flavors (tastes) of the staggered fermion to two flavors, which can be taken as the up and down quarks in Lattice QCD. The exact flavored chiral symmetry of the staggered fermion gets converted into an unflavored Ginsparg-Wilson chiral symmetry of the new overlap fermion, which also has pairs of exact chiral zero-modes satisfying the Index Theorem. A domain wall formulation giving a truncation of this overlap construction is also obtained.

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talk

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