Lattice2010



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## Classification and Generalization of Minimal-doubling actions

Friday, 18 June 2010 15:50 (20 minutes)

There is a chance that Minimal-doubling fermion actions will remove a numerical expense in Lattice QCD simulations although all the known examples so far lack sufficient discrete symmetries for a good continuum limit. In this talk we discuss classification and unification of Minimal-doubling actions to search for possibiliy of their application. In this context we propose a new class of Minimal-doubling actions, which might possess higher discrete symmetry than Karsten-Wilczek or Borici-Creutz actions.

We also study generalization of Minimal-doubling actions to higher dimensions. We show that the parameter range within which the number of doublers becomes minimal gets narrower with the dimension going up.

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talk

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