

Dynamical overlap fermions at fixed topology

Presenter: Shoji Hashimoto (KEK)

JLQCD collaboration: S. Hashimoto, S. Aoki, H. Fukaya, K. Kanaya, T. Kaneko, H. Matsufuru, M. Okamoto, T. Onogi, N. Yamada

Abstract: We propose a lattice action that preserves topological charge during continuous (or small step) evolution of gauge variables. Using this action, the near-zero modes of H_W are suppressed and the locality of the overlap-Dirac operator constructed from H_W is guaranteed. The action is used for dynamical overlap fermion simulations by the JLQCD collaboration. We discuss on the finite volume effect due to fixed topology.