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A construction of lattice chiral gauge theories

Rajamani Narayanan and Herbert Neuberger *

*School of Natural Sciences, Institute for Advanced Study,
Olden Lane, Princeton, NJ 08540*

Abstract

Path integration over Euclidean chiral fermions is replaced by the quantum mechanics of an auxiliary system of non-interacting fermions. Our construction avoids the no-go theorem and faithfully maintains all the known important features of chiral fermions, including the violation of some perturbative conservation laws by gauge field configurations of non-trivial topology.

* Permanent Address: Department of Physics and Astronomy, Rutgers University, Piscataway, NJ 08855-0849