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## Duals of lattice QCD in the presence of dynamical fermions

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A various approaches to construction of dual formulations of non-abelian lattice gauge theories are reviewed. The conventional approach based on the character expansion is elaborated for  $SU(2)$  LGT with the staggered fermions. In the case of  $U(N)$  LGT we use the theory of the Weingarten functions to construct a dual formulation. Possible applications related to the finite-density QCD are discussed.

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