

Symmetric mass generation in a gauged system

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We study a model of four reduced staggered fermions transforming in the bifundamental representation of an $SU(2) \times SU(2)$ symmetry group.

Single site mass terms are prohibited by this symmetry but a particular four fermi term is allowed. We gauge one of the $SU(2)$ subgroups and examine the phase structure of the model. We find evidence that the theory forms a symmetric four fermion condensate at strong coupling. The model generalizes a $SO(4)$ invariant four fermion model that has received recent attention.

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