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Properties of renormalization group flow in the neighborhood of Gaussian fixed point

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Abstract

We investigate the dynamics of the renormalization group transformation in the fermionic hierarchical model, given by the Lagrangian. We construct the invariant neighborhood of the Gaussian fixed point in the upper half-plane $g > 0$. We describe the subsets of the points of this neighborhood tending to the Gaussian fixed point under the iterations of the renormalization group transformation from the left and from the right. © 2014 Allerton Press, Inc.

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Keywords

fermionic hierarchical model, Gaussian fixed point, renomalization group