

Impurity-induced localized modes in parallel Josephson junction arrays

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We consider inhomogeneous underdamped one-dimensional parallel Josephson junction arrays. Inhomogeneity is introduced either as a non-uniformly applied dc bias current or as variations in the junctions' critical currents. We investigate the frequency of the localized modes induced by the presence of such inhomogeneities, in particular the frequency's dependence on the parameters that characterise inhomogeneities.

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