

Weak disorder in the Kronig-Penney model: stability of the absolutely continuous spectrum and eigenvalues in gaps

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One-dimensional Schrödinger operator with δ -interactions on a discrete set X is considered. Conditions for the stability of the essential and the absolutely continuous spectra under perturbations of the set X are given. Using Schatten-von Neumann estimates of the resolvent difference of perturbed and unperturbed operator we compare their generalized discrete spectra. The results are applied to the investigation of eigenvalues in gaps for the Kronig-Penney model with a weak disorder.