

Asymptotic stability of soliton for discrete nonlinear Schrödinger equation on one-dimensional lattice

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Abstract

In this talk we give a proof of asymptotic stability of soliton for discrete nonlinear Schrödinger equation near anti-continuous limit. Our novel insight is that the analysis of linearized operator, usually non-symmetric, can be reduced to a study of simple self-adjoint operator almost like the free discrete Laplacian restricted on odd functions.

This talk is based on the joint work with Masafumi Yoneda (Chiba University)