学术报告

Continuum limit for discrete NLS

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摘要： In this talk, I will discuss recent results on the continuum limit of some differential-difference equations. Using the Ablowitz-Ladik system, an integrable discretization of the nonlinear Schrodinger equation, as our prototypical example, we show that solutions to the discrete model converge to solutions of the cubic NLS for merely L^2 initial data. Furthermore, we consider initial data for this lattice model that excites Fourier modes near both critical points of the discrete dispersion relation and demonstrate convergence to a decoupled system of NLS. We achieve this through a new scheme that synthesizes compactness and Strichartz-based techniques. The idea of almost conservation laws will then be introduced to complete the proof of other non-integrable lattice approximations to NLS.

时间：**2023年7月14日 16:00**

地点：**文萃楼E1008**

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