



偏微分方程及其应用中心

学术报告

报告题目: Spectral analysis of periodic b-KP equation under transverse perturbation

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时间: 2024 年 1 月 24 日 (周三) 10:00-11:00

地点: 数学院南楼 613

摘要: The b-family-Kadomtsev-Petviashvili equation (b-KP) is a two dimensional generalization of the b-family equation. In this talk, we give the spectral stability of the one-dimensional small-amplitude periodic traveling waves with respect to two-dimensional perturbations which are either co-periodic in the direction of propagation, or nonperiodic (localized or bounded). We perform a detailed spectral analysis of the linearized problem associated to the above mentioned perturbations, and derive various stability and instability criteria which depends in a delicate way on the parameter value of b , the transverse dispersion parameter σ , and the wave number k of the longitudinal waves.