学术报告

New approach to Scattering: On the Asymptotic states of Nonlinear Dispersive and Hyperbolic equations with General Data

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摘要： I will present a new approach to finding the asymptotic states of Nonlinear Wave Equations with general initial data.In particular we find for a large class of equations that all asymptotic states are linear combinations of free wave, localized part(solitons, breathers..) and a possibility of self-similar solutions as well in some cases. These results hold for initial data for which the H^1 Sobolev norm (the energy norm) is uniformly bounded in time.This answers the question of Asymptotic Completeness for a large class of equations, including for the first-time equations with time dependent potentials.These are joint works with Baoping Liu (Peking Univ) and Xiaoxu Wu (Rutgers).

个人简介： Avraham Soffer 教授是 Rutgers 大学数学系杰出(Distinguished)教授,是 Alfred P. Sloan 奖获得者、国际数学家大会 45 分钟邀请报告人。他主要研究领域是数学物理和非线性偏微分方程,在量子多体散射、非线性孤立子(Soliton)稳定性研究中做出杰出贡献,已完成论文 90 余篇,其中在国际数学顶级杂志(如 Ann. Math, Invent. Math, CPAM,)发表论文多篇。

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