



西北大学
NORTHWEST UNIVERSITY

非线性科学研究中心综合报告会

Energy transfer and Generalized Fermi's Golden Rule in Hamiltonian nonlinear Klein-Gordon equations

报告人：雷震教授（厦门大学数学科学学院副院长）

报告时间：2023年3月3日 上午 10:00-11:00

报告摘要：More than 20 years ago, Soffer-Weinstein considered a class of nonlinear Klein-Gordon equations with nice potentials. For the first time they proved that spatially localized and time-periodic solutions of the linear problem are destroyed by generic nonlinear Hamiltonian perturbations via slow radiation of energy to infinity, via energy transfer from the discrete to continuum modes, under the condition that the discrete modes are close to the continuous spectral modes. Since then, a long-standing open question is to study the the corresponding problem with small eigenvalues, which was also raised in the paper of Soffer-Weinstein 1999. In this talk, we will report our recent result on this problem which settles the above open question. This is a joint work with my students Jie Liu and Zhaojie Yang.

报告人简介：

雷震，复旦大学数学科学学院副院长，国家杰出青年科学基金获得者、国家级人才计划入选者。长期在流体力学领域从事前沿基础理论研究，提出了“强零条件”的概念，发现了不可压流体的非线性内蕴结构并独自建立了不可压弹性与粘弹方程组解的整体稳定性理论，在不可压 NS 方程组等领域有杰出贡献，获得了菲尔茨奖得主 Bourgain、陶哲轩、阿贝尔奖及沃尔夫奖得主 Sinai 等国际数学大家的高度评价。2020 年获国家自然科学奖二等奖(排名第 1)，2022 年荣获第四届“科学探索奖”。

欢迎各位老师和同学参加！

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2023年3月2日