数学与系统科学研究院

计算数学所学术报告

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报告题目：

The application of the theory of trigonal curves to the discrete coupled nonlinear Schrödinger hierarchy

邀请人：　常向科 副研究员

报告时间：**2019** 年 **12** 月 **7** 日（周六）

下午 **15:00-16:00**

报告地点：　数学院南楼二层

202 教室

Abstract:

The discrete coupled nonlinear Schrödinger (DCNLS) hierarchy associated with a discrete 3\times 3 matrix spectral problem is derived, which are composed of the positive and negative flows. Utilizing the characteristic polynomial of Lax matrix for the DCNLS hierarchy, we introduce a trigonal curve with three infinite points and three zero points, from which we establish the associated Baker–Akhiezer function and meromorphic functions. The DCNLS equations are decomposed into a system of Dubrovin-type ordinary differential equations. Using the theory of the trigonal curve and the properties of the three kinds of Abel differentials, we obtain the explicit theta function representations of the Baker–Akhiezer function, the meromorphic functions, and in particular, that of solutions for the entire DCNLS hierarchy.

欢迎大家参加！