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 Riemann theta function solutions for the hierarchy of Bogoyavlensky lattices

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晚上 **20:00-21:00**

报告地点：　数学院南楼七层

702 教室

Abstract:

Starting with a discrete 3×3 matrix spectral problem, the hierarchy of Bogoyavlensky lattices which are pure differential-difference equations are derived with the aid of the Lenard recursion equations and the stationary discrete zero-curvature equation. By using the characteristic polynomial of Lax matrix for the hierarchy of stationary Bogoyavlensky lattices, we introduce a trigonal curve of arithmetic genus m−1 and a basis of holomorphic differentials on it, from which we construct the Riemann theta function of the trigonal curve, the related Baker–Akhiezer function, and an algebraic function carrying the data of the divisor. Based on the theory of trigonal curves, the Riemann theta function representations of the Baker–Akhiezer function, the meromorphic function, and in particular, that of solutions of the hierarchy of Bogoyavlensky lattices are obtained.

欢迎大家参加！