RIMS Kôkyûroku Bessatsu B94

Mathematical structures of integrable systems, their developments and applications

edited by Keisuke Matsuya

Mathematical structures of integrable systems, their developments and applications

August 8〜10, 2022

edited by Keisuke Matsuya

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Research Institute for Mathematical Sciences

Kyoto University, Kyoto, Japan

Preface

This volume is the proceedings of the workshop "Mathematical structures of integrable systems, their developments and applications" held from August 8 to August 10, 2022. This workshop was supported by the joint research program of the Research Institute for Mathematical Sciences (RIMS), an International Joint Usage/Research Center located in Kyoto University. The workshop was held at RIMS. Since the COVID-19 pandemic was not yet over, Zoom video meeting system was also used to hold the workshop.

The aim of the workshop was to connect researchers working on classical or quantum integrable systems with professions working on various mathematical objects such as applied mathematics, discrete differential geometry, blow-up of solutions for partial differential equations, etc. There were 13 lectures and 88 participants during the workshop. This volume collects 6 contributions from the speakers. All the papers have been refereed and are in their final forms.

I would like to express my gratitude to all participants, invited speakers, and RIMS staff for their kind cooperation under these difficult circumstances. I also appreciate the helps of anonymous referees.

September, 2023
Keisuke Matsuya

Program

RIMS Workshop 2022
Mathematical structures of integrable systems, their developments and applications
2022 年度 RIMS 共同研究（公開型）
「可積分系数理の発展とその応用」

August 8 (Mon)

13:40–14:30　大久保 直人
非正規団代数によるワイル群の実現とタウ関数

14:40–15:30　川上 拓志
高次元の離散 Painlevé 型方程式について

15:50–16:40　岩崎 雅史
シフト付き LR 変換から見た離散可積分系と箱玉系の広がり

August 9 (Tue)

9:30–10:20　東 康平
特異積分核をもつ非線形可積分系について

10:30–11:20　佐々木 多希子
異なる伝播速度をもつ半線形波動方程式系の爆発曲線の特異性について

11:40–12:30　川原田 茜
特異関数によるセル・オートマトンの軌道の特徴付け

13:40–14:30　大森 祥輔
低次元トロピカル差分方程式の力学的性質

14:40–15:30　松永 秀章
線形差分方程式の漸近安定性における時間遅れの影響

15:50–16:40　梶原 健司
可積分系による幾何学的形状生成：弾性曲線・対数型美的曲線から「美的曲面」へ

August 10 (Wed)

10:30–11:20　延東 和茂
確率セルオートマトンの漸近解と超幾何関数

11:30–12:20　礒島 伸
遷移図による符号付き超離散系の解析

13:40–14:30　丸野 健一
ホドグラフ変換が関わる非線形微分方程式の可積分離散化

14:40–15:30 辻本 諭

一般化固有値問題に付随する力学系と直交関数系について

Contents

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