Research Report（April, 2017 - March, 2023）

In the SGU course of Mathematical Physical Science: April 2017-March 2023

Conferring university	Degree name (by completing a course / by thesis only)	Date of conferment
Waseda University	Doctor of Science	03 23, 2023

Enrollment from April 2017 | Department of Pure and Applied Mathematics | Ryosuke ODOI

I. List of Papers

Ryosuke Odoi, Symplectic aspects of the tt*-Toda equations, J. Phys. A 55 (2022), no. 16, article 165201

II. Record of Awards

III. List of Talks

大土井 亮祐（Ryosuke Odoi）, Poisson manifolds and Ginzburg-Weinstein diffeomorphisms 1, Koriyama Geometry and Physics Days 2017, 日本大学工学部, 2017/02

大土井 亮祐、幾何学的手法による tt*戸田方程式の研究、学生力学系の会、京都大学、2018/10

Ryosuke Odoi, Symplectic structure of a space of harmonic maps, Variational problems in Geomoetry and Mathematical Physics, University of Leeds, 2019/01

大土井 亮祐、tt*戸田方程式と線型常微分方程式のモノドロミーデータ、早稲田大学数学若手異分野交流会、早稲田大学、2019/03

Ryosuke Odoi, Symplectic aspects of the tt*-Toda equations, Short course on Nonabelian Hodge theory, 早稲田大学（オンライン）, 2021/07

大土井 亮祐, Symplectic aspects of the tt*-Toda equations and the constant problem, Koriyama Geometry and Physics Days 2021, 日本大学工学部, 2021/11

Ryosuke Odoi, The constant problem of the tt*-Toda equations, Integrable Systems and Random Matrix Theory seminar, University of Michigan （オンライン）, 2022/02

Ryosuke Odoi, Symplectic approach to the tt*-Toda equations and its application, The 4th International Workshop Geometry of Submanifolds and Integrable Systems, 大阪市立大学（ハイブリッド）, 2022/02

Ryosuke Odoi, Symplectic geometry of the tt*-Toda equations and its application to the constant problem, Symplectic geometry and its application, 早稲田大学, 2022/10

IV. Research Results in AY 2022

Under the supervision of Professor Alexander Its (IUPUI), I studied a Riemann-Hilbert problem to solve the constant problem for local solutions of the tt*-Toda equations.

V. Summary (From April 2017 to May 2023)

I solved the constant problem for the global solutions. I have visited IUPUI twice, for seven months, with the financial support from SGU. I deeply thank the supporters and the staffs.