

## Research Report (April, 2018 - March, 2019)

Enrollment from  
April 2017

Department of Pure and Applied Mathematics Ryosuke ODOI

### **I. List of Papers**

None

### **II. List of Talks**

Ryosuke Odoi, “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, Kyoto University, October 13-14, 2018

Ryosuke Odoi, “Symplectic structure of a space of harmonic maps”, Variational problems in Geometry and Mathematical Physics, University of Leeds, January 7-10, 2019

Ryosuke Odoi, “ $tt^*$  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, Waseda University, March 22, 2019

### **III. Research Results in AY2018**

I found a geometric construction of a symplectic form related to the holomorphic data of the  $tt^*$ -Toda equations in the sense of Guest-Its-Lin (arXiv:1707.00259), and I studied a geometric construction of a symplectic form related to the monodromy data and a relation between two symplectic forms related to the asymptotic data and the monodromy data.

### **IV. Research Plan for AY2019**

I will find applications of what I studied about the relation between symplectic forms related to asymptotic data and monodromy data. I study further geometric constructions of a symplectic form related to monodromy data.