

2018 年度 研究活動報告

Articles

(in preparation)

Talks

2018/5 "The tt^* -Toda equations", Leeds University (UK), Yorkshire and Durham Geometry Day

2018/5 "The Coxeter Plane and the tt^* -Toda equations", ETH Zurich (Switzerland), Symplectic Geometry Seminar

2018/5 "Some geometric applications of meromorphic o.d.e. with irregular singular points", University of Hamburg (Germany), Pure Mathematics Colloquium

2018/6 "The enhanced Coxeter Plane - an application of integrable systems to Lie groups", University of Florence (Italy), The 5th workshop "Complex Geometry and Lie Groups"

2018/6 "The tt^* -Toda equations", University of Stuttgart (Germany), Geometry and Topology Seminar

2018/10 "The enhanced Coxeter Plane", University of Mannheim (Germany), Geometry Seminar

2018/11 "Quantum cohomology and reality", ETH Zurich (Switzerland), Symplectic Geometry Seminar

Conferences co-organized

UK-Japan Winter School on Variational problems in Geometry and Mathematical Physics, 7-10 January 2019, University of Leeds, UK

Research summary

I am studying Lie-theoretic and symplectic properties of moduli spaces of solutions of the tt^* -Toda equations. This is a nonlinear p.d.e. which is important in geometry (harmonic maps) and supersymmetric quantum field theory (quantum cohomology). In joint work with Nan-Kuo Ho (National Tsing-Hua University, Taiwan) I have computed the Stokes data of the global solutions of the tt^* -Toda equations in Lie-theoretic terms.