

Jia-Ming (Frank) Liou

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National Cheng Kung University
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Personal

- Date of Birth: April 30th, 1980
- Birth Place: Taichung, Taiwan
- Citizenship: Taiwan
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Education

- B.S. Mathematics, National Tsing-Hua University, Taiwan, 2002.
- M.S. Mathematics, National Tsing-Hua University, Taiwan, 2004.
- Ph.D. Mathematics, University of California, Davis 2011.

Employment

National Cheng Kung University

- Assistant Professor, Aug 2013-

Einstein institute of Mathematics, Hebrew University Of Jerusalem

- Postdoctoral Position, Sep 2012–July 2013

Institut Des Hautes Études Scientifiques, Paris France, 2012

- Visiting Position, July, 2012–Aug, 2012.

Max-Planck Institut für Mathematik, Bonn Germany, 2011-2012

- Postdoctoral Fellow, Sep, 2011– June, 2012.

National Tsing-Hua University, Taiwan, 2006-2007

- Teaching Assistant, Department of Mathematics, Aug, 2006 –July, 2007
- Research Assistant, National Center for Theoretical Science, Taiwan, Feb, 2006– July, 2006

Armed Force, Taiwan, 2004-2006

- Second lieutenant as a Platoon leader, Oct, 2004–Jan, 2006

Research

Research Interest

- Primary: Mathematical Physics, Complex Algebraic Geometry
- Secondary: Differential Geometry, Topology, Analysis, Homological Algebra.

Master Thesis

- On the inverse spectral problem of the string with a piecewise constant density (under C.L. Shen).

Ph.D Thesis

- Topology of the Krichever Map (under A. Schwarz).

Publication List

Papers and Preprint

1. Moduli Spaces and Grassmannian, *Lett. Math. Phys.*, 103, 585-603 (2013), arXiv:1111.1649 (with A. Schwarz).
2. Equivariant Cohomology of Infinite-dimensional Grassmannian and Shifted Schur Functions, *Math. Res. Lett.* 19, no.4, 1-10 (2011), arXiv:1201.2554 (with A. Schwarz).
3. Weierstrass cycles and tautological rings in various moduli space of algebraic curves, *J. Fixed Point Theory Appl.* 17 (2015) 209-219, arXiv:1308.6374 (with A. Schwarz, R. Xu)
4. Weierstrass cycles in moduli spaces and the Krichever Map, arXiv:1207.0530. (submitted with A. Schwarz)
5. Explicit solutions to the mean field equations on hyperelliptic curves of genus two, arXiv: 1603.03291 (submitted).

Honors, Awards, & Fellowships

- UCD & Humanities Graduate Research Award, 2010.
- Henry L. Alder Prize for Excellence in Teaching 2009 (awarded by the department of Mathematics, University of California, Davis).
- Ministry of Education Scholarship (Taiwan Scholar Program), 2007-2010.
- Professor Hsu Cheng-Rong Scholarship (awarded by the department of Mathematics, National Taiwan University), 2001, 2003
- Chow Hung-Ching Scholarship (awarded by the institute of Mathematics, Academia Sinica, Taiwan) 2002.

Invited Talks

- Weierstrass cycles and Tautological Rings in moduli space of curves, Younger Generation in Algebraic Geometry and Complex Geometry 2016
- Grassmannian String Theory, Conference on Geometry, Topology and Physics, NCTS 2015
- Moduli space of curves and infinite dimensional Grassmannian, New developments in algebraic geometry, NCTS 2014.
- Algebraic Theory of K.P. equation, department of mathematics HKUST, 2014.
- Weierstrass cycles in Moduli spaces of curves, Department of mathematics, National Taiwan University, Oct 2013.
- Partial Differential equations and algebraic geometry, Department of Applied Mathematics, National University of Kaohsiung, Sep 2012
- Moduli space of curves and infinite dimensional Grassmannian, M.P.I.M., Bonn, Germany, Feb 2012.

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