

## List of Publications

Chiu-Chu Melissa Liu

January 2012

### Published Papers.

- (1) Sheldon Katz, Chiu-Chu Melissa Liu, “Enumerative geometry of stable maps with Lagrangian boundary conditions and multiple covers of the disc,” *Adv. Theor. Math. Phys.* **5** (2001), no. 1, 1–49.
- (2) Chiu-Chu Melissa Liu, “Moduli of J-holomorphic curves with Lagrangian boundary conditions and open Gromov-Witten invariants for an  $S^1$ -equivariant pair,” Thesis (Ph.D.)-Harvard University, 2002, [arXiv:math.SG/0210257](https://arxiv.org/abs/math/0210257).
- (3) Chiu-Chu Melissa Liu, Shing-Tung Yau, “Positivity of quasilocal mass,” *Phys. Rev. Lett.* **90** (2003), no. 23, 231102, 4pp.
- (4) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “Connected components of the space of surface group representations,” *Int. Math. Res. Not.* **2003**, no. 44, 2359–2372.
- (5) Chiu-Chu Melissa Liu, Kefeng Liu, Jian Zhou, “A proof of a conjecture of Mariño-Vafa on Hodge integrals,” *J. Differential Geom.* **65** (2003), no. 2, 289–340.
- (6) Chiu-Chu Melissa Liu, Kefeng Liu, Jian Zhou, “On a proof of a conjecture of Mariño-Vafa on Hodge integrals,” *Math. Res. Lett.* **11** (2004), no. 2, 259–272.
- (7) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “On the connectedness of moduli spaces of flat connections over Compact Surfaces,” *Canad. J. Math.* **56** (2004), no. 6, 1228–1236.
- (8) Chiu-Chu Melissa Liu, Shing-Tung Yau, “Liu and Yau reply: ‘Comment on: Positivity of Quasilocal mass’,” *Phys. Rev. Lett.* **92** (2004), no. 25, 259002, 1p.
- (9) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “Connected components of the space of surface group representations II,” *Int. Math. Res. Not.* **2005**, no.16, 959–979.
- (10) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “On the connectedness of the spaces of surface group representations,” *Noncommutative geometry and physics*, 199–214, World Sci. Publ., Hackensack, NJ, 2005.
- (11) Chiu-Chu Melissa Liu, Shing-Tung Yau, “Positivity of quasi-local mass II,” *J. Amer. Math. Soc.* **19** (2006), no. 1, 181–204.
- (12) Chiu-Chu Melissa Liu, Kefeng Liu, Jian Zhou, “Mariño-Vafa formula and Hodge integral identities,” *J. of Algebraic Geom.* **15** (2006), 379–398.
- (13) Dagan Karp, Chiu-Chu Melissa Liu, Marcos Mariño, “The local Gromov-Witten invariants of configurations of rational curves,” *Geom. Topol.* **10** (2006), 115–168.
- (14) Chiu-Chu Melissa Liu, “Formulae of one-partition and two-partition Hodge integrals,” *Geom. Topol. Monogr.* **8** (2006), 105–128.
- (15) Chiu-Chu Melissa Liu, Kefeng Liu, Jian Zhou, “A formula of two-partition Hodge integrals,” *J. Amer. Math. Soc.* **20** (2007), no.1, 149–184.
- (16) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “Yang-Mills connections on nonorientable surfaces,” *Comm. Anal. Geom.* **16** (2008), no.3, 617–679.

- (17) Jun Li, Chiu-Chu Melissa Liu, Kefeng Liu, Jian Zhou, “A mathematical theory of the topological vertex,” *Geom. Topol.* **13** (2009), 527–621.
- (18) Nan-Kuo Ho, Chiu-Chu Melissa Liu, *Yang-Mills connections on orientable and nonorientable surfaces*, *Mem. Amer. Math. Soc.* **202** (2009), no.949, viii+98 pp.
- (19) Nan-Kuo Ho, Chiu-Chu Melissa Liu, Daniel Ramras “Orientability in Yang-Mills theory over nonorientable surfaces,” *Comm Anal. Geom.* **17** (2009), no.5, 903–954.
- (20) Elizabeth Gasparim, Chiu-Chu Melissa Liu, “The Nekrasov conjecture for toric surfaces,” *Comm. Math. Phys.* **293**, 661-700 (2010).
- (21) Chiu-Chu Melissa Liu, “Gromov-Witten invariants of toric Calabi-Yau threefolds,” *Handbook of geometric analysis*, Vol. 2, 139–159, *Adv. Lect. Math. (ALM)* **13**, Higher Education Press, 2010.
- (22) Chiu-Chu Melissa Liu, “Lectures on the ELSV formula,” *Transformation Groups and Moduli Spaces fo Curves*, 195–216, *Adv. Lect. Math. (ALM)* **16**, Higher Education Press, 2010.
- (23) Chiu-Chu Melissa Liu, “Gromov-Witten theory of Calabi-Yau 3-folds,” 497–512, *Proceedings of the International Congress of Mathematicians*, Hyderabad, India, 2010.
- (24) Bohan Fang, Chiu-Chu Melissa Liu, David Treumann, Eric Zaslow, “The Coherent-Constructible Correspondence and Homological Mirror Symmetry for Toric Varieties,” 3–37, *Geometry and Analysis Vol. 2*, *Adv. Lect. Math (ALM)* **18**, Higher Education Press, 2010.
- (25) Bohan Fang, Chiu-Chu Melissa Liu, David Treumann, Eric Zaslow, “The coherent-constructible correspondence and Fourier-Mukai transforms,” *Acta Math. Sin. (Engl. Ser.)* **27** (2011), no.2, 275–308.
- (26) Nan-Kuo Ho, Chiu-Chu Melissa Liu, “Anti-perfect Morse stratification,” *Selecta Math. (N.S.)* **17** (2011), no. 2, 505–532.
- (27) Bohan Fang, Chiu-Chu Melissa Liu, David Treumann, Eric Zaslow, “A categorification of Morelli’s theorem,” *Invent. Math.* **186** (2011), no.1, 79-114.
- (28) Bohan Fang, Chiu-Chu Melissa Liu, David Treumann, Eric Zaslow, “T-duality and homological mirror symmetry for toric varieties,” *Adv. Math.* **229** (2012), 1873-1911.

**Accepted Paper.**

- (29) Chiu-Chu Melissa Liu, “Localization in Gromov-Witten theory and orbifold Gromov-Witten theory,” [arXiv:1107.4712](https://arxiv.org/abs/1107.4712), to appear in *Handbook of Moduli*.

**Preprints.**

- (30) Bohan Fang, Chiu-Chu Melissa Liu, David Treumann, Eric Zaslow, “The coherent-constructible correspondence for toric DM stacks,” [arXiv:0911.4711v2](https://arxiv.org/abs/0911.4711v2).
- (31) Bohan Fang, Chiu-Chu Melissa Liu, “Open Gromov-Witten invariants of toric Calabi-Yau 3-folds,” [arXiv:1103.0693](https://arxiv.org/abs/1103.0693).
- (32) Chiu-Chu Melissa Liu, Florent Schaffhauser, “Yang-Mills equations over Klein surfaces,” [arXiv:1109.5164](https://arxiv.org/abs/1109.5164).