

Dawei Chen

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PERSONAL

Born Feb 1981, Qingdao, China. Chinese citizen.

EDUCATION

Ph.D. in Mathematics Harvard University Jun 2008
B.S. in Mathematics Peking University Jul 2003

APPOINTMENTS

Research Assistant Professor	University of Illinois at Chicago	Fall 2008 – Summer 2011
Postdoc Fellow	Mathematical Sciences Research Institute	Spring 2009
Liftoff Fellow	Clay Mathematics Institute	Summer 2008

RESEARCH INTERESTS

Algebraic geometry, especially the geometry of moduli spaces and applications to combinatorics, dynamics, number theory and mathematical physics.

PUBLICATIONS

- Moduli of generalized line bundles on a ribbon (with J. Kass), preprint.
- Non-varying sums of Lyapunov exponents of Abelian differentials in low genus (with M. Möller), preprint.
- Covers of the projective line and the moduli space of quadratic differentials, preprint.
- Surfaces with big anticanonical class (with C. Schnell), preprint.
- Detaching embedded points (with S. Nollet), *Algebra & Number Theory*, to appear.
- Square-tiled surfaces and rigid curves on moduli spaces, *Adv. Math.*, to appear.
- Hilbert scheme of a pair of codimension two linear subspaces (with I. Coskun and S. Nollet), *Comm. Algebra*, to appear.
- Towards Mori's program for the moduli space of stable maps (with I. Coskun and an appendix by C. Crissman), *Amer. J. Math.*, to appear.
- Covers of elliptic curves and the moduli space of stable curves, *J. reine angew. Math.*, 649 (2010), 167–205.
- Stable base locus decompositions of Kontsevich moduli spaces (with I. Coskun), *Michigan Math. J.* 59 (2010), 435–466.
- Linear series on ribbons, *Proc. Amer. Math. Soc.*, 138 (2010), 3797–3805.
- On the dimension of the Hilbert scheme of curves, *Math. Res. Lett.*, 16 (2009), no. 6, 941–954.
- Mori's program for the Kontsevich moduli space, *Int. Math. Res. Not.*, rnm 067 (2008), 17 pp.
- Covers of elliptic curves and the lower bound for slopes of effective divisors on the moduli space of curves, Ph.D. Thesis, Harvard University, 2008.

TEACHING EXPERIENCE

- Instructor for Math 533: Algebraic geometry II, UIC, Spring 2011, Spring 2010
- Instructor for Math 180: Single variable calculus I, UIC, Fall 2010, Spring 2010, Fall 2008
- Instructor for Math 1b: Single variable calculus II, Harvard University, Spring 2007, Fall 2006
- Instructor for Math 1a: Single variable calculus I, Harvard University, Fall 2005
- Course assistant for QR 28: The magic of numbers, Harvard University, Fall 2007
- Course assistant for Math 260b: Enumerative geometry, Harvard University, Spring 2006
- Course assistant for Math 1ab: Single variable calculus, Harvard Summer School, 2004–2007

SERVICE

- Co-organizer of the AMS special session on “Birational Geometry and Moduli Spaces” at the Joint Mathematics Meetings, Jan 2011
- Mentor of graduate students at the MRC Snowbird Meeting on “Birational Geometry and Moduli Spaces”, Jun 2010
- Mentor of the UIC Graduate Algebraic Geometry Seminar, 2008 – present
- Thesis committee member for R. Abdelkerim, K. Chung, R. Docampo and H. Moon
- Proposal reviewer for the National Fund for Scientific & Technological Development, Chile, 2011
- Proposal reviewer for the National Security Agency Mathematical Sciences Grant Program, 2011
- Journal reviewer for Adv. Math., Amer. J. Math., Cent. Eur. J. Math., Clay Math. Proc., Comm. Algebra, Int. Math. Res. Not., Michigan Math. J., Trans. Amer. Math. Soc.

ACADEMIC TALKS

- PCMI Summer Program Research Seminar, Geometry of Teichmüller curves, Jul 2011
- Seoul National University Algebraic Geometry Seminar, Geometry of Teichmüller curves, Korea, Jun 2011
- Humboldt Algebraic Geometry Seminar, Geometry of Teichmüller curves, Germany, May 2011
- Oberwolfach Meeting on Billiards, Flat Surfaces, and Dynamics on Moduli Spaces, Geometry of Teichmüller curves, Germany, May 2011
- Front Range Algebra, Geometry and Number Theory Seminar, Geometry of Teichmüller curves, Feb 2011
- Stanford University Algebraic Geometry Seminar, Geometry of Teichmüller curves, Feb 2011
- Purdue University Mathematics Colloquium, Geometry of Teichmüller curves, Jan 2011
- CUHK Mathematics Colloquium, Geometry of Teichmüller curves, Hong Kong, Jan 2011
- Ohio State University Mathematics Colloquium, Geometry of Teichmüller curves, Jan 2011
- UC Irvine Mathematics Colloquium, Geometry of Teichmüller curves, Jan 2011
- International Congress of Chinese Mathematicians 45 Minute Talk, Geometry of Teichmüller curves, China, Dec 2010
- University of Arizona Algebraic Geometry Seminar, Geometry of Teichmüller curves, Dec 2010
- Boston College Mathematics Colloquium, Geometry of Teichmüller curves, Dec 2010
- Kansas State University Mathematics Colloquium, Geometry of Teichmüller curves, Nov 2010
- Ohio State University Algebraic Geometry Seminar, Geometry of Teichmüller curves, Nov 2010
- University of Georgia VIGRE Graduate Student Colloquium, How to parameterize space curves, Oct 2010
- UIUC-Purdue Algebra, Geometry and Combinatorics Day, Algebra, geometry and combinatorics of Teichmüller curves, Oct 2010
- University of Wisconsin Algebraic Geometry Seminar, Geometry of Teichmüller curves, Oct 2010
- Harvard-MIT Algebraic Geometry Seminar, Geometry of Teichmüller curves, Sep 2010
- Rice University Algebraic Geometry Seminar, Slopes, Siegel-Veech constants and square-tiled surfaces, Sep 2010
- Columbia University Algebraic Geometry Seminar, Slope and Siegel-Veech constant of Teichmüller curves, Sep 2010
- UIC Algebraic Geometry Seminar, Geometry of Teichmüller curves, Sep 2010
- Workshop on Birational Geometry and Moduli Spaces, Detaching embedded points, Korea, Aug 2010
- AIM Workshop on Components of Hilbert Schemes, Hilbert scheme v.s. other moduli spaces from the viewpoint of birational geometry, Jul 2010
- Algebraic Geometry on Varieties and Manifolds Conference, Covers of elliptic curves and the moduli space of curves, China, May 2010
- UIUC Algebraic Geometry Seminar, Torus coverings and rigid curves on moduli spaces, Mar 2010
- KIAS Workshop on Moduli and Birational Geometry, Rigid curves on moduli spaces, Korea, Dec 2009
- AMS-KMS Special Session on Algebraic Geometry, Mori theory for the moduli space of stable maps, Korea, Dec 2009

- AMS-KMS Special Session on Geometry, Syzygies and Computations, Linear series on ribbons, Korea, Dec 2009
- University of Georgia Algebraic Geometry Seminar, Covers of elliptic curves and the moduli space of curves, Sep 2009
- UIC Algebraic Geometry Seminar, Hilbert scheme of a pair of codimension two linear subspaces, Sep 2009
- MSRI Research Seminar, Mori theory for moduli spaces, Feb 2009
- Texas Christian University Mathematics Colloquium, Mori's program for the Kontsevich space of twisted cubics, Nov 2008
- UIC Algebraic Geometry Seminar, Covers of elliptic curves and the moduli space of curves, Sep 2008
- Princeton University Geometry, Representation Theory and Moduli Seminar, Covers of elliptic curves and the moduli space of curves, Apr 2008
- Brown University Algebra and Algebraic Geometry Seminar, Mori's program for the Kontsevich moduli space, Feb 2008
- Michigan Algebraic Geometry Seminar, Mori's program for the Kontsevich moduli space, Jan 2008
- Rice University Algebraic Geometry and Ergodic Theory Seminar, Mori's program for the Kontsevich moduli space, Jan 2008
- UIC Algebraic Geometry Seminar, The minimal model program for the Kontsevich space of stable maps, Nov 2007
- Queen's Algebraic Geometry Seminar, Covers of elliptic curves and slopes of effective divisors on the moduli space of curves, Canada, Nov 2007
- Harvard-MIT Algebraic Geometry Seminar, Mori's program on the Kontsevich space of stable maps, Oct 2007
- Stony Brook Algebra, Geometry and Physics Seminar, Counting covers of elliptic curves, Oct 2007
- MIT Combinatorics Seminar, Counting covers of elliptic curves, Apr 2007
- Harvard-MIT Algebraic Geometry Seminar, Moduli space of curves and covers of tori, Mar 2007
- Academy of Mathematics and Systems Science, The moduli space of curves, China, Jan 2007
- GAeL XIV Spring School in Algebraic Geometry, On the dimension of Hilbert schemes of curves, Poland, Mar 2006

REFERENCES

- Joe Harris (thesis advisor), Harvard University
- Izzet Coskun, University of Illinois at Chicago
- Lawrence Ein, University of Illinois at Chicago
- Brendan Hassett, Rice University
- Ian Morrison, Fordham University
- Evangelos Kobotis (teaching), University of Illinois at Chicago