

Curriculum Vitae

Mingmin Shen

ADDRESS

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EDUCATION

Ph.D, Mathematics, Columbia University, 2010
Thesis Advisor: Aise Johan de Jong

M.Phil., Mathematics, Columbia University, 2008

M.A., Mathematics, Columbia University, 2006

B.S., Mathematics, 2005
University of Science and Technology of China (USTC), Hefei, China

POSITIONS

August 2010 – April 2014, Simons Postdoctoral Research Fellow, University of Cambridge.
May 2014 – , Assistant Professor (tenure-track), University of Amsterdam.

VISITING POSITIONS

2011 Summer, Beijing International Center for Mathematical Research (BICMR), China.

2015 Summer, Morningside Center of Mathematics (Beijing).

PUBLICATIONS AND PREPRINTS

1. *Foliations and rational connectedness in positive characteristic*, J. Algebraic Geom., **19**(2010), p.531–553.
2. *Rational curves on Fano threefolds of Picard number one*, Ph.D. Thesis, Columbia University, 2010.
3. *On the normal bundle of rational curves on Fano threefolds*, Asian J. Math. **16** No.2, 2012, p.237–270.
4. *On relations among 1-cycles on cubic hypersurfaces*, J. Algebraic Geom. **23** (2014), p.539–569.
5. *Prym-Tjurin constructions on cubic hypersurfaces*, Doc. Math., **19** (2014), p.867–903.
6. *Rational curves on Fermat hypersurfaces*, C. R. Acad. Sci. Paris, Ser. I, **350** (2012), p.781–784.
7. *Hyperkähler manifolds of Jacobian type*, J. Reine Angew. Math., **712**, 189–223, 2016..
8. *Surfaces with involution and Prym constructions*, submitted. arXiv: 1209.5457.
9. (with C. Vial) *On the Chow groups of the variety of lines of a cubic fourfold*, preprint, 2012. arXiv: 1212.0552.
10. (with C. Vial) *The Fourier transform for certain hyperkähler fourfolds*, Mem. Amer. Math. Soc., Volume 240, Number 1139, 2016.
11. (with C. Vial) *The motive of the Hilbert cube $X^{[3]}$* , Forum of Mathematics, Sigma, Volume 4 (2016), e30. arXiv: 1503.00876.
12. *Rationality, universal generation and the integral Hodge conjecture*, preprint, 2016, Arxiv: 1602.07331.

INVITED TALKS

1. Algebra, Geometry and Physics Seminar, Stony Brook University, December 2008.
2. Algebraic Geometry Seminar, Columbia University, February 2010.
3. Algebraic Geometry Seminar, Princeton University, March 2010.
4. Workshop in honor of S. Mori, Princeton University, May 2010.
5. Algebraic Geometry Seminar, University of Cambridge, October 2010.
6. Algebraic Geometry Seminar, University of Warwick, February 2011.
7. Workshop on Arithmetic and Algebraic geometry, Beijing International Center for Mathematical Research (BICMR), Beijing, August, 2011.
8. Algebraic Geometry Seminar, Imperial College London, February 2012.
9. Algebraic Geometry Seminar, University of Cambridge, April 2012.
10. COW seminar, University of Bath, November 2012.
11. Workshop “Algebraic geometry, modular forms and applications to physics”, ICMS, Edinburgh, November 2012.
12. Algebraic geometry seminar, Institut de Mathématiques de Jussieu, February 2013.
13. Birational geometry seminar, University of Cambridge, April 2013.
14. Workshop in Algebraic Geometry, Imperial College London, May 2013.
15. Edge Days: Workshop in Algebraic Geometry, University of Edinburgh, June 2013.
16. GLEN workshop, University of Liverpool, Liverpool, October 2013.
17. Geometry and Number Theory Seminar, University of Nottingham, October 2013.
18. Algebraic Geometry Seminar, University of Cambridge, November 2013.
19. Workshop: Birational Geometry and Foliations, Hausdorff Research Institute for Mathematics, University of Bonn, February 2014.
20. Locally free geometry seminar, Amsterdam, May 2014.
21. General mathematics colloquium, KdVI, University of Amsterdam, May 2014.
22. GQT Colloquium, Zeist, Netherlands, July 2014.
23. Algebra and Geometry Seminar, KdVI, University of Amsterdam, September 2014.
24. Belgian–Dutch Algebraic Geometry Day, University of Amsterdam, November 2014.
25. Mathematics colloquium, VU Amsterdam, April 2015.
26. Mathematics colloquium, University of Utrecht, April 2015.
27. Pan Asian Number Theory Conference, in honor of the 70th birthday of John Coates, Sanya, China, July 2015.
28. Geometry seminar, University of Lyon I, January 2016.
29. Workshop “Stable rationality and diagonal decomposition”, BICMR (Beijing), July 2016.
30. Conference “Rationality and selfmaps of algebraic varieties”, RIMS (Kyoto), 19/7 – 22/7, 2016.
31. Seventh international congress of Chinese mathematicians, Beijing, Aug. 6–11, 2016.
32. Workshop “Cubic fourfolds, hyperkähler manifolds and algebraic cycles”, Lyon, Oct. 11–12, 2016.
33. Workshop “Rationality problems and hyperkähler varieties”, Milano, Oct. 27–28, 2016.
34. Master Lectures – Hyper-Kähler Manifolds, Hodge Theory and Chow Groups: Claire Voisin, Tsinghua Sanya International Mathematics Forum (TSIMF), Dec. 19–23, 2016.

TEACHING EXPERIENCE

Undergraduate Courses:

1. Calculus I: Instructor, Columbia University, Fall 2007.
2. Calculus I: Instructor, Columbia University, Spring 2008.
3. Calculus II: Instructor, Columbia University, Summer 2008.
4. Undergraduate Seminar of Mathematics: Organizing Instructor, Columbia University, Fall 2008.
5. Ordinary Differential Equations: Instructor, Columbia University, Summer 2009.
6. Ordinary Differential Equations: Instructor, Columbia University, Summer 2010.
7. Vector Calculus: lecturer, Amsterdam University College, Fall 2014.
8. Vector Calculus: lecturer, Amsterdam University College, Fall 2015.

Graduate/Part III/Master courses:

1. Rational curves on algebraic varieties, University of Cambridge, Easter Term 2011.
2. Abelian varieties, University of Cambridge, Lent Term 2012.
3. Topics in algebraic surfaces, University of Cambridge, Easter Term, 2013.
4. Irreducible holomorphic symplectic manifolds, University of Cambridge, Lent Term, 2014.
5. Master reading course: Derived categories, University of Amsterdam, spring 2015.
6. (with Martijn Kool) National Master Mathematics: Algebraic surfaces, spring 2016.

SCHOLARSHIPS AND AWARDS

Guo Moruo Scholarship, USTC, 2005

National scholarship of excellent students, Ministry of Education of China, 2004

CONFERENCES AND WORKSHOPS PARTICIPATED

1. Rational curves and Diophantine problems over function fields, Clay Math Institute, Cambridge, November 2007.
2. Classical algebraic geometry today, Mathematical Science Research Institute (MSRI), Berkeley, January 2009.
3. Spaces of curves and their interaction with Diophantine problems, Columbia University, New York, June 2009.
4. Algebraic geometry Northeastern series (AGNES), Stony Brook, October 2009.
5. Conference on Algebraic Geometry and Arithmetic, Essen, Germany, February 2010.
6. Algebraic geometry Northeastern series (AGNES), University of Massachusetts Amherst, April 2010.
7. Algebraic geometry Northeastern series (AGNES), Stony Brook University, Stony Brook, 2011.
8. Workshop on rational curves and rational points, University of Zurich, May 2012.
9. Algebraic and Complex Geometry: a conference on the occasion of Klaus Hulek's 60th birthday, Leibniz Universität Hannover, September 2012.

SERVICES

Referee for *Compositio Mathematicae*, *Illinois Journal of Mathematics*, *Progress in Mathematics*, *Acta Math Sinica*.

Reviewer for *Mathematical Review* and *Zentralblatt Math*; co-organiser of "Algebra and geometry seminar" at KdVI (University of Amsterdam).