

Sijun Liu

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EDUCATION

B.S in Math, Nankai University, China 2004–2008

Ph.D in Math, University of Michigan, USA
Advisor: Michael Zieve 2008–Now

PAPERS

1. The dynamics of degree-2 Lattès maps over finite fields, with Michael Zieve, Preprint.
2. On the integer and rational solutions to $ax^m + bx^n + c = dy^p + ey^q$, with Michael Zieve, Preprint.
3. Global mirror symmetry for invertible simple elliptic singularities, with Todor Milanov and Yefeng Shen, Preprint.
4. Uniform bounds for rational preimages of Laurent polynomial maps, Dissertation.

PATENTS

1. Computing minimal polynomials, with Xu Yang, Zhouchen Lin, Tianjun Ye, Dongmei Zhang, Patent. 2010. US 2010/0262643 A1. (Published)
2. Computing minimal polynomials of radical expressions, with Xu Yang, Zhouchen Lin, Tianjun Ye, Patent. 2010. US 2010/0198902 A1. (Published)

HONORS AND AWARDS

Rackham One-Term Dissertation Fellowship, University of Michigan, 2012.

Departmental Scholarship, University of Michigan, 2009, 2010, 2011, 2012.

Microsoft Young Fellow, Microsoft Research Asia, 2007.

INTERN/VISITING POSITION

Intern at Microsoft Research Asia, March–July, 2008.

Description: I was a developer of Microsoft Math 4.0. During the internship, I created and implemented algorithms of symbolic computation, and I was the inventor of two patents.

Visiting student, ICERM program on arithmetic and complex dynamics, Institute for Computational and Experimental Research in Mathematics (ICERM), January–March, 2012.

TEACHING

Instructor, Math 105 (Pre-Calculus), University of Michigan, Fall 2009, Winter 2010.

Instructor, Math 115 (Calculus I), University of Michigan, Fall 2010, 2011 (Winter, Spring, Summer, Fall), Spring 2013.

Lab/Recitation Instructor, Math 216 (Differential equations), University of Michigan, Fall 2012, Fall 2013.

Mentor, Summer REU program, University of Michigan, 2012.

CONFERENCE AND TALKS

1. The art of iterating rational functions over finite fields. 05/2013, Banff.
Talk: Dynamics of degree-2 Lattès maps over finite fields.
2. Number theory seminar. 01/2013, UC Irvine.
Talk: Diophantine equation $f(x) = g(y)$ and a uniform boundedness conjecture on rational preimages of rational functions.
3. Midwest number theory day and conference for graduate student. 11/2010, University of Michigan.
4. Workshop in dynamics. 05/2010, UIC.