

Masahiro Nakahara

CONTACT INFORMATION Rice University (727)686-2721
Department of Mathematics mn24@rice.edu
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Houston, TX 77005 USA

RESEARCH INTERESTS Algebraic Geometry, Number Theory, Rational Points

EDUCATION **Rice University**
Ph.D. Candidate, Mathematics (expected May 2018)

- Advisor: Anthony Várilly-Alvarado

M.S. in Mathematics, December 2014

University of Florida
B.S. in Mathematics, May 2012

- Double major in statistics
- Minor in actuarial science

PREPRINTS Brauer–Manin obstructions on genus-2 K3 surfaces. (w/ P. Corn)
preprint [arXiv:1710.11116](https://arxiv.org/abs/1710.11116)

Index of fibrations and Brauer classes that never obstruct the Hasse principle.
Submitted [arXiv:1706.07019](https://arxiv.org/abs/1706.07019)

INVITED SEMINAR TALKS University of Wisconsin-Madison, Number Theory Seminar. (November 9, 2017)

Brown University, Algebra Seminar. (October 16, 2017)

Rice University, Algebraic Geometry and Number Theory Seminar. (February 28, 2017)

EXPOSITORY TALKS *Hardy-Littlewood circle method*, Current Mathematics Seminar, Rice University. (April 6, 2017)

Modular forms, Algebraic Geometry Working Seminar, Rice University. (January 30, 2017)

Cohomology of curves, Etale Cohomology Seminar, Rice University. (March 18, 2016)

Undecidability in number theory, Current Mathematics Seminar, Rice University. (February 18, 2016)

Direct and inverse image of sheaves, Etale Cohomology Seminar, Rice University. (February 12, 2016)

Jacobian of a curve, Modular Forms Seminar, Rice University. (November 20, 2015)

Connected solvable groups, Algebraic Geometry Working Seminar, Rice University. (November 12, 2015)

Elementary unipotent groups, Algebraic Geometry Working Seminar, Rice University. (October 8, 2015)

Rational points over function fields, Algebraic Geometry Working Seminar, Rice University. (April 23, 2015)

Examples of rational surfaces, linear systems of conics, Algebraic Geometry Working Seminar, Rice University. (February 19, 2015)

Rational points, Current Mathematics Seminar, Rice University. (February 5, 2014)

Dynkin diagrams, Algebraic Geometry Working Seminar, Rice University. (November 21, 2014)

Descent theory, Elliptic Curves Seminar, Rice University. (November 18, 2014)

Introduction to group cohomology, Elliptic Curves Seminar, Rice University. (November 11, 2014)

Representations of $\mathfrak{sl}_2\mathbb{C}$, Algebraic Geometry Working Seminar, Rice University. (September 26, 2014)

Weil conjectures, Current Mathematics Seminar, Rice University. (April 17, 2014)

Intersection theory, Algebraic Geometry Working Seminar, Rice University. (February 17, 2014)

Étale fundamental group, Algebraic Geometry Working Seminar, Rice University. (November 1, 2013)

Pattern packaging, Current Mathematics Seminar, Rice University. (March 14, 2013)

CONFERENCES
ATTENDED

Algebraic Geometry Northeastern Series, Northeastern University, Boston MA. (October 13-15, 2017)

Emory Conference on Higher Obstructions to Rational Points, Emory University, Atlanta GA. (May 15-19, 2017)

Texas Algebraic Geometry Symposium, Rice University, Houston TX. (April 21-23, 2017)

Arizona Winter School: Perfoctoid Spaces, University of Arizona, Tucson AZ. (March 11-15, 2017)

RTG Lectures in Arithmetic Geometry at Rice, Rice University, Houston TX. (February 17-19, 2017)

Texas Algebraic Geometry Symposium, University of Texas at Austin, Austin TX. (April 2-3, 2016)

Texas Algebraic Geometry Seminar 2015 Fall Workshop, Texas A&M University, College Station TX. (October 24, 2015)

LMS-CMI Summer School on Diophantine Equations, Baskerville Hall, Hay-on-Wye,

Wales. (September 15-19, 2015)

AMS Summer Institute in Algebraic Geometry, University of Utah, Salt Lake City UT. (July 27-31, 2015)

GAeL XXIII, Leuven Belgium. (June 1-5, 2015)

Arizona Winter School: Arithmetic and Higher-Dimensional Varieties, University of Arizona, Tucson AZ. (March 14-18, 2015)

Counting Arithmetic Objects, Université de Montréal, Montréal, Canada. (June 23-July 4, 2014)

Texas Algebraic Geometry Symposium, Rice University, Houston TX. (April 4-6, 2014)

Arizona Winter School: Arithmetic Statistics, University of Arizona, Tucson AZ. (March 15-19, 2014)

TEACHING
EXPERIENCE

Rice University

Fall	2017	Teaching Assistant, MATH365 Number Theory
Spring	2017	Teaching Assistant, MATH356 Abstract Algebra I
Fall	2016	Teaching Assistant, MATH463 Abstract Algebra II
Spring	2016	Teaching Assistant, MATH464 Abstract Algebra III
Fall	2015	Teaching Assistant, MATH371 Lie Theory
Spring	2015	Teaching Assistant, MATH212 Calculus III
Fall	2014	Instructor, MATH101 Calculus I
Spring	2014	Teaching Assistant, MATH102 Calculus II
Fall	2013	Teaching Assistant, MATH101 Calculus I
Spring	2013	Teaching Assistant, MATH211 Differential Equations
Fall	2012	Teaching Assistant, MATH101 Calculus II

LANGUAGES

English, Japanese, Chinese