

Eric Riedl

Curriculum Vitae

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Research Interest

Algebraic Geometry, Arithmetic Geometry, Combinatorics, Computational mathematics

Particular interest in birational geometry, including rationality questions, rational curves, and hypersurfaces

Academic Positions

2015–present **Research Assistant Professor**, *University of Illinois at Chicago*.

Postdoctoral mentor: Izzet Coskun

2010–2015 **Ph.D.**, *Harvard University*.

Adviser: Joe Harris

2006–2010 **B.S.**, *University of Notre Dame*, summa cum laude.

Mathematics and Piano Performance

2008–2009 **Junior Year Abroad**, *Cambridge University*, King's College, First-Class.

completed part II of the tripos

Awards

2017 – 2019 AMS-Simons Travel Grant

2010 – 2015 NSF Graduate Fellowship

Publications

[1] Beheshti, Roya and Riedl, Eric. Positivity results for spaces of rational curves. arXiv:1801.05834

[2] Riedl, Eric. Planes and quadrics on low degree hypersurfaces. (in preparation)

[3] Coskun, Izzet and Riedl, Eric. Normal bundles of rational curves in complete intersections (accepted to Communications in Contemporary Mathematics) arXiv:1705.08441

[4] Riedl, Eric and Woolf, Matthew. Rational curves on complete intersections in positive characteristic (accepted to Journal of Algebra) arXiv:1609.05958

[5] Coskun, Izzet and Riedl, Eric. Normal bundles of rational curves in projective space (accepted to Mathematische Zeitschrift) arXiv:1607.06149

- [6] Riedl, Eric and Yang, David. Rational curves on general type hypersurfaces (submitted) arXiv:1605.01759
- [7] Riedl, Eric and Yang, David Kontsevich spaces of rational curves on Fano hypersurfaces, *J. Reine Angew. Math.* (to appear).
- [8] Barbara Bolognese, Jack Huizenga, Yinbang Lin, Eric Riedl, Benjamin Schmidt, Matthew Woolf and Xiaolei Zhao. Nef cones of Hilbert schemes of points on surfaces, *Algebra Number Theory* 10 (2016), no. 4, 907–930.
- [9] Jesus De Loera, Susan Margulies, Michael Pernpeintner, Eric Riedl, David Rolnick, Gwen Spencer, Despina Stasi, Jon Swenson Graph-coloring ideals: Nullstellensatz certificates, Gröbner bases for chordal graphs, and hardness of Gröbner bases *Internatl. Symposium on Symbolic and Algebraic Computation*, 2015
- [10] Riedl, Eric. Largest minimal percolating sets in hypercubes under 2-bootstrap percolation. *Electronic Journal of Combinatorics*, Volume 17(1), 2010.
- [11] Riedl, Eric. Largest and Smallest Minimal Percolating Sets in Trees. *Electronic Journal of Combinatorics*, Volume 19(1), 2012.
- [12] Riedl, John and Riedl, Eric. Crowd-sourcing medical research. *IEEE Computer*. January 2013. 46(1) 0089-92
- [13] Hang Zhang, Eric Riedl, Valery A Petrushin, Siddharth Pal, Jacob Spoelstra. Committee Based Prediction System for Recommendation: KDD Cup 2011, Track2. *KDD Cup*, 2012.

Invited Talks

- March 2014 Graduate Student Math Conference at Brown
- July 2014 Talk at Yale REU
- Sept 2014 Algebraic Geometry Seminar at Brown University
- Sept 2014 Harvard/MIT Algebraic Geometry Seminar
- Oct 2014 Special Seminar at SUNY Stony Brook
- Oct 2014 Algebraic Geometry Seminar at Columbia University
- Nov 2014 Algebraic Geometry Seminar at University of Illinois at Chicago
- Sept 2015 Algebraic Geometry Seminar at University of Wisconsin
- Oct 2015 Algebraic Geometry Seminar at Washington University in St. Louis
- Nov 2015 Algebraic Geometry Seminar at University of Notre Dame
- Jan 2016 Algebraic Geometry Seminar at IMPA, in Brazil
- Jan 2016 Algebraic Geometry Seminar at UFF, in Brazil
- May 2016 Juan Migliore's birthday conference at University of Notre Dame
- June 2016 Oberwolfach workshop on Classical Algebraic Geometry
- Oct 2016 Special Seminar at SUNY Stony Brook
- Oct 2016 Algebraic Geometry Seminar at SUNY Stony Brook
- Feb 2017 Algebraic Geometry Seminar at Boston College

- March 2017 Algebraic Geometry Seminar at Princeton University
- Oct 2017 Algebraic Geometry Seminar at Columbia University
- Nov 2017 Geometry Seminar at UT Austin

Professional Activities

- October 2016 Coorganized an AIM Workshop on Rationality and Rational subvarieties in positive characteristic
- 2016 Organized the Rationality Seminar at UIC
- 2010-2014 Helped organize various graduate student seminars at Harvard, including the graduate student seminar (Trivial Notions), the general student algebraic geometry seminar (BAGS) and the algebraic geometry learning seminar (AGLS)

Teaching

- Fall 2012 Math 1b (Calculus II) at Harvard
- Fall 2014 "Fat Chance" (Gen Ed probability and stats course) at Harvard
- Fall 2015 Math 180 (Calculus I) at UIC
- Spring 2016 Math 554 (Graduate course on Riemann surfaces) at UIC
- Fall 2016 Math 180 (Calculus I) at UIC
- Spring 2017 Math 215 (Introduction to proofs) at UIC
- Fall 2017 Math 210 (Calculus III) at UIC