John Lesieutre

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Employment

- University of Illinois at Chicago
  RTG Research Assistant Professor, August 2015 – present.
- Institute for Advanced Study
  Member, September 2014 – June 2015.

Education

- Massachusetts Institute of Technology
  Ph.D. in Mathematics, 2014.
- Harvard University
  A.B. in Mathematics and minor in Linguistics, 2009.

Papers

- "A projective variety with discrete, non-finitely generated automorphism group", submitted. (arXiv:1609.06391)
- "Dynamical Mordell–Lang and automorphisms of blow-ups" (with D. Litt), submitted. (arXiv:1604.08216)
- "Log Fano structures and Cox rings of blow-ups of products of projective spaces" (with J. Park), to appear in *Proc. Amer. Math. Soc.*. (arXiv:1604.07140)
- "Effective cones of cycles on blow-ups of projective space" (with I. Coskun and J.C. Ottem), *Algebra & Number Theory* 10-9 (2016), 1983–2014. (arXiv:1603.04808)
- "A few questions about curves on surfaces" (with Ciliberto, Knutsen, Lozovanu, Miranda, Mustopa, and Testa), *Rend. Circ. Mat. Palermo* (2016), 1–10. (arXiv:1511.06618)
- "Some constraints on positive entropy automorphisms of smooth threefolds", submitted. (arXiv:1503.07834)
- "A pathology of asymptotic multiplicity in the relative setting", *Math. Res. Lett.* 23 (2016), no. 5, 1433–1451. (arXiv:1502.03019)
- "Curves disjoint from a nef divisor" (with J.C. Ottem), *Michigan Math. J.* 65 (2016), 321–332. (arXiv:1410.4467)
- "Derived-equivalent rational threefolds", *Int. Math. Res. Not.* (2015), 6011–6020. (arXiv:1311.0056)
- "The diminished base locus is not always closed", *Compositio Math.* 150 (2014), no. 10, 1729–1741. (arXiv:1212.3738)

Awards

- NSF Algebra and Number Theory grant ($132,717), 2017–2020.
- AMS–Simons Travel Grant, 2016–.
- NSF Graduate Research Fellowship, 2010–2013.
- Presidential Fellowship, MIT, 2009–2010.
  Support for first year of graduate study.
- David Mumford Undergraduate Mathematics Prize, Harvard, 2009.

Conference & Workshop Talks

- Mini workshop on complex geometry, University of Notre Dame, April 2016.
- Local negativity and positivity, Leibniz Universität Hannover, March 2016.
- Summer school on Higher Dimensional Algebraic Geometry, University of Utah, July 2016.
  Four lectures on "Dynamics on higher-dimensional varieties".
- New methods in birational geometry, CIMI, Toulouse, June 2016.
- Tokyo–Princeton algebraic geometry conference, Princeton, May 2016.
- Boston College–Northeastern Algebraic Geometry Conference, April 2016.
- Higher codimension cycles on algebraic varieties, University of Illinois at Chicago, March 2016.
- Summer research institute on algebraic geometry, University of Utah, July 2015 (contributed talk).
- New techniques in birational geometry, Stony Brook University, April 2015.
- Chow groups, motives, and derived categories, Institute for Advanced Study, March 2015.
- Recent advances in linear series and Newton–Okounkov bodies, Università degli Studi di Padova, February 2015.
- Mini-workshop: Negative curves on algebraic surfaces, Oberwolfach, February 2014.
- AMS sectional meeting, special session on the geometry of algebraic varieties, Temple University, October 2013.
- Workshop on Okounkov bodies and Nagata-type conjectures, IM PAN, Warsaw, September 2013.
- Géométrie Algébrique en Liberté, KTH, Stockholm, June 2013.
- Workshop on the minimal model program in characteristic p, AIM, Palo Alto, May 2013.

Seminar & Colloquium Talks

- Stanford Algebraic Geometry Seminar, May 2017.
- UIUC Algebraic Geometry Seminar, March 2017.
- Penn State Geometry and Physics Seminar, January 2017.
- Northwestern Algebraic Geometry Seminar, January 2017.
- Tufts Colloquium, December 2016.

— Michigan Algebraic Geometry Seminar, November 2016.
— UCLA Algebra Seminar, October 2016.
— UCLA Colloquium, October 2016.
— UIC Algebraic Geometry Seminar, September 2016.
— IUPUI Dynamics Seminar, April 2016.
— Utah Algebraic Geometry Seminar, February 2016.
— University of Chicago Algebraic Geometry Seminar, February 2016.
— UIC Algebraic Geometry Seminar, January 2016.
— Northwestern Geometry and Physics Seminar, November 2015.
— Columbia Algebraic Geometry Seminar, October 2015.
— Notre Dame Algebraic Geometry/Commutative Algebra Seminar, September 2015.
— Johns Hopkins Algebraic Geometry Seminar, April 2015.
— Michigan Complex Analysis, Dynamics and Geometry Seminar, March 2015.
— UIC Algebraic Geometry Seminar, March 2015.
— Missouri Geometry/Topology Seminar, November 2014.
— Princeton/IAS Algebraic Geometry Seminar, October 2014.
— Stanford Algebraic Geometry Seminar, May 2014.
— Penn State Algebra and Number Theory Seminar, April 2014.
— UCSD Algebraic Geometry Seminar, December 2013.
— UIC Algebraic Geometry Seminar, November 2013.
— Rice Algebraic Geometry Seminar, October 2013.
— Stony Brook Algebraic Geometry Seminar, September 2013.
— Michigan Algebraic Geometry Seminar, March 2013.
— Princeton Algebraic Geometry Seminar, February 2013.
— Harvard/MIT Algebraic Geometry Seminar, November 2012.

Teaching

Awards and training:

— Math, Stat, & CS Teaching Award, Fall 2016.
Departmental teaching award.
— UIC Teaching Scholar, Spring 2016.
Selected for semester-long mentorship on effective teaching, with emphasis on active learning.
— Charles and Holly Housman Award for Excellence in Teaching, MIT, 2013.
For “skill and dedication in undergraduate teaching”.
— MIT graduate student teaching certificate, 2013.
6-week training in university teaching.

— Harvard University Certificate of Distinction in Teaching, 2009.

UIC:

— Instructor, Math 210 (Calculus III), Spring 2017.

— Instructor, Math 181 (Calculus II), Fall 2016.

— Instructor, Math 553 (Algebraic geometry II), Spring 2016.

— Instructor, Math 310 (Applied linear algebra), Fall 2015.

MIT:

— Instructor, 18.089 (Review of calculus), Summer 2014.

— Instructor, 18.089 (Review of calculus), Summer 2013.

— Teaching assistant, 18.06 (Linear algebra), Spring 2013.

— Teaching assistant, 18.03 (Differential equations), Spring 2012.

— Teaching assistant, 18.02 (Multivariable calculus), Spring 2011.

Harvard:

— Course assistant, Math 25b (Real analysis), Spring 2009.

— Course assistant, Math 113 (Complex analysis), Spring 2008.

Professional

— Referee/reviewer: Int. Math. Res. Notices, Manuscripta Math., Proc. AMS, Adv. Math., Advances in Geometry, Math Reviews, Zentralblatt.

— Organizer, Workshop on Higher Codimension Cycles in Algebraic Geometry, UIC, March 2016.
NSF RTG-funded workshop for graduate students and postdocs.

— Organizer, Workshop on SYZ mirror symmetry, Big Bear, CA, May 2013.
NSF RTG-funded workshop.

— Mentor, Directed Reading Program, MIT, 2011-2014.
Led four month-long one-on-one undergraduate reading courses.

— Mentor, Research Science Institute, MIT, 2010.
Guided two high school students in research projects in algebraic geometry; both were Intel STS semifinalists.

Expository Talks

— UIC Rationality Seminar, “Birational rigidity”, March 2016.

— UIC Working Dynamics Seminar, “The dynamical Mordell–Lang conjecture”, February 2016.

— UIC RTG Seminar, “Pathologies of effective cones”, February 2016.

— UIC Working Dynamics Seminar, “Positive entropy automorphisms of varieties”, October 2015.

— Stanford Student Algebraic Geometry Seminar, “Positive entropy automorphisms of surfaces”, May 2014.

— Harvard/MIT Baby Algebraic Geometry Seminar, “The Kawamata–Morrison cone conjecture”, December 2013.

– MIT Pure Math Graduate Student Seminar, “Interpolation problems in the plane”, April 2013.
– Harvard/MIT Baby Algebraic Geometry Seminar, “Lazić’s approach to the MMP”, November 2012.
– Harvard/MIT Algebraic Geometry Learning Seminar, “The Li–Tian construction of the virtual fundamental class”, November 2012.
– Harvard/MIT Baby Algebraic Geometry Seminar, “Curves on general blow-ups of $\mathbb{P}^2$”, April 2012.
– MIT Pure Math Graduate Student Seminar, “Periodic orbits in billiards”, October 2011.
– Harvard/MIT Baby Algebraic Geometry Seminar, “Hilbert’s 14^{th} problem and finite generation of section rings”, October 2011.