

Jessica Sidman
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Curriculum Vitae

Education

Ph.D., 2002, University of Michigan.
M.S., 1999, University of Michigan.
B.A., 1997, Scripps College.

Teaching

Assistant Professor, Mount Holyoke College, 2008-present.
Clare Boothe Luce Assistant Professor, Mount Holyoke College, 2003-2008
Graduate Student Instructor, University of Michigan, 1998-2002.

Publications

- J. Sidman and P. Vermeire, Syzygies of the secant variety of a curve, arxiv: math.AG/0806/3056.
- J. Sidman and S. Sullivant, *Prolongations and computational algebra*, to appear in Canadian Journal of Mathematics, arxiv: math.AC/0611696.
- D. Cox and J. Sidman, *Secant varieties of toric varieties*, J. Pure and Applied Algebra (2007) vol. 209, no. 3, pp. 651-669.
- J. Sidman, A. Van Tuyl, and H. Wang, *Multigraded regularity: coarsenings and resolutions*. J. Algebra, (2006) 301, no. 2, 703-727.
- J. Sidman and A. Van Tuyl, *Multigraded regularity: syzygies and fat points*, B itrag (2006) **47**, no. 1, 67-87. (Due to a mixup of electronic files at the journal an older version was printed, and the correct version is only available online at the journal webpage.)
- A. Bjorner, I. Peeva, and J. Sidman, *Subspace arrangements defined by products of linear forms*, J. London Math. Soc., (2005) **71** no.2, 273--288.
- A. Conca, J. Sidman, *Generic Initial ideals of points and curves*, J. Symb. Comp. (2005) **40**, 1023--1038.
- J. Sidman, *Defining equations of subspace arrangements embedded in reflection arrangements*, IMRN, (2004), no. 15, 713—727.
- H. Derksen, J. Sidman, *Castelnuovo-Mumford regularity by approximation*, Adv. in Math. (2004) **188** , no. 1, 104-123.

H. Derksen and J. Sidman, *A sharp bound for the Castelnuovo-Mumford regularity of subspace arrangements*, Adv. in Math., **172** (2002), no. 2, 151--157.

J. Sidman, On the Castelnuovo-Mumford regularity of products of ideal sheaves, Adv. in Geom., **2** (2002), no. 3, 219--229.

Non-refereed publications

J. Sidman, "Resolutions and Subspace arrangements" in *Syzygies and Hilbert Functions*, 249-265, Lect. Notes Pure Appl. Math., 254, Chapman&Hall/CFC, Boca Raton, FL, 2007.

D. Eisenbud, Lectures on the geometry of syzygies. With a chapter by Jessica Sidman. Math. Sci. Res. Inst. Publ., 51, *Trends in Commutative Algebra*, 115-152, Cambridge Univ. Press, Cambridge, 2004.

Selected talks

Tutorials and short courses

Analytic and Algebraic Geometry: Common Problems – Different Methods.
Undergraduate Summer School Lecturer
Park City Mathematics Institute, Park City, July 21-26 2008.

Women and mathematics: Algebraic Geometry and Group Actions
Institute for Advanced Studies, Princeton, May 21-24, 2007.

Tutorial: What is algebraic geometry?
Institute for Mathematics and Its Applications, Minneapolis, April 13, 2007.

Colloquia and seminars

Reed Mathematics Colloquium
October 25, 2007.

Queen's algebraic geometry seminar
Queen's University, Kingston, Canada, January 17, 2005 and November 5, 2007.

University of Connecticut Department Colloquium
November 15, 2007.

Department Colloquium
Wellesley College, March 14, 2005.

Algebraic geometry seminar
University of Michigan, Ann Arbor, October 12, 2004.

Algebraic geometry seminar
Università di Genova, Italy, June 15, 2004.

Mathematics Colloquium
SUNY Albany, April 23, 2004.

Geometry-Algebra-Singularities-Combinatorics seminar
Northeastern University, Boston, March 15, 2004.

Claremont Colleges Mathematics Colloquium
Pomona College, November 13, 2002.

Conference talks

Commutative algebra and its interactions with algebraic geometry
Banff International Research Station, Banff, Canada, June 11, 2007.

AMS special session: toric varieties
Rutgers University, New Brunswick, October 6, 2007.

Hilbert Functions and syzygies in commutative algebra and combinatorics
Cortona, Italy, September 18, 2007.

Castelnuovo-Mumford regularity and related topics
CIRM, Luminy, May 12, 2006.

AMS special session: combinatorial algebraic geometry
Notre Dame University, South Bend, April 9, 2006.

AMS special session: algebraic statistics
Joint Meetings, San Antonio, January 13, 2006.

Conference of the School on Commutative Algebra and Interactions with Algebraic Geometry and Combinatorics
Trieste, Italy, June 10, 2004.

Workshop on Combinatorial Aspects of Hyperplane Arrangements
MSRI, Berkeley, November 1, 2004.

Local expository talks

Working commutative algebra/algebraic geometry seminar: Green's conjecture
University of Massachusetts, Amherst, February 8, 15, 29, 2008.

Westfield State Math Club
Westfield State College, Westfield, October 16, 2007.

The "What is ...?" seminar
UMass, Amherst, April 9, 2004 and March 29 and April 5, 2007.

Minimal Model Program Seminar
UMass, Amherst, April 20, 2007.

Working commutative algebra seminar
UMass, Amherst, September 17 and November 12, 2004, and February 25, 2005.

Combinatorics Study Group
Mount Holyoke College, October 21, 2004.

Grants and fellowships

RUI: Computational and Combinatorial Commutative Algebra
NSF grant DMS-0600471, 2006-2009.

Faculty fellowship: Investigations in computational and combinatorial commutative algebra
(The committee granted the fellowship in name only as I ended up with funding from Luce.)

NSF Mathematical Sciences Postdoctoral Research Fellowship
NSF grant DMS-0201607
UC Berkeley 2002-2003 and UMass Amherst 2004-2005.

Projects under way

Determinantal equations of varieties, with Greg Smith of Queen's University
Elliptic curves and toric surfaces, an expository paper
Four toric surfaces: introductory lectures on toric varieties for undergraduates

Service

MSRI workshop "Connections for women: Algebraic geometry and related fields"
Organizing committee for workshop scheduled for January 2009.

Common read committee
Mount Holyoke College, 2005-present (on leave 2006-2007).

Planning and Budget Committee
Mount Holyoke College, replacement, 2006-2007, 2007-2011.

Student advising
First-year advising 2005-2006 and 2006-2007. Advising in the major 2004-2005, 2006-2007.

Helped with Discrete Math Day at Mount Holyoke
April 16, 2005.

Problem solving seminar
Fall 2006, and with Margaret Robinson in 2007.

Advised senior thesis of Aaron Wolbach (UMass)
Fall 2005.

Co-coordinator of the Sky Dot Project NExT sessions for Mathfest
Providence, August 11, 2004.

A Walk Through the Math Pipeline from End to End (sponsored by the Committee on Science Policy and the Committee on the Professions)
Panelist, Joint Mathematical Meeting, Phoenix, January 9, 2004.

Department library liaison
2004-2205.

Professional organizations

Association for Women in Mathematics
American Mathematical Society
Mathematical Association of America
Sigma Xi

Refereeing

Journal of Algebra
Journal of Symbolic Computation
Journal of Algebraic Geometry
Proceedings of the American Mathematical Society
Advances in Mathematic