

Patrick K. McFaddin

Department of Mathematics
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Education

Ph.D., Mathematics

University of Georgia

May 2016
Athens, GA

- Advisor: Daniel Krashen
- Dissertation: K -Cohomology of Generalized Severi-Brauer Varieties

M.A., Mathematics

University of Georgia

August 2011
Athens, GA

- Advisor: Robert Varley

B.A., with Honors in Mathematics

University of Southern California

May 2010
Los Angeles, CA

Employment

University of South Carolina

Visiting Research Assistant Professor

Aug. 2016

University of Georgia

Graduate Research/Teaching Assistant

June 2010- May 2016

Research Interests

Algebra and algebraic geometry: algebraic K -theory, K -cohomology, algebraic cycles, motives, central simple algebras, algebraic groups, homogenous varieties

Publications

1. The group of K_1 -zero-cycles on the second generalized Severi-Brauer variety of an algebra of index 4. Preprint (arXiv), 2016.
2. (with V. Alexeev, et al.) Extended Torelli map to the Igusa blowup in genus 6, 7, and 8. Experimental Mathematics, Vol. 21(2), pp. 193-203, 2012.

Work in Progress

1. A conditional description of the group of K_1 -zero-cycles on generalized Severi-Brauer varieties.
2. Patching over fields and étale K -theory.
3. The Chen-Gibney-Krashen moduli spaces revisited.
(with P. Gallardo, N. Giansiracusa, and X. Wu).
4. A cocycle-free proof of a theorem of Uematsu on the Brauer group of affine diagonal quadrics.
(with R. Gordon-Sarney, D. Adams, D. Litt, S. Mathur).

Selected Talks

Subfields of Central Simple Algebras <i>Math Department Colloquium, California State University Sacramento</i>	Feb. 2016
Chow Groups with Coefficients and Generalized Severi-Brauer Varieties <i>Algebra and Number Theory Seminar, Emory University</i>	Feb. 2016
K-Cohomology of Generalized Severi-Brauer Varieties <i>Algebra Seminar, University of Georgia</i>	Sept. 2015
Twisted Homogenous Varieties, Derived Equivalences, and dg-Stacks <i>Algebra Seminar, University of Georgia</i>	Jan. 2015

Conferences and Workshops Attended

Georgia Algebraic Geometry Symposium <i>Emory University</i>	Oct. 2015
Local-Global Principles and Their Obstructions <i>University of Pennsylvania</i>	Oct. 2015
Grad Student Bootcamp for the Alg. Geom. Research Institute <i>University of Utah</i>	July 2015
The 12th Brauer Group Conference <i>Pingree Park, CO</i>	June 2015
Arizona Winter School: Arithmetic and Higher-Dimensional Varieties <i>University of Arizona</i>	March 2015
Georgia Algebraic Geometry Symposium <i>University of Georgia</i>	Oct. 2014
Representation Theory and K-Theory <i>University of Southern California</i>	May 2014

Southeastern Lie Theory Workshop <i>University of Georgia</i>	May 2014
Georgia Algebraic Geometry Symposium <i>University of Georgia</i>	Oct. 2013
Torsors, Nonassociative Algebras, and Cohomological Invariants <i>Fields Institute</i>	June 2013
Homotopical Methods in Algebraic Geometry <i>University of Southern California</i>	May 2013
Workshop on Torsors, Motives, and Cohomological Invariants <i>Fields Institute</i>	May 2013
Oberwolfach Seminar on Algebraic Groups and Patching <i>Mathematisches Forschungsinstitut Oberwolfach</i>	Oct. 2012
Georgia Algebraic Geometry Symposium <i>University of Georgia</i>	May 2012
VIGRE Summer School Program in Algebraic Geometry <i>University of Georgia</i>	May 2012
Arizona Winter School: Ramification and Geometry <i>University of Arizona</i>	March 2012
Algebraic Geometry Northeastern Series Workshop <i>Stony Brook University</i>	Oct. 2011
A Celebration of Algebraic Geometry <i>Harvard University</i>	Aug. 2011
K-Theory and Motives <i>University of California, Los Angeles</i>	March 2011
Compact Moduli and Vector Bundles <i>University of Georgia</i>	May 2010

Teaching

University of Georgia

Instructor of Record

- Math 2260- Calculus II for Science and Engineering Fall 2015
- Math 1113- Pre-Calculus Spring 2015
- Math 2250- Calculus I for Science and Engineering Spring 2014
- Math 1113- Pre-Calculus Fall 2013

Recitation Instructor

- Math 2200- Analytic Geometry and Calculus Spring 2011
- Fall 2010

Service and Outreach

UGA Graduate Student Bootcamp <i>Job Market Panelist/Speaker on “How to give a good math talk”</i>	June 2016
University of Georgia Math Camp <i>Graduate Instructor</i>	June 2016 July 2014
Project REFOCUS <i>21st Century Skills Program Volunteer</i>	Spring 2016 Fall 2015
University of Georgia High School Math Tournament <i>Volunteer</i>	Nov. 2014 Nov. 2013
A Place Called Home Non-Profit Youth Center <i>Volunteer Tutor, K-12, all subjects</i>	Spring 2008

Skills

Technology

Self-instructed coding in Python, HTML, website building, Mathematica, Sage, Git, L^AT_EX, experience with Windows, Mac, Linux (via Ubuntu) operating systems.

Language

- French, limited working proficiency
- Spanish, elementary proficiency

Awards

Great Lakes National Scholarship <i>Great Lakes Educational Loan Services</i>	Aug. 2015
Outstanding Teaching Assistant <i>University of Georgia</i>	March 2015
VIGRE Fellowship	Aug. 2011 - July 2012

References

Daniel Krashen

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Pete Clark

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University of Georgia
Email: plclark@gmail.com
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David Harbater

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University of Pennsylvania
Email: harbater@math.upenn.edu
Phone: (215) 898-9594

Daniel Nakano

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Lisa Townsley (Teaching)

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Robert Varley

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