Adam Graham-Squire — Curriculum Vitae

Contact Information

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Academic Employment

High Point University, Department of Mathematics

- Assistant Professor of Mathematics, Fall 2011 to present.

University of North Carolina at Chapel Hill, Department of Mathematics

- Senior Teaching Fellow, Fall 2010 to Spring 2011. Duties include co-teaching Math 920, mentoring and observing first-time instructors.
- Graduate Teaching Assistant, Fall 2006 to Spring 2010. Duties included teaching, assisting and tutoring.

Education

University of North Carolina at Chapel Hill

Ph.D. in Mathematics, May 2011

- Dissertation Topic: Explicit formulas for local formal Mellin transforms.
- Advisor: Dima Arinkin

M.S. in Mathematics, May 2010

- Masters Topic: Formal reduction of the operator $d/dx + A$ to canonical form.

Whitman College

B.A. in Mathematics, May 1998

- Minor in Geology
- Magna cum laude
- Phi Beta Kappa

University Courses Taught

High Point University

- Special Topics in Math (at UNCCH)
- Precalculus
- Business Calculus
- Calculus I
- Calculus II
- Mathematical Ideas (Math for Elementary Educators)
- Discrete Math (at UNCCH)
- Introduction to Mathematical Thought
- Calculus III
- Linear Algebra
- Abstract Algebra
- Problem Solving Seminar
- Teaching Seminar for Graduate Teaching Assistants (at UNCCH)

Research Interests

Voting Theory, Algebraic Geometry, Local Integral Transforms, Game Theory, Recreational Mathematics, Mathematics Education.

Publications

(with K. O'Hara and L. Piechnik) *Environmental Impacts: how comparative prior knowledge affects students' Calculus experience*, in preparation.

(with D. Naylor and N. Zayatz) *Preliminary Investigation of Monotonicity Anomalies in Real-World IRV data*, submitted.

Explicit calculation of local formal Mellin transforms, Pacific Journal of Mathematics 283-1 (2016), 115–137. DOI: 10.2140/pjm.2016.283.115

(with L. Zack, J. Fuselier, R. Lamb, and K. O'Hara) *Flipping Freshman Mathematics*, PRIMUS, 25(9-10) (2015), 803–813. DOI: 10.1080/10511970.2015.1031302

(with E. Farnell and J. Stockton) *Mat-Rix-Toe: Improving writing through a game-based linear algebra project*, PRIMUS, 24(6) (2014), 491–512. DOI: 10.1080/10511970.2013.876476

Calculation of local formal Fourier transforms, Arkiv för Matematik, 51 (2013), 71–84 DOI: 10.1007/s11512-011-0156-2

Honors, Awards, Grants

Spring 2015	Co-PI on STEM Club grant for Thomasville City Schools
Spring 2015	Granted Course Reduction Award
2014-2015	HPU Teaching Scholar Award
2011-2012	Project NExT Fellow
Spring 2011	GAANN Fellowship
Summer 2010	Future Faculty Fellowship Award
Spring 2010	GAANN Fellowship
Spring 2009	Nominated for Linker Teaching Award
1998	Phi Beta Kappa
1998	Award for Outstanding Student Services at Whitman
1994–1998	Whitman Merit Scholar, Whitman College
1994–1998	National Merit Scholar

Presentations

Environmental Impacts: how comparative prior knowledge affects students' Calculus experience, Talk given at SOTL conference (May 2016)

Differentiated Calculus: How does prior Calculus knowledge of peers affect students' experience in Calculus?, Talk given at MAA-SE conference (Mar. 2016)

Monotonicity Violations in Instant Runoff Voting, Talk given at MAA-SE conference (Mar. 2016)

Monotonicity Violations in Instant Runoff Voting, Talk given at High Point University (Sept. 2015)

The Mathematics of Enemy-Protector, Talk given at MAA-SE conference (Mar. 2015)

(with K. O'Hara) *Flipping Freshman Mathematics*, Talk given at Mathfest (Aug. 2014)

(with L. Zack, J. Fuselier and K. O'Hara) *Flipping Freshman Mathematics*, Presentation as part of HPU panel discussion on the flipped classroom (Mar. 2014)

(with K. O'Hara) *Flipping Freshman Mathematics*, Talk given at MAA-SE conference (Mar. 2014)

Mat-Rix-Toe: Improving Writing in Linear Algebra, Talk given at MAA-SE conference

(Mar. 2014)

Mat-Rix-Toe: Where Tic-Tac-Toe and Linear Algebra collide, Talk given at MAA-SE conference (Mar. 2013)

Why democracy is a sham, Talk given at Democracy USA Colloquium, High Point University (Nov. 2012)

Explicit calculations of local formal integral transforms, Talk given at Mathfest (Aug. 2012)

Mat-Rix-Toe: Explaining, writing and editing in Linear Algebra, Talk given at Mathfest (Aug. 2012)

Beyond Jeopardy! Games for Learning Mathematics, Panel discussion given at Joint Mathematics Meetings (Jan. 2012), Co-organizer and moderator.

Extensions of formal power series, Talk given at High Point University (Mar. 2011)

Local Formal Integral Transforms, Talk given at GMA Visions Seminar at UNC Chapel Hill (Nov. 2010)

Reduction of the Operator d/dx + A to Canonical Form, Talk given at GMA Visions Seminar at UNC Chapel Hill (Nov. 2009)

Students Mentored

Nick Zayatz and David Naylor, (2013-2014): researched voting anomalies in real-world instant run-off election data. Students presented four times (Gatlinburg CS conference, MAA-SE, and High-PURCS)

Service

2012-present: Member of Teacher Education Council

2013-present: Member of Global Studies Committee

Organized Cultural Event (April, 2014): FIXED film.

Chaired departmental committee on peer observation, led initial phase of peer observation program in spring of 2014.

Other Teaching Experience

2006 to 2011	University of North Carolina, Chapel Hill, NC. Taught numerous undergraduate courses.
2003 to 2005	Washington Prep High School, Los Angeles, USA. Taught Algebra II, Geometry and Algebra I.
2000 to 2002	Dantakali M.V., Dharan, Nepal. Taught middle school math in Nepali as a Peace Corps volunteer.
1999	Bunya Combined School, Bunya, Namibia. Taught high school math in English as a Peace Corps volunteer.

Conferences Attended

MAA-SE: University of Alabama at Birmingham, Birmingham, AL (March 2016)

MAA-SE: UNC Wilmington, Wilmington, NC (March 2015)

Mathfest: Portland, OR (August 2014)

MAA-SE: Tennessee Tech University, Cookeville, TN (March 2014)

MAA-SE: Winthrop University, Rock Hill, SC (March 2013)

Mathfest/Project NExT: Madison, WI (August 2012)

Joint Mathematics Meetings: Boston, MA (January 2012)

Mathfest/Project NExT: Lexington, KY (August 2011)

Joint Mathematics Meetings: New Orleans (January 2011)

Eigenvalue and Saturation Problems for Reductive Groups: UNC Chapel Hill (May 2009)

23^{rd} Annual Geometry Festival: Duke University (April 2008)

MEMBERSHIPS Mathematics Association of America