

Whitney H. Berard

CONTACT INFORMATION	<i>E-mail:</i> wberard@math.arizona.edu <i>Web:</i> www.whitneyberard.com	
EDUCATION	University of Arizona Ph.D., Mathematics, August 2016 Research Area: Algebraic Number Theory Advisor: David Savitt	August 2010 - August 2016
	University of Missouri, Kansas City M.S., Mathematics, May 2010 B.S., Computer Science, August 2008	August 2006 - May 2010
	University of Missouri, Columbia B.S., Mathematics and Physics, July 2005	August 2001 - May 2005
PROGRAMMING SKILLS	Mathematical computing with Sage, MATLAB, and GAP. Programming experience with Python using test-driven development, Java, C++, and SQL.	
RESEARCH EXPERIENCE	University of Arizona Studied generalizations of Serre's modularity conjecture. Extended existing examples to four dimensions. Wrote programs using Sage and Python to generate data and check predictions.	August 2010 - August 2016
TEACHING EXPERIENCE	Mills College Assistant Adjunct Professor <ul style="list-style-type: none">• Abstract Algebra 2 - Spring 2017• Multivariable Calculus - Spring 2017• Abstract Algebra 1 - Fall 2016• Linear Algebra - Fall 2016 University of Arizona Graduate Teaching Assistant Wrote and delivered interactive lectures that emphasized real-world applications of mathematics as the primary instructor for the following courses: <ul style="list-style-type: none">• Linear Algebra - Fall 2014, Spring 2016• Functions for Calculus - Fall 2015• Calculus 2 - Fall 2013, Spring 2014• Calculus 1 - Spring 2013, Summer 2013• Precalculus - Fall 2012• College Algebra - Fall 2010, Fall 2011, Spring 2012, Summer 2012	August 2016 - present August 2010 - May 2016

TEACHING
EXPERIENCE
CONT.

University of Arizona, cont.

Teaching Assistant for the following courses:

- *Super TA*, Formal Mathematical Reasoning and Writing. - Spring 2015
Developed and ran a problem solving session for Arizona's Introduction to Proof Writing class. Fostered a collaborative environment among the undergraduates in the class by having the students assemble proofs on the board as a team.
- *TA*, Vector Calculus Supplemental Instruction. A problem solving seminar for students in Vector Calculus. - Fall 2014
Participated in a team of three instructors that ran a problem solving course. Assisted students as they worked in groups on challenging subject material at the white boards, and facilitated student discussions.
- *TA*, Precalculus Supplemental Instruction. A problem solving seminar for students in Precalculus. - Fall 2013
Participated in a team of three instructors that ran a problem solving course. Assisted students as they worked in groups on challenging subject material at the white boards, and facilitated student discussions.

University of Missouri, Kansas City
Graduate Teaching Assistant

August 2008 - August 2010

Taught undergraduate mathematics courses to a diverse group of learners, including traditional and non-traditional students, as the primary instructor for the following courses:

- Calculus 1 - Summer 2010
- College Algebra - Summer 2010
- Brief Calculus and Matrix Algebra - Fall 2009, Spring 2010
- Math for Liberal Arts - Fall 2009
- Precalculus - Fall 2008, Spring 2009, Summer 2009

SERVICE

Mills College

Fall 2016 - Spring 2017

- Faculty advisor for the Math Club (Möbius Band).
- Organized the Math Department Speaker Series.
- Faculty advisor for ten math majors and minors.
- Faculty advisor for the Mills College Esperanto Club.

OTHER
EXPERIENCE

Sprint
Intern for the Application Developer Program

June 2007 - December 2007

Created sample programs and wrote white papers explaining Sprint's specialized Java API's, for distribution to outside developers. Collaborated with the other interns to keep the knowledge-base up to date.

AWARDS AND
GRANTS

University of Arizona College of Science Teaching Award in Mathematics. Spring 2014.

University of Arizona Mathematics Departmental fellowship. Fall 2015-Spring 2016.

AMS JMM 2016 Travel Grant. \$500 for travel to 2016 JMM.

Clay Fund travel grant. \$200 for travel to Rutgers-Newark Junior Number Theory Days. November 20-21, 2015.

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AWARDS AND GRANTS CONT. First prize in the Physical Sciences and Mathematics division at the SEARCH Symposium for Research and Creative Achievements for presenting the poster *Graphs Based on Vector Spaces Over Finite Fields*. April 11, 2008.

TALKS *Explicit Serre Weights in Dimension Four*.
Algebra and Number Theory Seminar, University of Arizona. April 19, 2016.

Serre Weights and Graphs.
Introductory Algebra Seminar, University of Arizona. September 4 and 11, 2015.

Using in-class response systems to support interactive teaching.
Graduate Colloquium, University of Arizona. September 9, 2015.

Adventures in Calculating the Character Table of $GL(4, q)$.
Graduate Colloquium, University of Arizona. February 18, 2015.

p-adic Differential Equations.
Graduate Colloquium, University of Arizona. October 29, 2014.

Newton Polygons.
Graduate Colloquium, University of Arizona. November 5, 2013.

Braid Groups.
Undergraduate Brown Bag Seminar, University of Arizona. February 5, 2013.

CONFERENCES AND WORKSHOPS ATTENDED *Arizona Winter School 2106: Analytic Methods in Arithmetic Geometry*.
Tucson, AZ March 12-16, 2016.

Joint Mathematics Meetings.
Seattle, WA January 6-9, 2016.

Rutgers-Newark Junior Number Theory Days.
Newark, NJ November 20-21, 2015.

Johns Hopkins-Maryland Algebra and Number Theory Day.
University of Maryland, College Park. November 7, 2015.

Arizona Winter School 2015: Arithmetic and Higher-Dimensional Varieties.
Tucson, AZ March 14-18, 2015.

Arizona Winter School 2014: Arithmetic Statistics.
Tucson, AZ March 15-19, 2014.

Southwest Local Algebra Meeting.
University of Arizona, Tucson, AZ March 2-3, 2013.

Arizona Winter School 2013: Modular Forms and Modular Curves.
Tucson, AZ March 9-13, 2013.

AMS Fall Western Sectional Meeting.
University of Arizona, Tucson, AZ October 27-28, 2012.