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## EDUCATION

Texas A&M University Fall 2010–August 2016  
 Ph.D Mathematics  
 College Station, TX

University of Wisconsin-Eau Claire Fall 2006–Spring 2010  
 B.S. Mathematics with minor in Chemistry  
 Eau Claire, WI

## PUBLICATIONS

*Polynomial Equations over Matrices.* Colleen Duffy and Kaitlyn Phillipson. *Involve* (2016). To appear

*Lowest Triplet  $(n, \pi^*)$  State of 2-Cyclohexen-1-one: Characterization by Cavity Ringdown Spectroscopy and Quantum-Chemical Calculations.* Michael O. McAnally, Katherine L. Zabronsky, Daniel J. Stupca, Kaitlyn Phillipson, Nathan R. Pillsbury, and Stephen Drucker. *Journal of Chemical Physics* vol. 139 (2013)

*Fewnomial systems with many roots, and an Adelic Tau Conjecture.* Kaitlyn Phillipson and J. Maurice Rojas. *Pure Mathematics and Applications* vol. 605 (2013)

## TEACHING AND MENTORING EXPERIENCE

*Graduate Research Assistant* Summer 2015  
 University of Hawaii-Hilo, Hilo, HI

Assisted with the Pacific Undergraduate Research Experience in Mathematics (PURE Math) Interns Program. Was the lead mentor for a research project. Created and ran interactive SAGE labs. Gave a presentation at symposium to introduce Gröbner bases to audience.

*Instructor of Record* Fall 2014

Texas A&M University, College Station, TX  
 Taught “Math for All Practical Purposes” to a lecture of 95 students. Wrote and gave lectures, quizzes, and exams. Encouraged multi-disciplinary activities via optional reports.

*Assistant REU Instructor* Summer 2014

Texas A&M University, College Station, TX  
 Assisted with Summer REU. Was the lead mentor for a research project. Gave lectures, led homework discussions, prepared students for presentations. Organized several colloquia for the REU program.

*Calculus I Teaching Assistant* Fall 2013

Texas A&M University, College Station, TX  
 Duties included leading recitations and running a lab where students worked in a group on MatLab assignments.

*Assistant REU Instructor* Summer 2013

Texas A&M University, College Station, TX  
 Assisted with Summer REU. Gave lectures, led homework discussions, discussed research projects with students, prepared students for presentations. Organized several colloquia for the REU program.

*Assistant REU Instructor* Summer 2012

Texas A&M University, College Station, TX

Assisted instructor with Summer REU. Gave lectures, led homework discussions, discussed research projects with students, prepared students for presentations.

*Pre-Calculus Teaching Assistant* Fall 2011  
Texas A&M University, College Station, TX  
Duties included leading recitations, creating and grading weekly quizzes, and holding office hours.

*Freshman Year Experience (FYE) Mentor* September 2008–May 2010  
University of Wisconsin-Eau Claire, Eau Claire, WI  
Assisted with the advising for the Freshman Year Experience section of Calculus I. Held office hours, participated in social activities, and prepared a registration lesson for the students.

*Student Academic Apprentice* July 2008–May 2010  
University of Wisconsin-Eau Claire, Eau Claire, WI  
Helped with lab activities in Calculus I and II, created review guides and led review sessions for students.

## AWARDS AND HONORS

*College of Science Undergraduate Research Mentoring Award* July 2015  
Texas A&M University, College Station, TX

*College of Science Teaching Fellow* December 2014  
Texas A&M University, College Station, TX  
Selected based on student evaluations.

*L.F. Guseman Award* April 2014  
Texas A&M University, College Station, TX  
Given each spring semester to a graduate student in math with high scholastic achievement and who has demonstrated outstanding achievement in teaching, research or service.

*Mathematics Department Outstanding Senior* April 2010  
University of Wisconsin-Eau Claire, Eau Claire, WI

*Outstanding Student Presentation* November 2009  
Seven Rivers Undergraduate Research Symposium, La Crosse, WI

*Outstanding Student Presentation* August 2009  
MAA Mathfest, Portland, OR

*Award for Exceptional Achievement in Mathematics by a Senior Student* April 2009  
University of Wisconsin-Eau Claire, Eau Claire, WI  
Awarded to one or more undergraduate students each year. The selection is by a vote of the mathematics faculty.

*Blugold Fellow* September 2006–May 2008  
University of Wisconsin-Eau Claire, Eau Claire, WI  
Selected as a freshman to work with an advisor on collaborative research.

## RESEARCH PRESENTATIONS

*Linear Forms in Logarithms and Fast Topology Computation for Positive Zero Sets of Sparse Polynomials*  
September 2014  
University of Wisconsin-Eau Claire, Eau Claire, WI

*Non-negative Polynomials and Sums of Squares* March 2013  
Texas A&M University, College Station, TX

<i>Polynomial Equations over Matrices</i> Viterbo University, La Crosse, WI	November 2009
<i>Polynomial Equations over Matrices</i> Portland, OR	August 2009
<i>Optimizing Hospital Evacuation</i> UW-La Crosse, La Crosse, WI	April 2009

## RESEARCH POSTERS

<i>A Stronger Solution to Smale's Seventeenth Problem for Strongly Sparse Systems</i> AWM Workshop Poster Session at the JMM, Seattle, WA	January 2016
<i>Fast Topology Computation for Real Zero Sets of Certain Exponential Sums</i> Texas Algebraic Geometry Symposium, College Station, TX	April 2015
<i>Solutions of Polynomial Equations over Matrices</i> University of Wisconsin-Eau Claire Student Research Day, Eau Claire, WI	April 2010
<i>Solutions of Polynomial Equations over Matrices</i> MAA Undergraduate Poster Session-Joint Mathematics Meeting, San Francisco, CA	January 2010
<i>Polynomial Equations over Matrices</i> University of Wisconsin-Eau Claire Student Research Day, Eau Claire, WI	April 2009
<i>Optimizing Hospital Evacuation</i> MAA Undergraduate Poster Session Joint Mathematics Meeting, Washington, D.C.	January 2009

## GRANTS

<i>MAA Dolciani Mathematics Enrichment Grant (\$3000)</i> Texas A&M University, College Station, TX To be used for Math Circle	Fall 2014–Fall 2015
<i>Faculty/Student Research Collaboration Grant (Two \$2400 Grants)</i> University of Wisconsin-Eau Claire, Eau Claire, WI	Fall 2008–Fall 2009

## OUTREACH ACTIVITIES

<i>TAMU Math Circle</i> - Co-organizer Texas A&M University, College Station, TX Assisted students with the activities, developed and presented activities for the students.	February 2013–May 2016
<i>Women in Math Mentoring Lunches</i> - Co-organizer Texas A&M University, College Station, TX Helped to organize lunches for women in mathematics. The lunches focus on topics and issues of interest to graduate students, each with a specific theme.	Fall 2014–Spring 2016
<i>Judging for MAA Undergraduate Poster Session</i> - Judge Joint Mathematics Meeting, Seattle, WA Evaluated undergraduate research posters and gave constructive feedback.	January 2016
<i>Pi Day of the Century</i> - Co-organizer Texas A&M University, College Station, TX Organized a Pi Day celebration with Prof. Frank Sottile for the community.	March 2015

- TAMU Math Mini Fair* - Volunteer April 2013  
Texas A&M University, College Station, TX  
Helped with Math Mini-fair in April of 2013, 2014, and 2015. Duties included: running an art booth on Hexaflexagons, giving demonstrations of Galton box, supervising game room, and assisting with logistics.
- TAMU Physics and Engineering Festival* - Volunteer March 2013  
Texas A&M University, College Station, TX  
Helped run math booth at festival in March 2013 and 2014.

## OUTREACH PRESENTATIONS AND POSTERS

- From 5th to 12th: Discoveries and Challenges of Multi-leveled Math Circles* January 2016  
Joint Mathematics Meeting, Seattle, WA
- The Art Gallery Problem* September 2015  
Math Teachers' Circle of Austin, Austin, TX
- The Art Gallery Problem* April 2015  
East Texas Math Teachers' Circle, Nacogdoches, TX
- The Art Gallery Problem* March 2015  
Mid Cities Math Circle, Arlington, TX
- Texas A&M Math Circle* January 2015  
Outreach Poster Session-Joint Mathematics Meeting, San Antonio, TX

## ORGANIZATIONS

- AMS Graduate Student Chapter-President and Founder* Fall 2013-Spring 2014  
Texas A&M University, College Station, TX
- (Mathematics) Graduate Student Organization-Representative* Fall 2012-Spring 2014  
Texas A&M University, College Station, TX
- UWEC Math Club-President* Fall 2009-Spring 2010  
University of Wisconsin-Eau Claire, Eau Claire, WI
- Kappa Mu Epsilon Wisconsin Gamma Chapter-President* Fall 2009-Spring 2010  
University of Wisconsin-Eau Claire, Eau Claire, WI

## WORKSHOPS AND CONFERENCES

- Joint Mathematics Meeting* January 2015  
San Antonio, TX
- AMS Sectional Meeting* September 2014  
University of Wisconsin-Eau Claire, Eau Claire, WI
- SIAM Conference on Applied Algebraic Geometry* August 2013  
Colorado State University, Fort Collins, CO
- From Dynamics to Complexity: A conference celebrating the work of Mike Shub* May 2012  
Fields Institute, Toronto, Canada
- Joint Mathematics Meeting* January 2010  
San Francisco, CA