

# CRAIG GROSS

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## Contact Information

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## Education

Present	Ph.D. Applied Mathematics, Michigan State University, East Lansing, (Anticipated May 2022), Advisor: Mark Iwen
May 2017	B.S. Mathematics & Computer Science, summa cum laude, University of Arizona, Tucson, Advisor: Andrew Gillette

## Research Interests

Numerical partial differential equations, uncertainty quantification, compressive sensing.

## Publications

### Undergraduate

- A. GILLETTE, C. GROSS, AND K. PLACKOWSKI, *Numerical studies of serendipity and tensor product elements for eigenvalue problems*, *Involve*, 11 (2018), pp. 661–678

## Workshops and Conferences

### Workshops attended

- PDE-based uncertainty quantification, Argonne National Laboratory, Lemont, IL, 2019.
- Finite element method for eigenvalue problems, Michigan Technological University, Houghton, MI, 2016.

### Conferences attended

- Concentration week in randomness and determinism in compressive data acquisition, Texas A&M, College Station, TX, 2019.

## Other Talks

- *Summary of restricted isometries of partial random circulant matrices*. Presentation for course in applied computational and harmonic analysis, Michigan State University, 2019.
- *Summary of weighted  $\ell_1$  minimization*. Informal compressive sensing seminar, Michigan State University, 2019.

## Teaching Experience

### Michigan State University

- Teaching assistant

Fall	2019	Differential equations (Recitation instructor)
Spring	2019	Differential equations (Recitation instructor)
Fall	2018	Survey of calculus (Instructor)
Summer	2018	Calculus I, online section (Exam writing, live-streaming review sessions, compiling supplemental instructional material)
2017–	Present	Math learning center tutor
- Other projects

Summer	2019	Producing screen-cast video introductions and recaps of MATLAB-based programming labs for application focused sections of Calculus II. Collaborated with and supervised undergraduate assistant in producing accompanying text-based introductions.
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- Teaching mentorship

Fall	2019	Lead TA, Calculus II (Observing, holding meetings with, and mentoring new teaching assistants)
Spring	2018	Teaching mentor to first year graduate student
- Teaching training

2017–	2018	Introductory teaching workshop from Center for Instructional Mentoring
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### University of Arizona

- Undergraduate teaching assistant

Spring	2014	Calculus I
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## Scholarships and Awards

2017	Department of mathematics recruiting fellowship, Michigan State University (\$8,000)
2017	Early start fellowship, Michigan State University (\$6,000)
2017	Excellence in undergraduate research for Mathematics Department and finalist for College of Science, University of Arizona
2013 – 2017	Arizona wildcat excellence scholarship, University of Arizona (\$40,000)
2013 – 2016	Worth and Dot Howard Foundation Scholarship (\$4,000)
2015	Galileo Scholar, University of Arizona (\$1,000)

## Selected Graduate Coursework

- Measure theory
- Complex analysis
- Numerical linear algebra
- Numerical ODE
- Introduction to PDE (two semesters)
- Elliptic regularity
- Numerical PDE
- Probability
- Applied harmonic analysis: compressive sensing
- Machine Learning

## Relevant Skills

Proficiency	MATLAB, Mathematica, Java, C, Git, L <sup>A</sup> T <sub>E</sub> X
Familiarity	Python