

Opal GRAHAM

Florida State University
Department of Mathematics
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EDUCATION

- MAY 2020[†] Doctorate in PURE MATHEMATICS, **Florida State University** Tallahassee, FL
Dissertation: *Rigidity of Points, Circles, and Spheres* | Advisor: Dr. Philip BOWERS
- AUG 2016 Master of Science in MATHEMATICS, **Florida State University** Tallahassee, FL
- AUG 2014 Bachelor of Arts in MATHEMATICS, **University of North Florida** Jacksonville, FL
Thesis: *Lie Symmetries of the Klein-Gordon Equation* | Advisor: Dr. Jose FRANCO
Honors in the Major
- AUG 2012 Associate of Arts, **Florida State College at Jacksonville** Jacksonville, FL

SCHOLARSHIPS & AWARDS

- FA 2018 - SP 2020 FSU Dean's Scholarship (& FA 2016 - SP 2017)
- AUG 2019 Qian Endowment for Excellence travel support
- APR 2019 Clara Kibler Davis Scholarship
Outstanding Graduate Student in the field of Mathematics
- APR 2019 Distinguished Teaching Assistant Recognition Award
- APR 2019 1st Place in Graduate Student Research Week Poster Competition
- APR 2015 2014-2015 UNF Outstanding Student in Mathematics
- MAY 2014 UNF SOARS Undergraduate Award for Talk Presentation
- 2010-2014 Bright Futures Scholarship—Florida Academic Scholars Recipient

RESEARCH INTERESTS

- Discrete Geometry – Rigidity, flexibility, and existence of discrete structures.
- Inversive, Hyperbolic, and Projective Geometry

[†] = expected graduation date

SOARS = Showcase of Osprey Advancement in Research and Scholarship

PROFESSIONAL EXPERIENCE

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| DEC 2019 | Instructor of record for Calculus I (MAC 2311) | DGTA, FSU |
| AUG 2019 | <ul style="list-style-type: none"> -Lectured to over 100 students three times per week. -Delegated quizzes and review to recitations TA. -Worked with students in office hours. -Wrote and graded tests. | |
| MAY 2019 | Instructor of record for Vector Calculus (MAP 4153) | SGTA, FSU |
| JAN 2019 | <ul style="list-style-type: none"> -Prepared and gave proof-based lectures for upperclassmen. -Worked with students in office hours and review sessions. -Wrote, administered, and graded tests. | |
| DEC 2018 | Instructor of record for Discrete Math II (MAD 3105) | SGTA, FSU |
| AUG 2018 | <ul style="list-style-type: none"> -Lectured to computer science majors 3 times a week. -Guided students in constructing proofs correctly. -Worked with students in office hours and review sessions. -Wrote, administered, and graded quizzes and tests. | |
| AUG 2018 | Instructor of record for Calculus II (MAC 2312) | SGTA, FSU |
| MAY 2018 | <ul style="list-style-type: none"> -Lectured to students 4 times per week. -Worked with students in office hours and review sessions. -Wrote, administered, and graded quizzes and tests. | |
| MAY 2018 | Instructor of record for Calculus I (MAC 2311) | SGTA, FSU |
| JAN 2018 | <ul style="list-style-type: none"> -Lectured to students 3 times per week. -Worked with students in office hours and review sessions. -Wrote, administered, and graded quizzes and tests. | |
| DEC 2017 | Recitations TA for Discrete Math I (MAD 2104) | SGTA, FSU |
| AUG 2017 | <ul style="list-style-type: none"> -Organized group activities each week, promoting collaboration. -Created quizzes that encouraged critical thinking. -Provided constructive feedback when grading quizzes and tests. | |
| MAY 2017 | Instructor of record, Precalculus (MAC 1140 – 2 semesters) | SGTA, FSU |
| AUG 2016 | <ul style="list-style-type: none"> -Prepared and gave lectures and labs geared towards student interaction. -Used students' result statistics in MML to assess issues. -Showed students how to improve study habits in office hours. | |
| AUG 2016 | Assistant to Math Coordinator of TAs | SGTA, FSU |
| JUNE 2016 | <ul style="list-style-type: none"> -Created an original MML question used in all FSU Precalculus courses. -Organized the pacing for all FSU fall 2016 calculus courses. -Updated html files for the math department. | |

 DGTA = Distinguished Graduate Teaching Assistant, SGTA = Senior Graduate Teaching Assistant

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| MAY 2016 | Recitations TA for Calculus II | SGTA, FSU |
| JAN 2016 | <ul style="list-style-type: none"> -Ran weekly specialized question and answer sessions. -Created quizzes to assess students' understanding of material. -Graded quizzes and tests, and provided feedback. | |
| DEC 2015 | CAI Proctor for Liberal Arts Math I, II, College Algebra, Business | |
| AUG 2014 | Calculus, Trigonometry, Precalculus | GTA, FSU |
| (SU' 2017, SU' 2019) | <ul style="list-style-type: none"> -Prepared for and managed labs. -Worked with students in office hours. -Proctored quizzes and tests. | |
| AUG 2014 | Math Tutor | ACE/PATH at UNF |
| AUG 2012 | <ul style="list-style-type: none"> -Assisted students in algebra, precalculus, trigonometry, calculus I-III, elementary statistics, discrete math, and differential equations. -Reinforced reading comprehension, and critical thinking. -Attended tutor training each semester. -Volunteered at family weekends and leadership summits. | |
| AUG 2012 | Math Tutor | ASC at FSCJ |
| DEC 2010 | <ul style="list-style-type: none"> -Aided in basic, intermediate, and college algebra, liberal arts math, precalculus and trigonometry. -Acted as a class assistant for up to 30 students per class. -Taught organizational skills and independent thinking to non-traditional students. | |

TALKS & POSTERS

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| JAN 2020 | <i>Rigidity of Points, Circles, and Spheres</i> Joint Mathematics Meeting – Denver, CO |
| NOV 2019 | <i>Rigidity of Points and Planes in Hyperbolic Space</i> Geometry & Topology Seminar, FSU |
| AUG 2019 | <i>Uniquely Placing a Pair of Points via Cross Ratios</i> Circle Packing Symposium, University of Tennessee–Knoxville, TN |
| MAR 2019 | <i>A Correspondence Between Projective Geometry and Circle Geometry</i> Graduate Student Flash Talk Colloquium Competition, FSU |
| MAR 2019 | <i>Rigidity of Configurations of Points and Spheres</i> Graduate Student Poster Competition, FSU |
| FEB 2019 | <i>Rigidity of Configurations of Points and Spheres</i> UF/FSU Topology and Geometry Meeting, FSU |
| AUG 2018 | <i>Rigidity of Configurations of Points and Spheres</i> Circle Packing Symposium, James Madison University–Harrisonburg, VA |

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| JULY 2017 | <i>Möbius Rigidity of Projective Polyhedra</i> Candidacy Talk, FSU |
| JUNE 2017 | <i>Circle Polyhedra and Projective Polyhedra</i> Circle Packing Workshop, James Madison University— Harrisonburg, VA |
| APR 2017 | <i>Partial Correspondence Between Projective Polyhedra and Circle Polyhedra</i> Graduate Student Seminar, FSU |
| MAR 2017 | <i>Proof of Rigidity of Tangency Circle Packings, Parts I, II</i> Geometry Seminar, FSU |
| NOV 2016 | <i>Ma-Schlenker C-Octahedra in the 2-Sphere</i> Geometry & Topology Seminar, FSU |
| OCT 2016 | <i>Overview of Cauchy's Rigidity Theorem</i> Graduate Student Seminar, FSU |
| OCT 2016 SEPT 2016 | <i>The Proof of Cauchy's Rigidity Theorem, Parts I, II</i> Geometry Seminar, FSU |
| AUG 2014 | <i>Classification of Semisimple Lie Algebras</i> Pi Mu Epsilon—MAA MathFest —Portland, OR |
| MAY 2014 | <i>Lie Symmetries of the Klein-Gordon Equation</i> SOARS Conference, University of North Florida — Jacksonville, FL |

ADDITIONAL MATH MEETINGS & CONFERENCES

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| MAY 2019 | Georgia Topology Conference University of Georgia — Athens, GA |
| JULY 2018 | SIAM Annual Meeting Oregon Convention Center Portland, OR |
| MAR 2017 | AMS Sectional Meeting College of Charleston Charleston, SC |

LEADERSHIP, OUTREACH & SERVICE

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| FALL 2019 | Co-organizer for Graduate Student Seminar -Planned, advertised, and introduced weekly talks by graduate students. |
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SOARS = Showcase of Osprey Advancement in Research and Scholarship

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| SEPT 2019 — PRESENT | Mentor, AWM FSU Student Chapter -Paired with an undergraduate at FSU to explore career in math. -Offered advice on graduate research process and options. -Met with student monthly. |
| FEB 2019 | Assistant, UF/FSU Topology and Geometry Meeting -Prepared materials for attendees. -Ran check-in table for meeting and dinner. |
| NOV 2017 | FSU High School Math Contest Grader -Assisted in scoring high school students' proofs for FSU's annual math contest. |
| AUG 2017 — AUG 2018 | President of AWM FSU Student Chapter -Organized meetings and community outreach. -Managed fundraisers for future projects. -Hosted undergraduate-graduate social events. -Spoke to undergraduates about aspects of my research. |
| SEPT 2016 | Volunteer, FSU Math at Tallahassee Science Festival -Ran the FSU Math booth at the Tallahassee Science Festival. -Taught people about fractals and symmetries through tactile constructions. |
| 2015 — PRESENT | Prospective/Incoming Graduate Student Liaison -Hosted prospective FSU students by taking them to lunch, touring campus, answering questions, and discussing grad life. -Met annually with the incoming pure math graduate students. -Gave advice about how to succeed in the first year of school. |
| 2014 — PRESENT | Volunteer, Annual FSU Math Fun Day -Activity leader for projects like 'Fibonacci Sequence in Nature,' 'Flexibility and Rigidity of Polyhedra,' and running a 'Women in Math' room. -Activity Leader, 1st annual Math Fun Day FSU—Panama City. -Taught K-12 students about hyperbolic geometry using crochet. -Coordinated a Math Escape room. |

CERTIFICATIONS AND TRAINING

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| 2018 | Canvas Training —FSU Math Department |
| 2018 | MyMathLab Training —FSU Math Department |
| 2016 | FSU PIE Teaching Training Recognition |
| 2016 | FSU Advanced PIE Teaching Training Recognition ^{sem} |
| 2015 | TA Class and Supervised Teaching—FSU Math Department ^{sem} |

sem = Semester-long obligation,

PIE = Program for Instructional Excellence

PROFESSIONAL MEMBERSHIPS AND ASSOCIATIONS

- 2016–PRESENT Association for Women in Mathematics (AWM)
AWM FSU Student Chapter President—(2017 - 2018)
- 2014–PRESENT American Mathematical Society (AMS)
- 2013–PRESENT Pi Mu Epsilon (PME)

COMPUTER SKILLS

Basic Knowledge: HTML, CSS, MYMATHLAB, WEBASSIGN, BLACKBOARD
Intermediate Knowledge: GEOGEBRA, \LaTeX , EXCEL, WORD, POWERPOINT, CANVAS

PROFESSIONAL REFERENCES

- Dr. Philip BOWERS *Dwight B. Goodner Professor of Mathematics*
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Phone: (850) 644-2202
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- Dr. Penelope KIRBY *Coordinator of Graduate Teaching Assistants*
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- Mr. James WOOLAND *Teaching Faculty III*
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- Dr. Kathleen PETERSEN *Associate Professor*
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