

Gillian Carr

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EDUCATION

St. Mary's College of Maryland (SMCM)

St. Mary's City, MD

Bachelor of Science in Mathematics and International Languages and Cultures: Spanish

May 2022

- Minors in Applied Mathematics and History
- Summa Cum Laude
- Phi Beta Kappa
- Senior Award in Mathematics

University of Florida

Gainesville, FL

Doctor of Philosophy in Mathematics

Expected May 2027

- Entered program August 2022
- Studied mathematical biology

WORK EXPERIENCE

Graduate Teaching Assistant

Fall 2022 – Present

Analytic Geometry and Calculus 1 and Survey of Calculus 1

University of Florida

- Taught weekly discussion classes to review lecture material
- Led office hours and review sessions to address individual student questions
- Graded and proctored quizzes and exams

Undergraduate Teaching Assistant

Fall 2020 – Spring 2022

Calculus II, Vector Calculus, and Differential Equations

SMCM

- Math TA Award (2020-21 School Year)
- Graded and offered feedback on assignments
- Led review sessions and assisted with small group activities

Private Calculus Tutor

Fall 2020 – Fall 2021

Calculus I, Calculus II, Multivariable Calculus, and Differential Equations

Virtual

- Prepared notes to supplement class instruction
- Personalized activities for the needs of the student
- Explained solutions for practice problems and led study sessions

Mathematics Tutor

Spring 2022

Office of Student Support Services

SMCM

- Offered tutoring for various lower-level and upper-level mathematics courses
- Supplemented class instruction with additional explanations
- Helped students prepare for exams

Student Ambassador

Fall 2021 – Spring 2022

Office of Admissions

SMCM

- Gave campus tours to interested students and their families
- Assisted with admissions mailings and other office work
- Worked open houses and engaged with potential applicants

RESEARCH

Senior Project in Mathematics

Spring 2022

Role of mixotrophic zooplankton in seasonally-forced plankton blooms

SMCM

- Awarded best student presentation at Spring 2022 MD-DC-VA MAA Sectional Conference
- Created ODE mixotrophic plankton model with seasonal light intensity
- Used MatLab to solve model and investigate causes of plankton blooms
- Advised by Dr. Seth Cowall

St. Mary's Project

Fall 2021 – Spring 2022

Modeling CAR T-cell immunotherapy treatment of hematological cancer and CRS toxicity

SMCM

- Created ODE blood cancer immunotherapy model that tracked toxicity from the treatment
- Solved model in R and conducted stability and sensitivity analyses
- Presented results to faculty and peers
- Advised by Dr. Alex Meadows and Dr. Emek Köse

Research Experience for Undergraduates

June 2021 – July 2021

Texas Tech University

Virtual

- Presented research at the RedRaider Minisymposium virtual poster session in August 2021
- Developed on a PDE model of the Brownian movement of bacteria with limited food
- Gave weekly progress report presentations to other REU participants and advisors
- Created a final written report, poster, and presentation of the research results

LEADERSHIP AND CAMPUS INVOLVEMENT

Secretary

Fall 2021 – Spring 2022

SIAM and AWM Student Chapters

SMCM

- Created records of Executive Board meetings
- Planned and participated in chapter events
- Encouraged new SIAM and AWM student membership

Treasurer

Fall 2020 – Spring 2022

Equestrian Club

SMCM

- Managed finances and budget of the club
- Calculated member costs and organized fee collection
- Organized fundraisers and volunteered at barn activities

Resident

Fall 2019, Fall 2020 – Spring 2022

Women in Science Housing

SMCM

- Lived in supportive environment with other women interested in STEM
- Attended meetings with female faculty to learn about their research and receive advice
- Helped organize events to encourage participation in STEM for middle school girls

ADDITIONAL SKILLS

Foreign Language: Spanish

Math Programs: L^AT_EX, MatLab, R