

CHRIS GERLACH

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EDUCATION

PhD Computational Mathematics, Science, & Engineering | *Michigan State University* 2023-Present
MS Applied Mathematics | *San Jose State University* 2021-2023
BA Mathematics | *San Jose State University* 2018-2021

TEACHING EXPERIENCE

Math Specialist | *Tessellations School* 2021-2023

- Developed and taught project-based curricula covering Geometry through Calculus and programming, fostering critical thinking and problem-solving skills in middle school students.
- Led the vertical alignment and differentiation of math courses from elementary through college level.
- Mentored students in national math competitions, leading to several first-place and ranked finishings.
- Designed a foundational high school math and data science curriculum including AP integration and interdisciplinary labs.

Math SAT Prep Tutor | *Insight Education* 2019-2021

- Delivered intensive SAT targeted instruction in algebra, geometry, data analysis, and advanced math topics, helping high school students improve their test-taking skills
- Created custom practice materials, focused on problem-solving and time management skills.
- Raised student scores through targeted, skills-based instruction, improving college admissions.

Math Teaching Assistant, Workshop Facilitator & Exam Grader | *San Jose State University* 2019-2021

- Taught seminar courses in College Algebra through Calculus III
- Managed classroom activities, assessed assignments, and provided support through regular office hours.

RESEARCH EXPERIENCE

PhD Research Assistant: Machine Learning and Biomedical Imaging | *Michigan State University* 2023-Present

Summer Research Fellow: Optimal Auction Design | *Simons Laufer Mathematical Sciences Institute* 2023

Graduate Research Assistant: Computational Plasma Physics | *San Jose State University* 2021-2023

Undergraduate Research Assistant: Blockchain Analysis | *San Jose State University* 2020-2021

CONFERENCE PROCEEDINGS

65th Annual Meeting of the APS Division of Plasma Physics | *Speaker* 2023

50th IEEE International Conference of Plasma Science | *Speaker* 2023

64th Annual Meeting of the APS Division of Plasma Physics | *Speaker* 2022

49th IEEE International Conference of Plasma Science | *Invited Speaker* 2022

PROFESSIONAL CERTIFICATIONS

IBM Data Science Professional Certificate | *Coursera* 2024

IBM Machine Learning Certificate | *Coursera* 2024

DeepLearning.AI TensorFlow Developer Certificate | *Coursera* 2023

SKILLS

Programming: *Python, C++, MATLAB, R, CUDA, SQL, LaTeX* | *G-Suite* | *Microsoft Office* | Languages: *Fluent in Spanish*

Awards

"AI and Data Enabled Predictive Multiscale Modeling across STEM" NSF Research Traineeship 2023