Sean Riedel
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Summary: I am a graduate student pursuing a research career in scientific computing and applied mathematics. I have experience conducting research in pure mathematics as well as applied and computational physics. I also have substantial teaching and leadership skills from planning and facilitating weekly group tutoring sessions for undergraduate classes in math and physics. I am interested in using high performance computing and mathematical models to solve problems relating to clean energy generation, energy storage, and climate modeling.

Education

B.S. in Mathematics, University of California, Santa Cruz — June 2021
- Minor in Physics
- GPA 3.9
- Member of the NCAA Cross Country and Track teams

M.S. in Applied Mathematics and Scientific Computing, University of California, Santa Cruz — June 2022 expected

Experience

Summer Intern, Los Alamos National Laboratory X Computational Physics Division — Summer 2021
- Implemented the Rutherford scattering model in a large, C++, Monte Carlo charged particle transport (CPT) code library
- Performed code to code verification using two other CPT codes at the laboratory

Math and Physics Tutor, UCSC Learning Support Services — 2019 - 2021
- Conducted 3 weekly small group tutoring sessions focused on engagement of students
- Prepared weekly planning sheets with detailed activities
- Courses tutored for include: Waves and Optics, Real Analysis, Abstract Algebra, Linear Algebra, Vector Calculus and Discrete Mathematics.

Undergraduate Researcher, Polymath Research Experience for Undergraduates — Summer 2020
- Developed a visualization tool for representing convex geometries using circles in the plane
- Contributor on a paper with cohort of 12 students and our mentor Professor Kira Adaricheva

Program Mentor, UCSC Learning Support Services — 2019
- Trained and mentored other tutors
- Conducted quarterly performance reviews of other tutors

ATLAS electronics testing assistant, Santa Cruz Institute for Particle Physics — 2018
- Collected data used to analyze the effects of annealing on silicon strip particle detectors

Honors

Highest GPA of all UCSC male student athletes — 2019
- Awarded for a GPA of 3.98 at the time

CoSIDA Academic All-District — 2020
- Men's Track & Field/Cross Country

Skills

Programming: C++, Matlab, Python, Fortran, Git
LaTeX: Proficient in mathematical and scientific document typesetting
Spanish: I am able to read, write, and speak Spanish at a basic level
Mountain Unicycling: I enjoy riding my unicycle in places most people would be scared to hike