

Jay Bonthius

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Education

M.A. in Applied Mathematics

University of California at San Diego

June 2020

- Comprehensive Exams in Complex Analysis and Numerical Optimization
- Research emphasis in Undergraduate Math Education
- Major GPA 3.85

B.S. in Mathematics

University of California at San Diego

June 2016

- Major GPA 3.86 (Honors Cum Laude)

Teaching Experience

Adjunct Instructor of Mathematics

Portland Community College

Fall 2020 – present

- Instructor of statistics

Teaching Assistant

UCSD Department of Mathematics

Fall 2015 – Summer 2020

- Planned and implemented weekly discussion sections, held weekly office hours, wrote and proctored exams, and graded student work
- Implemented virtual learning environments during the COVID-19 pandemic
- Courses taught:
 - PreCalculus
 - Single/Multivariable Calculus
 - Vector Calculus
 - Linear Algebra
 - Differential Equations
 - Statistics and Probability
 - Discrete Math
 - Design and Analysis of Algorithms
 - Euclidean Geometry
 - Intro to Teaching Mathematics I, II

SI Curriculum Developer

UCSD Academic Achievement Hub

Spring 2020 – Summer 2020

- Developed curriculum for supplemental instruction calculus workshops
- Used diagnostic testing results to shape curriculum according to need

High School Math Teacher

e³ Civic High School, San Diego, CA

Fall 2016

- Served as the teacher of record for Precalculus, Integrated Math I, and Integrated Math 1 Readiness
- Developed lesson plans consistent with the Common Core State Standards
- Wrote homework and exams to assess student performance
- Tutored in after-school program to assist under-performing students

Tutoring Experience

Graduate Teaching Associate

San Diego State University Department of Mathematics

Fall 2016

- Planned and implemented of weekly discussion sections, held weekly office hours, and graded student work for a Calculus II course

Private Tutor

WyzAnt Inc.

June 2016 – Summer 2020

- Tutored high school and college math students in subjects ranging from algebra to upper-division, proof-based math
- Used virtual learning tools to tutor remotely during the COVID-19 pandemic

Educational Technician

San Diego Miramar Community College Math Lab

Spring 2018

- Planned, implemented and monitored individualized educational programs for community college mathematics students.
- Tutored students in a drop-in lab setting

Tutor

UCSD Calculus Lab

Fall 2015 – Spring 2016

- Provided one-on-one, drop-in tutoring for students in UCSD's lower division math courses, primarily in calculus, differential equations, and linear algebra

Workshop Leader

UCSD Office of Academic Support & Instructional Services

Winter 2015 – Spring 2016

- Held twice-weekly supplemental math workshops with a targeted emphasis on developing confidence in mathematics and alleviating math anxiety

Research Projects

Math Animation Software

UC San Diego

2019 – 2020

- Developed a simple user interface for a math animation python library
- Created intuitive math animations for an introductory linear algebra course

Math Education Reading Group

UC San Diego

2017 – 2019

- Engaged in a weekly mathematics education reading group with Dr. Guershon Harel, Dr. John Eggers, and a few graduate students
- Discussed the teaching of linear algebra, introductory proof, and first-semester calculus within the DNR framework

Cognitive sciences of mathematics

UC San Diego

Winter 2018

- Discussed research in the field of cognitive science of mathematics with Dr. Rafael Núñez and other graduate students, with a focus on implications in mathematics education