Dante Buhl

Personal Information

University of California Santa Cruz,
Department of Engineering,
Santa Cruz, CA, 95064
Address: Personal Website

Citizenship: U.S.A
Date of Birth: 27th November 2001
E-mail: dbuhl@ucsc.edu

Research Interests

Fluid Dynamics, Dynamical Systems, High Performance Computing, Machine Learning, PDE based research

Employment

University of California Santa Cruz
Department of Applied Mathematics UCSC, Santa Cruz, California, USA
Teaching Assistant: September 2023 – Current.

Towson University REU
Department of Mathematics, Towson, Maryland, USA
Research Assistant: June 2023 – August 2023

University of California Santa Cruz
Learning Support Services, Santa Cruz, California, USA
Peer-Group Tutor: September 2022 – June 2023.

Education

Masters of Science (August 2023-Current)
Major: Scientific Computing and Applied Mathematics; Thesis: Fluid Dynamics
Department of Applied Mathematics, Santa Cruz, California, USA

Bachelors of Arts (September 2020-June 2023)
Major: Mathematics; GPA: 3.74; Graduated with highest honors in the major
Department of Mathematics, Santa Cruz, California, USA

Research Experience

Master's Thesis
Topic: Investigating the effect of rotation on stratified turbulence
Advisor: Pascale Garaud
UC Santa Cruz Applied Mathematics, Fall 2023 - Spring 2024

Simulating Spherical Ciliated Organism Locomotion
Topic: Machine-Learning methods for solving Navier-Stokes in a Stokes Flow environment with spherical boundaray conditions
Advisor: Herve Nganguia
Towson University Mathematics REU, Summer 2023

Boxes and Balls: Quantifying Chaos
Topic: Numerical Methods for computing the fractal dimension of chaotic attractors
Mentor: John G. Pelias
Directed Reading Program, UC Santa Cruz Mathematics Dept., Winter 2023

The Pow-der of Ani-snow-tropy
Topic: Investigation of the Lorenz Ski-Slope system from, *The Essence of Chaos* by Edward Lorenz
AM 214: Applied Dynamical Systems, UC Santa Cruz, Fall 2022

Teaching Experience

Math 19A (TA: Fall 2023, Peer-Group Tutor: Fall 2022): Calculus for Science, Engineering, and Mathematics
Math 11A (Peer-Group Tutor: Winter-Spring 2023): Calculus with Applications

Awards And Recognitions

Next Gen. Scholars in Applied Mathematics UC Santa Cruz 2023.
T&LC Graduate Pedagogy Fellowship UC Santa Cruz

Languages and Other Activities

Intermediate Spanish
Secretary and Member of Slugs United by Mathematics Math Club (2022-current)
Proficient in Fortran, Python, Matlab, Java, and Excel.

References

Pascale Garaud
Chair of Applied Mathematics Dept.,
Professor of Applied Mathematics,
University of California Santa Cruz,
606 Engineering Loop
Santa Cruz, CA 95064

Herve Nganguia
Assistant Professor of Mathematics,
Towson University,
7800 York Road
Towson, MD 21252

Chris Edwards
Professor of Ocean and Earth Sciences,
University of California Santa Cruz,
Earth and Marine Sciences Building, 447
Santa Cruz, CA 95064

Hongyun Wang
Professor of Applied Mathematics,
University of California Santa Cruz,
606 Engineering Loop
Santa Cruz, CA 95064