JAXON STUHR

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EDUCATION

University of California, Santa Barbara *Sep 2021 - Current*
PhD in Environmental Science and Management
University of California, Berkeley *May 2020*
BA in Physics

RESEARCH AND INTERNSHIP EXPERIENCE

Bren School of Environmental Science and Management Sep 2021 - Current
PhD Student focused on LCA, Energy Systems, and Decarbonization *PI: Dr. Eric Masanet*

· Coupling physical modelling and data science skills to predict, analyze, and optimize decarbonization pathways for the United States Industrial Sector

Argonne National Laboratory August 2020 - April 2021
SULI Energy Systems Division Intern *PI: Dr. Troy Hawkins*

· Forecasted the decarbonization potential of biofuel usage in the Marine Shipping Sector
· Produced Environmental Impact Assessments for 18 novel Biofuel pathways using life-cycle inventory data developed by teammates at Argonne
· Integrated Supply and Demand data into an existing model of total energy usage and greenhouse gas emissions in the transportation sectors to better understand the potential impact of Biofuels

Scripps Institute of Oceanography May 2019 - July 2019
Marine Physical Laboratory Summer Intern *PI: Dr. Jules Jaffe*

· Conducted an independent research project studying bacterial motility in which I rapidly took pictures with a submersible microscope, processed the images, optimized a particle tracking algorithm to differentiate the bacteria from ambient noise, and analyzed the data to determine mean velocities (MATLAB)

California Polytechnic State University, SLO September 2017 - June 2018
Undergraduate Neutrino-Physics Research *PI: Dr. Stephanie Wissel*

· Independently programmed the geometry and circuitry of an antenna to compare with experimental data from an antenna array in Antarctica and ran wave impulse simulations (XFdtd)
· Edited code (C++) to integrate data from an antenna model into a large-scale simulation code working with collaborating scientists in England via weekly Skype meetings

EMPLOYMENT

UC Berkeley Physics Department January 2020 - August 2020
Graduate Student Instructor for Physics Department

· Worked full-time as an Undergraduate GSI for the Physics department lecturing, providing and explaining practice problems, leading laboratories, and grading
· Transitioned to online teaching and utilized creative ways to give Physics demonstrations and maintain students engagement while teaching over Zoom

PUBLICATIONS

The simulation of the sensitivity of the Antarctic Impulsive Transient Antenna (ANITA) to Askaryan radiation from cosmogenic neutrinos interacting in the Antarctic Ice
January 2019

· Work I did on neutrinos contributed to and was included in an Institute of Physics Journal of Instrumentation paper

COMPUTER LANGUAGES AND SOFTWARE

R, RStudio, Python, MATLAB, Excel, VBA, GREET, LabVIEW, Latex