Dallas Roberts

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WORK EXPERIENCE

LAB MANAGER | Summer 2021 – Current

Working as a lab manager for the fluid mechanics laboratory in the Chemical and Biomolecular Engineering department at Cornell University. Responsibilities include: setting up experimental equipment, performing experiments with particle suspensions and optical equipment, experimental design, experimental equipment design, training and evaluating lab members, and supplies orders.

RESEARCH ASSISTANT | Summer 2019 – Spring 2020

Worked as an undergraduate assistant for graduate students in the mechanical engineering department fluids lab at Ohio University, Athens. Continued the experimentation as an undergraduate researcher.

- Performed and assisted with data collection and analysis using Particle Imaging Velocimetry (PIV). Experience using pylonviewer software, high pressure pumps, high power laser, and Basler camera
- Maintain experimental setup including mixing particle suspensions, cleaning PMMA particles ranging from 75 - 90 µm, repairing leaks in the experimental channel, experience with using sonicator, and washing connective tubing, glassware, and sieves

EDUCATION

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING | Ohio University, Athens, Ohio

August 2016 - May 2021 | GPA: 3.364

- Relevant course work: Machine Design, Mechatronics, Principles of Engineering Materials, Dynamics, Thermodynamics, Differential Equations, Intro to Manufacturing processes, Experimental Design, programming in C, Basic Electrical Engineering I and II, Heat and Fluid Transport I and II, Kinematics and Dynamics, Systems Analysis and Control, Manufacturing and Design Lab, CAD, Applied Numerical Methods

ASSOCIATE OF SCIENCE | Columbus State Community College, Columbus, Ohio

Autumn 2016 – Spring 2018 | GPA: 3.867

- Completed the honors program and Future Scientist of Ohio Scholarship course work. Course work included: Engineering Mathematics A, Calculus III, Linear Algebra, Calculus-based Physics I and II, Fundamentals of Engineering I and II, Statics & Introduction to Mechanics of Materials.

SKILLS

- Experience with Solidworks, MatLab, LASER alignment, handling 50-100 µm particles, camera and optical lens operation and setup
- Introductory experience with machining, programming in C, and Python
- Analytical abilities, excellent written and oral communication, excellent mechanical abilities, excellent math skills, works well as a team member, strong critical thinking skills, Microsoft Word, Excel, and PowerPoint

ACTIVITIES/MEMBERSHIPS/HONORS RECEIVED

- 2021 Bachelor of Science degree in mechanical engineering (Ohio University
- 2020 Recipient of Provost Undergraduate Research Fund
- 2019-20 Co-author of AIChE 2020 Shear-induced migration and axial development of particles in channel flows of non-Brownian suspensions
- 2016-18 Recipient of the Choose Ohio First Scholarship
- 2016-18 STEM Club (Columbus State Community College)
- 2017-18 Phi Theta Kappa Alpha Roe Epsilon member
- 2018 Associate of Science degree with honors (Columbus State Community College)