

Jonathan Crosmer

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EMPLOYMENT HISTORY

08/2015 – 05/2016

08/2016 – 05/2018

Teaching Assistant

North Carolina State University, Raleigh, NC

- Led labs teaching computing concepts to undergraduate students
- Presented the concepts in an understandable manner
- Demonstrated proper coding techniques and evaluate accuracy and functionality of code

03/2016 – 05/2018

Tutor

Pi Tau Sigma, Raleigh, NC

- Coordinated meetings with undergraduate students in Mechanical Engineering courses
- Supplemented and reinforce concepts taught in Mechanical Engineering curriculum
- Provided the means to solve complex engineering problems

05/2016 – 08/2016

Mechanical Engineering Intern

Jacobs Engineering Group, Cary, NC

- Conducted analysis for the design of mechanical systems
- Created and evaluated mechanical engineering drawings
- Communicated ideas and concepts to different disciplines
- Created an original building design with other interns

08/2018 – Present

Graduate Research Assistant

Purdue University, West Lafayette, IN

- Align and operate lasers and other optics
- Investigate properties of optical components
- Conduct experiments and research on lasers and diagnostics of turbulent combustion
- Analyze flow behavior using non-intrusive techniques
- Perform modal decomposition and phase space analysis on imaging and velocity data

08/2020 – 12/2020

01/2021 – 05/2021

01/2022 – 05/2022

Graduate Teaching Assistant

Purdue University, West Lafayette, IN

- Held office hours to provide individual assistance to students
- Graded assignments for graduate level Mechanical Engineering classes
- Administered grades using modern online technology

EDUCATION

08/2014 – 05/2018

North Carolina State University

Raleigh, NC

BS: Mechanical Engineering

Minor: Mathematics

08/2018 – 05/2020

Purdue University

West Lafayette, IN

MS: Mechanical Engineering

05/2020 – Present

Purdue University

West Lafayette, IN

PhD: Mechanical Engineering (in progress)

PUBLICATIONS

- [1] E. Braun *et al.*, “Joint Temperature and Velocity Statistics in High-speed Flows Using Simultaneous CARS Thermometry and FLEET Velocimetry,” in *AIAA SCITECH 2023 Forum*, American Institute of Aeronautics and Astronautics. doi: 10.2514/6.2023-0221.
- [2] A. Saha, J. Crosmer, H. Subramani, G. H. Gunaratne, S. Roy, and T. R. Meyer, “Nonlinear Analysis of Shear Coaxial Jets with Transverse Acoustic Forcing,” in *AIAA SCITECH 2022 Forum*, American Institute of Aeronautics and Astronautics, 2021. doi: 10.2514/6.2022-1164.

CONFERENCE PRESENTATIONS

“Joint Temperature and Velocity Statistics in High-speed Flows Using Simultaneous CARS Thermometry and FLEET Velocimetry,” AIAA SciTech Forum, February 2023.

PROFESSIONAL MEMBERSHIPS

Lifetime Member: Pi Tau Sigma Mechanical Engineering Honor Society