

Julia Meyer

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EDUCATION

Purdue University, West Lafayette, Indiana

May 2019

- B.S. with Honors in Mechanical Engineering; Minor in Mathematics
- Purdue University GPA: 3.62/4.00
- GRE Scores: 165/169/4.5
- Dean's List and Semester Honors, 2015–2019

WORK EXPERIENCE

ME Research Intern, TMNT Laboratory, Ivan Christov, Purdue University

May 2017–May 2019

- Developed MATLAB codes for analyzing statistical behavior of systems undergoing phase transitions
- Solved Schrödinger equations for theoretical solutions to probability density functions
- SURF Symposium poster, “Thermodynamics of Coherent Structures near Phase Transitions”

ME Research Intern, Marcial Gonzalez Laboratory, Purdue University

May 2016–May 2019

- Determined best test procedures for characterizing behavior of particles and binder during compression
- Conducted tests for material failure limits and stress-strain relationships during compression
- Developed MATLAB codes for analyzing particle deformation and non-elastic behavior
- Honors Symposium poster, “Refining Contact Models for Particle-Binder Composites”

Computational Physics and Mechanics Laboratory, Iowa State University

Aug. 2014–July 2015

ME Research Intern as YES Scholar under Prof. Baskar Ganapathysubramanian

- Evaluated various methods for genetic algorithm optimization using MATLAB
- Classified and analyzed microfluidic flows created by obstacle patterns in micro-channels
- Poster presentation, “Characterizing Modes of Fluid Deformation in Inertial Microchannel Flow”

Undergraduate Teaching Assistant, Purdue University

Jan.–May 2019

- Assisted students taking a Dynamics course in homework and conceptual understanding

SKILLS/RELATED EXPERIENCE

Software/Computing

- Proficient in MS Office, MATLAB, LabVIEW, Python, C, CATIA, LaTeX, FEM/DEM analysis

Team-Based Design

- ME 263: collaborated in engineering team to develop a prototype for a novel assistive device
- ME 375: designed and programmed a robot to complete autonomous tasks
- ME 463: analyzed and designed an active CVT to be implemented in a reverse-osmosis system
- Honors Engineering: collaborated in a multidisciplinary engineering team for mechanical design

Technical Skills

- Able to solve technical problems in self-managed/team-based atmospheres in fast-paced environments
- Hands-on experience with construction tools and materials

HONORS/EXTRACURRICULARS

- Office of Undergraduate Research (OUR) Scholarship, Sep. 2018–Apr. 2019
- Bottomley Undergraduate Research Scholar, Jan.–May 2017
- Summer Undergraduate Research Fellowship (SURF), May–Aug. 2017
- Young Engineers and Scientists (YES) Scholar, Sept. 2014–May 2015
- National Merit Scholar (SAT: 740/800/730); ACT: 36/36

Active Member, Pi Tau Sigma, ME Honor Society

2016–2019

- Attended various volunteer events, subcommittee chair (Spring-Fall 2017, Fall 2018)

Volunteer Mentor, Science Olympiad, Purdue University

2015–2017

- Coordinated and supervised various build events for middle/high school students

Purdue Origami Club

2017–2019

Purdue Swing Dance Club

2016–2019