

Max M. Friestad

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Campus

711 E Sunnycrest Dr
Urbana, IL 61801

Permanent

2 Windy Point
Rock Island, IL 61201

Education

Iowa State University, Ames, Iowa December 2019
B.S. in Mechanical Engineering 3.93 GPA

University of Illinois at Urbana-Champaign December 2023 (est.)
Ph.D. in Mechanical Engineering 3.95 GPA
Subfield: Fluid Mechanics and Heat Transfer

Employment

University of Illinois at Urbana-Champaign – Graduate Research Assistant Spring 2020 – Present
Department of Mechanical Science and Engineering, Urbana, IL

- Investigating the use of Artificial Neural Networks (ANNs), Entropy Generation Minimization (EGM), and Computational Fluid Dynamics (CFD) to predict and optimize thermal systems.
- Instructed ME 200: Introductory Thermodynamics at Purdue University for Spring 2022.
 - Provided 40+ lectures to 100 students.
 - Coordinated with four other instructors to write homework and exam problems.
 - Proctored and graded three midterm exams and one final exam.
 - Helped students understand complex topics after class and during office hours.
- TA for MEngg 598: Computational Modeling of Industrial Transport Processes.

Iowa State University – Tutor for ME 436 – Heat Transfer Sept – Dec 2019
Academic Success Center, Ames, IA
Prepared lessons, example problems, and exam reviews for Mechanical Engineering students.

Collins Aerospace – Industrial Intern May – July 2019
Microelectronics Packaging, Cedar Rapids, IA

Rockwell Collins - Mechanical Co-op Jan – Aug 2018
Microelectronics Packaging, Cedar Rapids, IA

- Built, tested, and performed failure analysis on microelectronics packages in engineering development.
- Designed and performed packaging experiments – patent pending.
- Designed stencils, fixtures, and other materials to support various manufacturing processes.
- Managed technicians and sales reps to meet build and test deadlines.
- Communicated across departments to create and maintain a detailed part tracking system.
- Automated routine Excel-based procedures.

Iowa State University - Undergraduate Research Assistant Dec 2015 – Dec 2017
Metal Additive Manufacturing System (3D Printing), Ames, IA

- Designed, modified, and cost-optimized parts utilizing SolidWorks FEA and 3DXpert.
- Maintained, operated, and monitored the metal AM system to produce high-quality parts for industry.
- Provided guided tours and outreach to industry professionals, students, and staff.

Software Skills

ANSYS
Matlab
Python

Comsol
SolidWorks
Linux

Qualifications

Inactive DoD Secret Security Clearance
Tau Beta Pi Member

Stratasys Additive Manufacturing Certification
Iowa State ACE Scholarship

Interests

Thermal Design
Optimization Algorithms
Astrophotography / Astrophysics

Artificial Intelligence / Machine Learning
Strength Sports