

Emma Schinstock

(785) 313-0581 • emmaschinstock@gmail.com

EDUCATION

University of Minnesota – Twin Cities, Minneapolis, MN

Doctor of Philosophy in **Mechanical Engineering, Visible Heart Lab**, Dr. Paul Iaizzo

Expected 2021

Master of Science in **Mechanical Engineering, Visible Heart Lab**, Dr. Paul Iaizzo

September 2019

Kansas State University, Manhattan, KS

Bachelor of Science in **Mechanical Engineering**

May 2017

RESEARCH AND TEACHING EXPERIENCE

University of Minnesota Mechanical Engineering, Minneapolis, MN

Graduate Research Assistant

February 2018 – Present

- Designing and building perfusion apparatuses for organ fixation and functional organ assessment and research
- Oversees volunteer work from undergraduate students

Graduate Teaching Assistant

ME 2011 – Introduction to Mechanical Engineering

Falls 2017, 2019

- Collected and graded homework assignments and exams
- Instructed one recitation and periodically substitute taught multiple recitations

PHSL 5511 - Advanced Neuromuscular Junction Physiology

Summers 2018, 2019

- Facilitated lab session of neuroscience graduate students
- Presented short overview of research projects

Kansas State University Mechanical and Nuclear Engineering, Manhattan, KS

Undergraduate Research Assistant

October 2015 – December 2016

- Exposure to computational physics
- Researched the effects of high Knudsen numbers on velocity profiles of fluid flows
- Ran and evaluated simulations of rarefied fluid flows

Grader and Undergraduate Teaching Assistant

ME 400 - Computer Applications in Mechanical Engineering

Fall 2016

- Collected and graded homework assignments and exams over C programming
- Assisted in instructing multiple lab sections
- Wrote and edited exam questions and solutions
- Taught class on three occasions

ME 570 - Control of Mechanical Systems I

Spring 2017

- Graded homework assignments, lab reports, and exams
- Assisted in instructing multiple lab sections using MATLAB tools
- Hosted weekly tutoring sessions and periodic exam reviews

PROFESSIONAL EXPERIENCE

Weddle and Sons Inc., Manhattan, KS

Clerical Assistant

June 2016 – September 2017

- Developed and integrated VBA programs to improve company efficiency
- Assisted in answering phones and performing other office tasks

Florence Manufacturing Company, Manhattan, KS

Engineering Intern

May 2014 – August 2015

- Evaluated and redistributed workload on assembly lines
- Performed tasks to improve efficiency
- Researched, evaluated, tested, and improved powder coat system setup and operation
- Converted AutoCAD part drawings to SolidWorks parts and part drawings

Innovative Design Labs, Minneapolis, MN

Graduate Research Assistant

May 2019 – June 2019

- Reviewed lesson plans for Physiology courses
- Developed documents for instruction on incorporating physiology course lessons into augmented reality systems
- Facilitated reviews on augmented reality systems by high school students

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PUBLICATIONS

Cheikh, M., Schinstock, E., Ferland, G. and Chen, J. (2018). *A Molecular Dynamics-Based Model for Knudsen Number and Slip Velocity*.

Schinstock, E., Zhingre Sanchez, J., Bateman, M., Iaizzo, P. (2018, September). *Fixation Apparatus for the Closure of the Atrio-Ventricular Valves*. Poster presented at the Institute for Engineering in Medicine annual conference and retreat, Minneapolis, MN.

Schinstock, E., Ling, X., Conedera, R., Tucker, A., Ramirez, D. (2019, April). *Constant Force Application on a Beating Swine Heart: Robotic Assistance for Mapping and Ablation Procedures" (DMD2019-3253)*. Poster presentation and three in five competition at the Design of Medical Devices annual conference, Minneapolis, MN.

Shaffer, A., Schinstock, E., Bateman, M., Iles, T., Iaizzo, P. (2019, April). *Human Hearts Declined for Transplant Were Resuscitated on the Visible Heart® Apparatus*. Poster presentation and journal publication at the International Society for Heart and Lung Transplants annual meeting and scientific sessions, Orlando, FL.

HONORS AND AWARDS

Ellis Foundation Scholar	2013 –2017
Putnam Scholarship (KSU)	2013 –2017
Outstanding Senior Award (KSU)	2017
DMD 3 in 5 Competitor	2019