

# Emily Schlegel

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## EDUCATION

Fall 2022 - Spring 2026

**University of Pittsburgh**, Pittsburgh, PA

Bachelor of Science Bioengineering Major | Industrial Engineering Minor

**Relevant Coursework:** Biomechanics, Bioinstrumentation, Biostatistics, Human Physiology, Medical Product Design, Medical Product Regulation, Operations Research, Senior Design II

**Awards:** Dr. Helen Meeks Horstmann '63 Science Award, June 2022, Society of Women Engineering – Philadelphia Section Highest Honors, June 2021

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## SKILLS

Microsoft Office

Autodesk Fusion 360

Sewing

Silicon Molding

MATLAB, Python, R

FDA & ISO Standards

Vacuum Forming

Lab Techniques

Paraview, Fiji

3D Printing

Laser Cutting

Lab Equipment/Safety

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## RESEARCH AND DESIGN EXPERIENCE

**Senior Design Project – Pressure-Sensing Prosthetic Sock for Injury Prevention**

Fall 2025 - Present

*Team Lead (6-person interdisciplinary team) | Verification and Validation Phase*

- Developing a pressure-sensing prosthetic sock system and leading verification and validation testing with transtibial amputees and clinical partners to assess performance, reliability, and patient impact

**Undergraduate Research Lab Assistant, Dr. Maiti's Lab**, Pittsburgh, PA

Spring 2025 - Present

- Analyzing biomechanical parameters contributing to aortic dissections; applying MATLAB, Python, and Excel for patient data analysis and collaborating with Surgery & Cardiothoracic departments to discover potential predictive measures

**Flower Microbiome Lab**, Pittsburgh, PA

Fall 2023

- Studied flower microbiomes and morphology, utilized lab skills such as plate streaking, gel electrophoresis, PCR, micropipetting, and dilutions to contribute to larger university research

**Sustainability Prototype for Bus Systems**, Pittsburgh, PA

Fall 2022

- Collaborated with two other engineering students to create a prototype for safer and more user friendly bus stops to encourage the use of public transportation in Pittsburgh, PA
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## WORK EXPERIENCE

**Hospitality Roles, Server, Hostess, Receptionist**, PA & NJ

Fall 2019 - Present

- Experience working in three different restaurants, Merion Golf Club, McCloskey's Tavern, and Oar House Pub, delivering customer service in a fast-paced environment managing up to 50+ guests and multitasking in high-volume environments

**SSOE Engineering Ambassador, Student Ambassador**, Pittsburgh, PA

Spring 2024 - Spring 2025

- Presented tours in Benedum Hall of Engineering to groups of 10–20, engaging prospective students and families while answering questions about academics and student life.
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## PUBLICATIONS

Emily Schlegel, Bryant Fisher, Julie A. Phillippi, Thomas G. Gleason, David A. Vorp, Spandan Maiti. Rethinking Aortic Dissection Risk: Why Aortic Diameter Alone is Inadequate and the Power of Biomechanical Metrics. Biomedical Engineering Society. October 8-12, 2025. San Diego, CA, USA. *Oral Presentation.*

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## CAMPUS INVOLVEMENT

**Theta Tau – Engineering Fraternity**

Jan. 2023 - Jan. 2025

*Rush Chair*

Aug. 2023 - Jan. 2024

- Led recruitment efforts by organizing rush events, engaging with potential new members, and serving as their first point of contact for questions

**Undergraduate Teaching Assistant – Bioethics**

Spring 2025

- Supported course operations by evaluating student assignments, providing timely feedback, and fostering effective communication between students and faculty.

**Humans Factors and Ergonomics Society**

Spring 2025- Present

**BMES – Biomedical Engineering Society**

Fall 2024 - Present

**Pink Panther Mentorship Program**

Spring 2024 - Present