

Emily Schlegel

610-737-4174 · emilyschlegel18@gmail.com



EDUCATION

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 I & II

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

Fall 2022 - Spring 2026

SKILLS

Microsoft Office	Autodesk Fusion 360	Sewing	3D Printing
MATLAB, Python, R	FDA Standards	Vacuum Forming	Lab Techniques
Paraview, Fiji	ISO Standards	Laser Cutting	Lab Equipment/Safety

RESEARCH AND DESIGN EXPERIENCE

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

Team Lead (6-person interdisciplinary team)

Designed and developed a pressure-sensing prosthetic sock system; conducted verification and validation (V&V) testing with transtibial amputee participants and clinical partners in alignment with 21 CFR Part 820 quality system requirements to evaluate device performance, reliability, and patient outcomes

Fall 2025 - Spring 2026

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

Developed biomechanical models of aortic dissection risk using MATLAB, Python, and Excel; analyzed patient datasets in collaboration with Surgery & Cardiothoracic departments to identify predictive parameters beyond standard anatomical measures

Spring 2025 - Spring 2026

Flower Microbiome Lab, Pittsburgh, PA

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

Fall 2023

Sustainability Prototype for Bus Systems, Pittsburgh, PA

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

Fall 2022

WORK EXPERIENCE

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

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

Fall 2019 - Present

SSOE Engineering Ambassador, Student Ambassador, Pittsburgh, PA

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.

Spring 2024 - Spring 2025

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.

CAMPUS INVOLVEMENT

Theta Tau – Engineering Fraternity

Rush Chair

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

Jan. 2023 - Jan. 2025

Aug. 2023 - Jan. 2024

Undergraduate Teaching Assistant – Bioethics

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

Spring 2025

Humans Factors and Ergonomics Society

BMES – Biomedical Engineering Society

Pink Panther Mentorship Program

Spring 2025- Present

Fall 2024 - Present

Spring 2024 - Spring 2026