

# Gianna Paier

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## EDUCATION

### University of Michigan, Rackham Graduate School

*Doctor of Philosophy in Biomedical Engineering, Pre-Candidacy, Expertise in Neural Engineering* Expected May 2028

Cumulative GPA: 4.0/4.0

### Binghamton University, SUNY, Thomas J. Watson College of Engineering and Applied Science

*Bachelor of Science in Biomedical Engineering, Biomedical Devices & Instrumentation Concentration* May 2023

Cumulative GPA: 3.9/4.0 | Dean's List: Fall 2019 – Spring 2023 | Alpha Eta Mu Beta, Biomedical Honor Society

## TECHNICAL SKILLS

**Software:** MATLAB, RStudio, Python, DeepLabCut, LeadDBS, MS Suite, Adobe Suite, Image J, Solid Edge, LTspice

**Hardware:** Oscilloscope, Reflectance Spectrometer, Soldering, HF Etching Chamber

## RESEARCH EXPERIENCE

### Opri Lab | Ann Arbor, MI

*Doctoral Research Assistant*

*November 2023 – Present*

- Building a benchtop recording systems to characterize stimulation from deep brain stimulation (DBS) electrodes
- Analyzing local field potentials recorded from deep brain stimulation electrodes in Parkinson's patients
- Working with undergraduate researchers to support their research interests and cultivate their ability to independently solve problems

### Vanderbilt Institute of Nanoscience and Engineering REU | Nashville, TN

*Student Researcher*

*June 2022 – August 2022*

- Researched and designed porous silicon thin films to implement in point-of-care diagnostic devices using machine learning algorithms with Dr. Sharon Weiss
- Used an etching chamber to create porous silicon wafers of different pore properties to test on a protein spiked solution
- Presented findings at the national BMES conference in San Antonio, TX, and the Vanderbilt Institute of Nanoscale Science and Engineering (VINSE) Summer Research Symposium to share findings with the scientific community

## WORK EXPERIENCE

### Laboratory Teaching Assistant | Binghamton, NY

*Biomedical Instruments*

*August 2022 – May 2023*

- Constructed and explained real-world biomedical devices to cultivate 40 students' interest in the course content

*Calculus-Based General Physics*

*August 2020 – May 2021*

- Worked with a partner to lead classes of 25 through scientific demonstrations to explain physics theories

### Educational Opportunity Program | Binghamton, NY

*Peer Tutor*

*August 2021 – May 2023*

- Led one-on-one tutoring sessions for undergraduate students in the EOP for upper-level math and science courses
- Identified tutee's learning dilemmas and provide individualized approaches for future success in their coursework

## LEADERSHIP EXPERIENCE

### Tau Beta Pi (Engineering Honor Society) | Binghamton, NY

*Secretary*

*August 2022 – May 2023*

- Kept detailed records of executive board meetings and communicate decisions with the general body and nationals
- Acted as a delegate at the 2022 national Tau Beta Pi convention in Knoxville TN to coordinate ideas between the Binghamton chapter and other chapters effectively allowing us to triple the number of our Chapter's members

*Vice President of Community Service*

*November 2021 – May 2022*

- Advanced engineering excellence within the school and surrounding community by coordinating technical activities

### Alpha Omega Epsilon | Binghamton, NY

*Professional Chair*

*January 2022 – May 2022*

- Motivated female engineers of all curricula to achieve their personal goals of professional development

*Outreach Chair*

*January 2021 – May 2021*

- Fostered and developed strong relationships with members of the school, and surrounding community through the coordination of community outreach STEM events for children

### Biomedical Engineering Society | Binghamton, NY

*President*

*August 2022 – May 2023*

- Led executive board meetings by delegating events to executive board members and ensuring that all tasks are completed

✕ Gianna Paier

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