

Shane J. Hansen

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EDUCATION

Bachelor of Philosophy, Neurolinguistics (Interdisciplinary Studies) Graduation: April 2025
University of Pittsburgh GPA: 4.0

Thesis Title: Exploring the Neurolinguistic Processing of Nonbinary Pronouns in First vs Second Languages

Thesis Advisor: Natasha Tokowicz, Ph.D.

Learning Sciences Distinction

Bachelor of Science, Chemistry: Bioscience Option Graduation: April 2025
University of Pittsburgh GPA: 3.73

Certificate: Conceptual Foundations of Medicine

RESEARCH EXPERIENCE

PLUM Lab, Research Assistant August 2023 – Present

Bachelor of Philosophy Project

- Led comprehensive study design process including stimuli development, language training protocols, and successful IRB/funding applications
- Designed and coded various tasks in E-Prime, interfaced with Curry 8
- Developed and implemented training protocols for research assistants on study procedures and EEG lab techniques, ensuring consistent data collection quality
- Facilitated all data collection sessions
- Processed and coded ERPs using Neuroscan Edit 4.5 and EEGLAB/ERPLAB/MATLAB
- Conducted data analysis using linear mixed effects models in R
- Writing and defended publication-ready thesis to faculty committee

NSF Funded Second Language Acquisition Study

- Collected data during study sessions by guiding participants through behavioral tasks and facilitating EEG recording
- Assisted in preliminary data analysis and interpretation using R
- Presented preliminary findings in broader research context to lab group
- Mentored new research assistants, taught behavioral and EEG techniques

Honors Organic Chemistry Lab, Student January 2023 – April 2023

- Worked in group of three to design project investigating the most efficient synthesis of soaps using recycled food waste products
- Used NMR, FTIR, and pH analysis to characterize products; various organic synthesis methods explored
- Prepared publication-quality report of findings and defended research to class and faculty

TEACHING EXPERIENCE

Language and the Mind, Undergraduate Teaching Assistant January 2024 – April 2024

- Developed discussion board response prompts to facilitate understanding of required journal article readings with focuses on experimental design and implications of results

- Wrote and delivered lecture on use of large language models in psycho/neurolinguistic research

Honors Organic Chemistry Lab, UTA

January 2024 – April 2024

- Co-mentored group of students to develop and implement independent research project
- Assisted in teaching organic laboratory skills and techniques
- Guided students through analysis and formal publication-quality report write up/defense

Honors General Chemistry, UTA

August 2022 – December 2022

- Led weekly recitation sections for 16 students, incorporating active learning strategies to reinforce course concepts; hosting weekly office hours; and conducting individual meetings to deepen understanding of course material
- Assisted laboratory professor in weekly instruction by teaching safe lab practices for 22 students and breaking down complex procedures to increase overall performance and experimental success.
- Developed and successfully implemented new academic strategies to address student learning gaps, presenting recommendations directly to head professor

General Chemistry II, UTA

January 2023 – April 2023

- Served as lead UTA for 250 student lecture class, coordinated exam review sessions designed to prepare students for problem solving
- Held weekly office hour to assist students in understanding lecture content and completing homework assignments
- Taught weekly recitation in collaboration with graduate student instructor, encouraged students to work through curated review worksheets and present answers to class

PRESENTATIONS

38th Annual Conference on Human Sentence Processing

March 2025

- Poster abstract submitted and under review: *Exploring the Neurolinguistic Processing of Nonbinary Pronouns in First vs Second Languages*

National Council on Undergraduate Research Conference

April 2025

- Poster abstract submitted and under review: *Exploring the Neurolinguistic Processing of Nonbinary Pronouns in First vs Second Languages*

Learning Sciences Seminar Poster Session

April 2024

- Presented literature review poster *Neurobiological Explanations for Second Language Acquisition Success* to Learning Research and Development Center faculty and students

Linguistics Department Colloquium

April 2024

- Presented PLUM Directed Research experience to Department faculty and students at Spring 2024 End of Semester Colloquium Meeting (Co-presenter: Julia Zeiser)

American Chemical Society Student Affiliates @ Pitt Research Talk

February 2024

- Presented PLUM Lab NSF Project work and beginning iterations of Bachelor of Philosophy project planning to Chemistry Department students and faculty

HONORS, AWARDS, & DISTINCTIONS

The Kenneth P. Dietrich School of Arts and Sciences Dean's List

- All attended semesters

Brackenridge Fellowship

May 2024 – August 2024

- Selective summer fellowship awarded by the University of Pittsburgh Frederick Honors College to support student independent research and scholarship
- Fellowship window used to design and plan Bachelor of Philosophy study

Chancellor's Undergraduate Research Fellowship

August 2024 – December 2024

- Fall research fellowship awarded by the University of Pittsburgh Frederick Honors College to support student independent research and scholarship
- Used fellowship window for Bachelor of Philosophy study data collection

INVOLVEMENT & LEADERSHIP

American Chemical Society Student Affiliates Chapter- at University of Pittsburgh, Senior Affairs Committee

August 2022 – Present

- Work with other Committee members to plan Chemistry Department graduation ceremony and activities
- Coordinate with executive board members to manage funds and membership tracking

Yinzling, Business Manager & Interim VP

August 2022 – Present

- Coordinate with President and Vice President to plan biweekly meetings designed to increase engagement with the Linguistics Department and foster interest through educational meetings with guest speakers
- Manage funds for the organization in collaboration with University student organization oversight office

Resident Student Association, VP of Communications

August 2021 – May 2023

- Managed twelve Public Relations Chairs from campus residential communities to promote organization-wide events for student residents' enjoyment and community growth
- Streamlined communication between internal and external student leaders, professional staff, and 150 organization members
- Grew social media engagement by 6% (reaching 1,256 accounts) through targeted content strategy and consistent posting schedule
- Designed and implemented marketing campaigns with the objective of increasing student engagement

Hampton High School Musical, Student Director

August 2019 – June 2021

- Coordinated intracompany communication, scheduling, marketing, and social media to improve efficiency of the year-long production operation and member engagement across departments
- Nurtured success of actors through rehearsal notes leading to several regional high school theater awards

SERVICE

UPMC Children's Hospital of Pittsburgh, Volunteer

June 2019 – Present

- Assist clinical staff in preparatory work to facilitate efficient patient care through the organization of medical supplies and plan-of-care delivery (Neurosurgery, Trauma Surgery, and Gastroenterology Units)
- Manage operational-level tasks for Child Life Department specialists in order to enrich the patient experience through e-card distribution and serving as a Buddy on Call

ACS Outreach, Member

August 2022 – Present

- Engaged in several outreach events aimed at bringing science to the greater community
- Events often involved facilitating activities for children to engage in science (Cub Scouts, Science Camps etc.)

WORK EXPERIENCE

Target, Food & Beverage and General Merchandise Expert

October 2020 – Present

- Organize and provide consumable merchandise upkeep following in accordance with corporate rotation schedules and presentation standards to guarantee the optimal quality of floor sets to best increase customer product interaction
- Prioritize relationship building with guests in order to best recommend products that suit their needs and preferences
- Ensure guest satisfaction in checkout settings both in online order fulfillment and working as a service advocate

The Milkshake Factory, Team Member

June 2020 – October 2020

- Personally guided customers through the menu, showcasing extensive product knowledge and promoting sales of additional items at the register
- Crafted milkshakes, coordinating ingredients, blending, and finishings at the dedicated station
- Ensured customer satisfaction by delivering exceptional service, maintaining cleanliness, and upholding quality standards throughout the milkshake preparation process