

Holly A. Zaharchuk

POSTDOCTORAL RESEARCHER (SHE/HER)

Storrs, Connecticut, United States

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Research interests

How does the brain respond to linguistic variation? I use a combination of neural (EEG, fMRI, TMS) and behavioral (eye-tracking, response time/accuracy) methods to study the perception, representation, and processing of diverse speech signals. I am particularly interested in the effects of multilingual and multilectal experience on the language system.

Education

The Pennsylvania State University

University Park, Pennsylvania

PH.D., PSYCHOLOGY AND LANGUAGE SCIENCE, SPECIALIZATION IN COGNITIVE AND AFFECTIVE NEUROSCIENCE

2018 - 2024

- Advisor: Dr. Janet G. van Hell
- Dissertation: *Cross-language transfer in voice onset time: A window into perceptual adaptation in brain and behavior*

The Pennsylvania State University

University Park, Pennsylvania

M.S., PSYCHOLOGY

2018 - 2020

- Advisor: Dr. Janet G. van Hell
- Master's thesis: *We "might could" revisit syntactic processing: Studying dialectal variation with event-related potentials*

The University of Chicago

Chicago, Illinois

B.A., PSYCHOLOGY, MINOR IN LINGUISTICS

2011 - 2015

- Advisor: Dr. Daniel Casasanto
- Honors thesis: *Does linguistic experience change mental representations of pitch?*

Academic employment

Language and Brain Lab

Storrs, Connecticut

POSTDOCTORAL RESEARCHER

Aug 2024 - present

- Principal investigator: Dr. Emily B. Myers
- Research areas: neurobiology of speech perception in young adults, older adults, and persons with aphasia
- Responsibilities: design, implement, and analyze research projects investigating laterality, gradiency, and talker specificity in speech perception with fMRI, TMS, and eye-tracking (NIH R01: 5R01DC013064-09)

Experience and Cognition Lab

Chicago, Illinois

UNDERGRADUATE RESEARCH ASSISTANT

Sep 2013 - Jun 2015

- Principal investigator: Dr. Daniel Casasanto
- Research areas: embodied cognition and linguistic relativity
- Responsibilities: collect, code, and analyze behavioral data

Honors and awards

Doctoral Dissertation Research Improvement Grant (Ling-DDRI)

The Pennsylvania State University

NSF GRANT FOR DOCTORAL RESEARCH ON HUMAN LANGUAGE (SBE-2234907)

Feb 2023 - Feb 2025

Partnerships for International Research and Education Fellowship (PIRE)

The Pennsylvania State University

NSF GRANT FOR INTERNATIONAL LANGUAGE RESEARCH (OISE-1545900)

May 2022 - Jun 2022

Adele Miccio Memorial Travel Award

The Pennsylvania State University

TRAVEL AWARD FOR PROFESSIONAL DEVELOPMENT

Dec 2021

University Graduate Fellowship

The Pennsylvania State University

COMPETITIVE FIVE-YEAR FELLOWSHIP FOR RESEARCH DOCTORAL STUDENTS (100 AWARDED PER YEAR UNIVERSITY-WIDE)

Aug 2018 - Aug 2024

University Scholar Award

The University of Chicago

FOUR-YEAR MERIT SCHOLARSHIP FOR UNDERGRADUATE STUDENTS

Sep 2011 - Jun 2015

Peer-reviewed publications

- Miller, A. R., Jończyk, R., **Zaharchuk, H. A.**, & Van Hell, J. G. (2025). Unlocking second language novel metaphor processing: Behavioral and ERP insights from first and second-language English users. *Psychophysiology*, 62(5), e70066.
- Zaharchuk, H. A.**, & Karuza, E. A. (2021). Multilayer networks: An untapped tool for understanding bilingual neurocognition. *Brain and Language*, 220, 104977.
- Zaharchuk, H. A.**, Shevlin, A., & Van Hell, J. G. (2021). Are our brains more prescriptive than our mouths? Experience with dialectal variation in syntax differentially impacts ERPs and behavior. *Brain and Language*, 218, 104949.
- Lucero, C., **Zaharchuk, H.**, & Casasanto, D. (2014). Beat gestures facilitate speech production. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Meeting of the Cognitive Science Society*. Red Hook, NY: Curran Associates.

Manuscripts in progress

- Litcofsky, K., **Zaharchuk, H. A.**, & Van Hell, J. G. (2025). Cross-modality structural priming in dialogue is influenced by interlocutor accent [Manuscript submitted, in revision]. *Journal of Neurolinguistics*.
- Zaharchuk, H. A.**, Medina, V., Paterno, S., Viswanathan, N., & Van Hell, J. G. (2025). Sentential context impacts bilingual speech-in-speech recognition [Manuscript in preparation].
- Zaharchuk, H. A.**, Olson, H. E., Mechtenburg, H., Phillips, M. C., & Myers, E. B. (2025). Measuring age-related differences in phonetic gradiency with the visual analogue scale and eye tracking [Manuscript submitted, under review]. *Journal of the Acoustical Society of America*.
- Zaharchuk, H. A.**, & Van Hell, J. G. (2025). The effects of exposure variability and similarity on talker-independent adaptation to Spanish-accented English [Manuscript submitted, in revision]. *Journal of Memory and Language*.
- Zaharchuk, H. A.**, Walker, A. J., Miller, A. R., Fernandez, C. B., & Van Hell, J. G. (2025). Expecting a challenge: A behavioral and neurophysiological investigation of talker identity in cross-dialectal speech perception [Manuscript submitted, in revision]. *Journal of Laboratory Phonology*.

Invited talks

- Zaharchuk, H. A.** (2023). Sociolinguistics in the lab and the field. Invited lecture, University at Buffalo, March 13.
- Zaharchuk, H. A.**, Shevlin, A., & Van Hell, J. G. (2022). Are our brains more prescriptive than our mouths? Experience with dialectal variation in syntax differentially impacts ERPs and behavior. Invited lecture, Processing Variation (ProVAR), Federal University of Rio de Janeiro, February 14.

Conference presentations

- Zaharchuk, H. A.**, Washington, P. N., & Myers, E. B. (2025, September). Hemispheric differences in speech perception: The role of right temporal regions in talker-specific learning [Poster session]. 17th Annual Meeting of the Society for the Neurobiology of Language (SNL), Washington, DC.
- Zaharchuk, H. A.**, & Van Hell, J. G. (2024, November). The neurocognitive correlates of talker-specific adaptation to Spanish-accented speech [Poster session]. 65th Annual Meeting of the Psychonomic Society, New York City, New York.
- Walker, A., **Zaharchuk, H. A.**, Miller, A. R., & Van Hell, J. G. (2023, December). Your brain on accents: Profiles of event related potentials in cross-dialectal listening in the US English context [Poster session]. 185th Meeting of the Acoustical Society of America, Sydney, Australia.
- Zaharchuk, H. A.**, & Van Hell, J. G. (2023, October). Investigating the roles of acoustic-phonetic and lexico-semantic processing in resolving perceptual ambiguity in Spanish-accented English [Poster session]. 15th Annual Meeting of the Society for the Neurobiology of Language (SNL), Marseille, France.
- Zaharchuk, H. A.**, Lipski, J., & Van Hell, J. G. (2023, August). Mi casa es tu posá: Exploring the bilingual mental lexicon in speakers of Spanish and Palenquero [Poster session]. Architectures and Mechanisms for Language Processing Conference (AMLaP 29), Donostia-San Sebastián, Spain.
- Zaharchuk, H. A.**, Medina, V., Paterno, S., Viswanathan, N., & Van Hell, J. G. (2023, March). Sentential context impacts bilingual speech-in-speech recognition [Poster session]. 36th Annual Conference on Human Sentence Processing (HSP), Pittsburgh, Pennsylvania.
- Zaharchuk, H. A.**, Walker, A., & Van Hell, J. G. (2023, March). Tracking the time-course of cross-dialect comprehension with ERPs [Oral and poster sessions]. 30th Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, California.

- Zaharchuk, H. A.**, Shevlin, A., & Van Hell, J. G. (2022, November). Experiencia con variación dialéctica en sintaxis afecta el procesamiento de lenguaje [Plenary session]. III Congreso Paraguayo de Lingüística Aplicada (CON-PLA), Asunción, Paraguay.
- Walker, A., **Zaharchuk, H. A.**, Fernandez, C. B., & Van Hell, J. G. (2021, August). The role of dialect expectation on lexical processing: EEG evidence [Oral session]. 5th Variation and Language Processing Conference (VALP5), Copenhagen, Denmark.
- Zaharchuk, H. A.**, Shevlin, A., & Van Hell, J. G. (2020, May). We “might could” revisit syntactic processing: Studying dialectal variation with event-related potentials [Poster session]. 27th Annual Meeting of the Cognitive Neuroscience Society (CNS), Boston, Massachusetts.
- Zaharchuk, H. A.**, Shevlin, A., & Van Hell, J. G. (2019, November). Auditory comprehension of double versus single modal constructions in Mainstream American English listeners [Poster session]. 60th Annual Meeting of the Psychonomic Society, Montréal, Québec, Canada.
- Zaharchuk, H. A.** (2015, June). Does linguistic experience change mental representations of pitch? [Poster session]. University of Chicago Undergraduate Research Symposium, Chicago, Illinois.

Teaching experience

Psychology of language

The Pennsylvania State University

INSTRUCTOR

Jan 2024 - May 2024

- Seminar course for upper-level psychology and linguistics undergraduates on psycholinguistics, with a focus on language development, bilingualism and second language acquisition, and linguistic diversity
- Presented bi-weekly lectures to highlight key concepts and clarify models and methods; mentored students on interpreting empirical research through reflection papers, journal article presentations and discussions, and individual meetings; fostered student curiosity and creativity through final project proposal and poster presentation

Psychology of language

The Pennsylvania State University

TEACHING ASSISTANT

Jan 2021 - May 2021

- Instructor: Dr. Katharine Donnelly Adams
- Seminar course covering auditory speech perception, visual word recognition, language representation, sentence comprehension and production, and language acquisition across the lifespan
- Presented guest lecture on linguistic variation and the relation between production and comprehension

Basic research methods in psychology

The Pennsylvania State University

TEACHING ASSISTANT

Aug 2020 - Dec 2020

- Instructor: Dr. Nicholas Pearson
- Introduction to experimental design, analysis, and presentation
- Led weekly laboratory section to reinforce lecture concepts

What makes us human?

The Pennsylvania State University

TEACHING ASSISTANT

Jan 2020 - May 2020

- Instructor: Dr. Daniel Weiss
- Senior seminar in comparative psychology

Neurological bases of human behavior

The Pennsylvania State University

TEACHING ASSISTANT

Aug 2019 - Dec 2019

- Instructor: Dr. Stephen Wilson
- Introduction to neuroscience theories and methods
- Presented guest lecture on auditory system and neuroanatomy of language production and comprehension

Academic service

- Ad hoc reviewing
 - *Brain and Language*
 - *Cognitive, Affective, and Behavioral Neuroscience*
 - *Journal of Experimental Psychology: Learning, Memory, and Cognition*
 - *Journal of Speech, Language, and Hearing Research*
 - *Perspectives*
 - *Psychonomic Bulletin & Review*
 - *Scientific Reports*
- Workshops and tutorials
 - Leader: R Markdown for Graduate Students (2020) for 20 students, Creating HTML Reports with R Markdown (2020) for 10 students

- Assistant: R Bootcamp led by Dr. Rick Gilmore for 50+ students
- R Markdown for Psychology Graduate Students resource

Outreach

- Mentor with the Mentoring Aspiring Graduate students and building an Inclusive Community program at UConn (2024-2025)
- Volunteer with the Auditory Brain Research Lab to provide free hearing screenings in English and Spanish at the 4th Latin Multicultural Latin Festival (July 2025, Willimantic, CT)

Skills

- Natural languages: English, Spanish (B2/Intermediate)
- Programming languages: R, MATLAB, Python, SQL
- Experiment programming: E-Prime, PsychoPy, Gorilla, LabVanced, Pavlovia
- Acoustic analysis: Praat

Affiliations

- Center for Language Science (Penn State)
- Cognitive Neuroscience Society
- Institute for the Brain and Cognitive Sciences (UConn)
- Psychonomic Society
- Society for the Neurobiology of Language
- Women in Cognitive Science