Walter Philip Dych

Curriculum Vitae

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Education

2023 | **BA in Linguistics**, *European Studies Minor*, University of Delaware, Newark, Delaware

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Work Experience

2024–Present | **Laboratory Manager**, *Binghamton University*, Lab for Auditory Cognitive Neuroscience Research (Lim Lab), Binghamton, NY

- Run day-to-day laboratory operations
- Research, develop, test, and run auditory-cognitive experiments.
- Design BioSemi-compatible trigger system for sub-second EEG triggering.
- Processing/analysis of behavioral and neuroimaging data.
- Writing/editing IRB protocols.
- Maintain laboratory database.
- Instruct RAs on proper lab and experiment-specific procedures.
- Experience with neuroimaging techniques including EEG, MEG, and fMRI.
- Experience with brain stimulation devices (tES, tDCS, tACS)

2023–2023 | **Research Assistant**, *Harvard University*, PhonLab under Dr. Kathryn Franich, Cambridge, MA

- *Continuation of role at University of Delaware*

2022–2023 | **Undergraduate Researcher**, *University of Delaware*, PhonLab under Dr. Kathryn Franich, Newark, DE

- Organize and plan out research projects for gesture-speech relations.
- Write/Proof papers for publication.
- In charge of a group of research assistants.
- Aid other research assistants.
- Published a peer-reviewed paper on experimental methods for gesture-speech relations and poster presentation on gesture-speech relations in Medʉmba.
- Develop methods for corpus collection.
- Develop computational methods for the automation of gesture annotation and gesture-speech research.
- Maintain and organize lab database

Publications

2024   Garvin, K., **Dych, W**., Spradling, E., Briasco-Stewart, C., and Franich, K., Effects of co-speech gesture on magnitude and stability of oral gestures, *LabPhon19*, 2024.

2023   **Dych, W**., Garvin, K., and Franich, K. Comparing manual vs. semi-automated methods for the coding of co-speech gestures. *Proceedings of the 20th International Congress of Phonetic Sciences (ICPhS)*, 2023.

Presentations

2024   **Dych, W.**, Garvin, K., and Franich, K. A toolkit for automating co-speech gesture data annotation and analysis, *MMSYM24*, 2024.

2024   **Dych, W.**, Garvin, K., and Franich, K. Creating Multimodal Corpora for Co-Speech Gesture Research, *CorpusPhon Workshop at LabPhon19*, 2024.

2022   **Dych, W**. Gesture Magnitude Mapping in Medɨmba. *University of Delaware Summer Scholars Symposium*, 2022.

Skills

Programming	Python(NumPy, Pandas, OpenCV, MediaPipe, Parselmouth, PscyhoPy, MNE, Seaborn), MATLAB, R, C++, Java
Tools	Git, Docker
Professional Software	LATEX, Microsoft Office, Adobe Suite, Qualtrics
LLMs	GPT-3/4, PaLM2, BLOOM
Data Annotation	Label Studio, ELAN Video Annotation, PRAAT
Languages	English(Fluent), Dutch(Fluent), German(C1), Spanish(C1), Italian(B2), Scottish Gaelic(Research), Medɨmba(Fieldwork)

References

Dr. Sung-Joo Lim, Ph. D, Assistant Professor, Department of Psychology, Binghamton University, Binghamton, NY, ✉ sungjoo@binghamton.edu

Dr. Karee Garvin, Ph. D, Postdoctoral Fellow, Department of Linguistics, Harvard University, Cambridge, MA, ✉ kareegarvin@fas.harvard.edu

Dr. Kathryn Franich, Ph. D, Assistant Professor, Department of Linguistics, Harvard University, Cambridge, MA, ✉ kfranich@fas.harvard.edu

Dr. Alex Hong-Lun Yeung, Ph. D, Assistant Professor, Department of Linguistics and Cognitive Science, University of Delaware, Newark, DE, ✉ ahlyeung@udel.edu

Dr. Daniel Kinderman, Ph. D, Associate Professor, Department of Political Science and International Relations, University of Delaware, Newark, DE, ✉ kindermd@udel.edu