Yi-Fang Cheng

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EDUCATION

Purdue University
West Lafayette, IN

Ph.D. in Linguistics, Graduate Certificate in Applied Statistics, MA in Linguistics

- Dissertation: The time course of bilingual cross-linguistic interference: From acoustic evidence to speech model representations
- MA Thesis: The role of phonetic awareness in modulating bilingual cross-linguistic phonetic interaction: Evidence from code-switching

National Taiwan Normal University
Taipei, Taiwan

BA in English, BM in Music

RESEARCH INTERESTS

Phonetics, Computational and Quantitative Methods, Bilingualism, Human–AI and Human-Computer Interaction

RESEARCH EXPERIENCE

Purdue Bilingualism Lab
West Lafayette, IN

Research Assistant   *Aug. 2022 – Present*

- Conducted several multilingual speech research on cross-linguistic interference and the impact of sociopragmatic and typological factors such as conversational topic, orthographic depth, and code-switching structures
- Built statistical and acoustic analysis workflows on annotated multilingual data (Korean, English, Mandarin, Vietnamese) to model context- and language-dependent variations in speech
- Presented research results at academic conferences to interdisciplinary collaborators

NSF National Innovation Corps
Remote

Entrepreneurial Lead   *Jun. 2025 - Jul. 2025*

- Led a seed-stage ed-tech startup, securing $50,000 in funding to develop PadagoTalk, an AI-powered speech-based chatbot for immersive second-language learning
- Conducted 100+ interviews across the language education ecosystem to understand user needs, user experience, perceptions of AI-assisted learning, and concerns around bias and pedagogical impact
- Delivered weekly pitches and progress updates to NSF program officers

The Data Mine
West Lafayette, IN

Graduate Data Science Researcher, Reported to Knudsen Institute   *Aug. 2024 - Dec. 2024*

- Project: Training LLMs within Manufacturing
- Designed and implemented data pipelines to scrape, clean, and pre-process manufacturing text data for LLM training

Graduate Data Science Researcher, Reported to C-SPAN   *Jan. 2024 - May. 2024*

- Project: Analysis of Rhetoric on Capitol Hill
- Quantified political polarization in congressional speech using acoustic metrics (pitch and emotional intensity) with Bash and Praat scripting, Whisper API, and Parselmouth library

PUBLICATIONS

- **Cheng, Y.-F.**, & Olson, D. J. (Under Review). The time course of cross-linguistic interference: Evidence from pre-switch anticipation and post-switch persistence. *Proceedings of Interspeech 2026.*
- **Cheng, Y.-F.**, & Olson, D. J. (In revision). Cross-linguistic phonetic interference in spontaneous code-switching speech: A corpus-based analysis from the SEAME corpus. *Corpus Linguistics and Linguistic Theory.*
- **Cheng, Y.-F.**, & Olson, D. J. (Accepted). Short-term phonetic interference and orthographic depth: Code-switching cued by logographic and phonological representations. *Proceedings of the 20th Laboratory Phonology.*
- **Cheng, Y.-F.**, & Olson, D. J. (2026). Phonetic outcomes in Mandarin–English code-switching: Exploring the role of orthographic depth. *Phonetica.* https://doi.org/10.1515/phon-2024-0048
- **Cheng, Y.-F.**, & Olson, D. J. (2025). The effect of metalinguistic awareness on second language phonetic acquisition. In J. M. Levis, M. Duris, S. Sonsaat-Hegelheimer, I. Na (Eds.), *Proceedings of the 15th Pronunciation in Second Language Learning and Teaching Conference* (pp. 1-12). Iowa State University. https://doi.org/10.31274/psllt.18454.

Projects in Progress

- **Cheng, Y.-F.**, & Issa, E. (In prep). Human perception of speech deepfakes.
- **Cheng, Y.-F.**, Olson, D. J, & Jiang, Y. (In prep). Short-term phonetic interference and orthographic depth: Code-switching cued by logographic and phonological representations.

Conference Presentations

- **Cheng, Y.-F.**, Jiang, Y., & Olson, D. J. (2026). Short-term phonetic interference and orthographic depth: Code-switching cued by logographic and phonological representations. Poster to be presented at the *20th Conference on Laboratory Phonology (LabPhon).* Montreal, Quebec, Canada.
- **Cheng, Y.-F.**, & Olson, D. J. (2026). Corpus-Based Study of Spontaneous Mandarin-English Code-Switching Speech. Paper presented at the *2026 Linguistic Society of America (LSA) Annual Meeting.* New Orleans, LA.
- **Cheng, Y.-F.** (2025). Pitch is fundamental: Has congressional rhetoric become more polarized? Poster presented at the *16th Mid-Continental Phonetics and Phonology Conference.* Bloomington, IN.
- **Cheng, Y.-F.**, & Olson, D. J. (2025). Asymmetrical phonetic outcome in a large Mandarin–English spontaneous speech corpus. Paper presented at the 2025 Purdue Linguistics Symposium. West Lafayette, IN
- **Cheng, Y.-F.**, & Olson, D. J. (2024). Phonetic Awareness and Phonetic interference in code-switching among Bilinguals. Paper presented at the *UIC Bilingualism Forum 2024.* Chicago, IL
- **Cheng, Y.-F.**, & Olson, D. J. (2024). The effect of phonetic awareness on second language phonetic acquisition. Paper presented at the *15th Annual Pronunciation in Second Language Learning and Teaching (PSLLT).* Ames, IA
- **Cheng, Y.-F.**, & Olson, D. J. (2024). The role of phonetic awareness in modulating bilingual cross-linguistic interaction: Evidence from code-switching. Paper presented at 2024 Purdue Linguistics Symposium. April 12.
- Seo, Y., Olson, D. J., & **Cheng, Y.-F.** (2023). Phonetic interference in bilingual speech: the role of code-switching typology. Paper presented at Bilingualism Matters Research Symposium (BMRS 2023). October 20.
- Seo, Y., Olson, D. J., & **Cheng, Y.-F.** (2023). Cross-linguistic interference in second language vowels: Evidence from code-switching. Paper presented at 14th Annual Pronunciation in Second Language Learning and Teaching (PSLLT). September 7.

Work Experience

VoiceTube Inc.   Taipei, Taiwan
Curriculum and Content Intern   *Feb. 2022 – Jul. 2022*
- Advanced steady user engagement by producing, translating, and editing 60+ English videos distributed to 4M+ users worldwide
- Hosted VoiceTube Pronunciation Challenge Podcast on Spotify, Apple Music, and VoiceTube official website
- Developed and launched products by designing content and materials for the leading ed-tech company's English learning platform

Skills

Programming: Python, R, SAS, SQL
Frameworks & Tools: PyTorch, Praat
DevOps: Git, Docker, Jira
Languages: Mandarin (Native), English (Full professional), Southern Min (Conversational), Japanese (Beginner)

Teaching

Purdue University   West Lafayette, IN
Department of Linguistics, School of Interdisciplinary Studies   *Aug. 2024 - Present*
- Fundamentals of Phonology and Morphology, LING 311 (Main instructor: Fall 2025)
- Introduction to Linguistics, LING 201 (Main instructor: Fall 2024, Spring 2025)

Department of East Asian Languages and Cultures, Shool of Languages and Cultures   *Jan. 2023 - Aug. 2024*
- Chinese, CHNS 101 (TA and Co-instructor: Fall 2023)
- Chinese- Distance Learning, CHNS DIST 101 (Main instructor: Summer 2023, Summer 2024)
- Chinese, CHNS 102 (TA and Co-instructor: Spring 2023, Spring 2024)