

HUANG Po-Hsuan

3601 Watt Way GFS 301 Los Angeles CA 90089 | pohsuan@usc.edu | peh-suan.github.io

EDUCATION

Ph.D.	2024–	University of Southern California, CA Linguistics
M.A.	2020–2023	National Taiwan University, Taipei, TW Linguistics Thesis: Production and perception of tonal coarticulation in Taiwan Mandarin and Taiwan Southern Min
B.A.	2015–2020	National Chengchi University, Taipei, TW English, French (majors)

AWARDS & HONORS

Taiwan Global Fellowship Ministry of Education, Taiwan	2024–2027
Graduate School Fellowship Dornsife College of Letters, Arts and Sciences, USC	2024–2025
Dean's List National Chengchi University	2017

PUBLICATIONS Google Scholar

Journal Articles

- Huang, Po-Hsuan & Chiu, Chenhao. (Submitted). Production and perception of coarticulated tones: The cases of Taiwan Mandarin and Taiwan Southern Min. *Phonetica*.
- Huang, Po-Hsuan & Her, One-Soon. (2024). On a dichotomy of question types: The case of Paiwan. *Concentric: Studies in Linguistics*, 50(1), 24–56. <https://doi.org/10.1075/consl.00033.her>. 

Peer-reviewed Proceedings

- Huang, Po-Hsuan & Shao, Hsuan-Lei. (2024a). Applying mutual information to extract legal domain-specific collocation nouns in Mandarin. *Proceedings of the Thirtieth Annual Meeting of the Association for Natural Language Processing*, 1329–1333. 
- Chiu, Chenhao, Huang, Jian-Zhi, & Huang, Po-Hsuan. (2023). Perceptual identification of high vowels in Taiwan Mandarin. *Journal of the Acoustical Society of America*, 154, A35. 
- Chiu, Chenhao & Huang, Po-Hsuan. (2023). Lip postures of high vowels in Taiwan Mandarin. In R. Skarnitzl & J. Volín (Eds.), *Proceedings of the 20th International Congress of Phonetic Sciences* (pp. 1052–1056). Guarant International. 
- Huang, Po-Hsuan & Chiu, Chenhao. (2023b). Perception of coarticulated tones in Taiwan Mandarin and Taiwan Southern Min. In R. Skarnitzl & J. Volín (Eds.), *Proceedings of the 20th International Congress of Phonetic Sciences* (pp. 446–450). Guarant International. 

Book Chapters

- Liu, Te-Hsin, Huang, Po-Hsuan, Lai, Ching-Hong, & Liu, Chan-Yueh. (2025). Role of prosodic constraints on the acquisition of Mandarin tones by French learners. In S. Teng, L. Chang, & T. Liu (Eds.), *Handbook of Chinese Language Learning and Technology*. Springer. https://doi.org/10.1007/978-981-97-5930-9_3.

Presentations

- Huang, Po-Hsuan & Shao, Hsuan-Lei. (2026, June 26–28). *The conditioning of surprisal and many-to-one mappings in speech variation: Articulatory efficiency and perceptual recoverability*. LabPhon 20, Montreal, Canada.
- Huang, Po-Hsuan & Breiss, Canaan. (2026, January 8–11). *Surprisal and plasticity tradeoffs in the competition between speaker-oriented and listener-oriented production constraints in speech variation*. LSA Annual Meeting 2026 (LSA 2026), New Orleans, LA.
- Huang, Po-Hsuan & Shih, Stephanie S. (2026, January 8–11). *Speaker-oriented versus listener-oriented production: The case of classifier specificity in Taiwan Mandarin and Chinese Mandarin*. LSA Annual Meeting 2026 (LSA 2026), New Orleans, LA.
- Huang, Po-Hsuan & Shih, Stephanie S. (2025a, November 5–7). *Indexing political identity through syntactic variables: Classifier specificity in pro-Taiwan and pro-China Taiwan Mandarin speakers*. New Ways of Analyzing Variation 53 (NNAV 53), Ann Arbor, MI.
- Huang, Po-Hsuan & Shih, Stephanie S. (2025b, May 16–18). *Informativity and cost allocation in tonal coarticulation in Taiwan Southern Min and Taiwan Mandarin*. The 3rd International Conference on Tone and Intonation (TAI 2025), Herrsching, Germany.
- Chiu, Chenhao, Huang, Po-Hsuan, & Huang, Jian-Zhi. (2024, June 24–25). *Coordination of tongue and lips in Taiwan Mandarin high rounded vowels*. Ultrafest XI: Conference on Ultrasound Imaging for Speech and Language Research, Aizu, Japan.
- Chiu, Chenhao, Chang, Cheng-Hsiang, Huang, Jian-Zhi, & Huang, Po-Hsuan. (2024, May 13–17). *Enhancing lip contrasts between /u/ and /y/ in Taiwan Mandarin*. The 13th International Seminar on Speech Production (ISSP 2024), Autrans, France. [Poster]
- Huang, Po-Hsuan. (2024, May 13–17). *Production and perception of tonal coarticulation through computational communication simulation*. The 13th International Seminar on Speech Production (ISSP 2024), Autrans, France. [Poster]
- Huang, Po-Hsuan & Liu, Yi-Chen. (2023, October 21). *Ultrasonic-and-optical-imaging-assisted automated speech correctness judgment model*. Tunghai International Conference on Second Language Teaching and Research 2023 (SLTR.THU 2023), Taichung, Taiwan.
- Huang, Po-Hsuan & Chiu, Chenhao. (2023a, May 26–27). *Tonal coarticulation in Taiwan Mandarin and Taiwan Southern Min*. Hanyang International Symposium on Phonetics and Cognitive Sciences of Language 2023 (HisPhonCog 2023), Seoul, Korea. [Poster]
- Wang, Chi-Wei, Chen, Bo-Wei, Huang, Po-Hsuan, Lai, Ching-Hung, & Chiu, Chenhao. (2023, May 26–27). *Evaluating forced alignment for under-resourced languages: A test on Squliq Atayal*. Hanyang International Symposium on Phonetics and Cognitive Sciences of Language 2023 (HisPhonCog 2023), Seoul, Korea. [Poster]
- Huang, Po-Hsuan & Chiu, Chenhao. (2022a, November 3–4). *Articulation and syllabic affiliation of prenuclear glide in Taiwan Mandarin*. Ultrafest X: Conference on Ultrasound Imaging for Speech and Language Research, Manchester, United Kingdom.
- Huang, Po-Hsuan, Lai, Ching-Hung, & Liu, Te-Hsin. (2022, September 23–25). *On the interaction between L1 Transfer and universal constraints – Evidence from the acquisition of Mandarin*

- tones by French speakers.* North American Conference on Chinese Linguistics 2022 (NACCL 2022), Bloomington, IN, United States. [File]
- Huang, Po-Hsuan** & Chiu, Chenhao. (2022b, January 6–9). *Vowel-glide distinction in high vocoid diphthong structures in Squliq Atayal: An ultrasound and acoustic study*. LSA Annual Meeting 2022 (LSA 2022), Washington, DC, United States. [Poster] [File]
- Huang, Po-Hsuan**. (2021, October 23). *Vowel-glide distinction in high vocoid diphthong structures in Squliq Atayal: An ultrasound and acoustic study*. National Conference on Linguistics 2021 (NCL 2021), Taipei, Taiwan. [File]
- Huang, Po-Hsuan** and Her, One-Soon. (2021, October 15–16). *On a two-way distinction of questions in Paiwan*. Young Scholars' Symposium on Taiwan Languages (YSSTL), Online. [File]

Working Papers

- Huang, Po-Hsuan** & Shao, Hsuan-Lei. (2024b). Comparison between the structures of word co-occurrence and word similarity networks for ill-formed and well-formed texts in Taiwan Mandarin. *arXiv*. <https://doi.org/10.48550/arXiv.2408.09404>.

RESEARCH EXPERIENCE

Feb, 2024	Full-time Research	Natural Language Processing and Sentiment Analysis Lab
–Jun, 2024	Assistant	Institute of Information Science, Academia Sinica (PI: Dr. Lun-Wei Ku)
Jul, 2021	Research Assistant	Speech Behavior and Science Lab
–Feb, 2024		Graduate Institute of Linguistics, National Taiwan University (PI: Dr. Chenhao Chiu)
Aug, 2023	Research Assistant	Laboratory of Computational China Studies
–Dec, 2023		Research Center for Digital Law, National Taiwan Normal University (PI: Dr. Hsuan-Lei Shao)
Jul, 2021	Research Assistant	Graduate Program of Teaching Chinese as a Second Language, National Taiwan University (PI: Dr. Te-Hsin Liu)
–Oct, 2022		
Jun, 2018	Research Assistant	Graduate Institute of Linguistics, National Chengchi University
–Jul, 2020		(PI: Dr. One-Soon Her)

TEACHING

2025 Fall	Teaching Assistant	Language and Society Department of Linguistics, University of Southern California (Instructor: Prof. Andrew Simpson)
2023 Spring	Teaching Assistant	Technology of Brain Science Graduate Institute of Brain and Mind Sciences, National Taiwan University (Instructors: Prof. Joshua G.O. Soo & Prof. Chia-Lin Lee)

<i>2022 Spring & 2023 Spring</i>	Teaching Assistant	Uncovering Languages Graduate Institute of Linguistics, National Taiwan University (Instructor: Prof. Chenhao Chiu)
<i>2020 Fall & 2021 Spring</i>	Teaching Assistant	Freshman English Department of Foreign Languages and Literatures, National Taiwan University (Instructor: Prof. Wen-Hsien Hsu)

INVITED TALKS

"Implementation of Praat through Python"	<i>Nov, 2024</i>
Department of Linguistics, USC, CA	
"Electroglottography in linguistics research with Python"	<i>Mar, 2024</i>
Institute of Linguistics, Academia Sinica, Taipei	
"Face extraction with MediaPipe in linguistics research"	<i>Oct, 2024</i>
Speech Behaviours and Speech Sciences In-class Talk, NTU, Taipei	
"Face extraction with MediaPipe in linguistics research"	<i>Nov, 2022</i>
MultiMoco NTU Workshop, NTU, Taipei	
"Using PCA and LDA for ultrasound image classification"	<i>Nov, 2021</i>
The 1 st NTU GIL Ultrasound Workshop, NTU, Taipei	

ACADEMIC SERVICE

Reviewing

Journals Journal of the Acoustical Society of America

Conferences International Conference on Tone and Intonation (TAI), Annual Meeting of the Association for Computational Linguistics (ACL)

SKILLS & KNOWLEDGE

Languages Mandarin (native); Southern Min (native); English (advanced); French (advanced); Spanish (basic)

Laboratory instrumentation ultrasound; electromyography; electroglottography

Statistical analyses fundamental analyses (t-test, ANOVA, etc.); dimensionality reduction (PCA, LDA, t-SNE, etc.); regression/modeling (linear/logistic regression, LMM, GLM, GAMM, etc.), cluster analysis (hierarchical; K-Means, etc.); correlation-related analyses (fundamental correlation analyses, CCA, Apriori Algorithm, mutual information, label ranking average precision scores, etc.); basic graph analyses

Programming languages/software Python; R; Javascript; Praat Script; Psychopy; E-Prime; Matlab; SQL; bash; Swift

Packages/modules

- Data analyses: numpy; scikit-learn; statsmodels; pandas; network; lme4
- Visualization: matplotlib; seaborn; Plotly

- Image processing: OpenCV; MediaPipe; FFmpeg
- Acoustic analyses: parselmouth; wave
- Text mining: jieba; ckip; gensim
- Others: tensorflow; PyTorch; tkinter; PyPI; pickle; cython; git

Machine learning linear/logistic regression; SVM; decision tree; random forest; KNN; neural networks (CNN, spatial-transformer network, RNN, GAN, etc.); neural agent simulation, transformers and LLMs

Data structures & Algorithms linked list, tree, array, A* pathfinding, Levenshtein distance

LICENSES & CERTIFICATIONS

Deep Learning Specialization [\[View\]](#)

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