HUANG Po-Husan

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

PUBLICATIONS   G Google Scholar

Journal Articles

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 [Poster] 📄

Peer-reviewed Conference 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 [Poster] 📄

Chiu, Chenhao, Huang, Jian-Zhi, & **Huang, Po-Hsuan**. (2023). Perceptual identification of high vowels in Taiwan Mandarin. *The Journal of the Acoustical Society of America*, *154*, A35 [Poster] 📄

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 [Poster] 📄

Huang, Po-Hsuan & Chiu, Chenhao. (2023a). 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 [Poster] 📄

Presentations

Huang, Po-Hsuan & Breiss, Canaan. (Under review). What's in a name? Phonetic and phonological conditioning of personal names in Taiwan Mandarin. *Penn Linguistics Conference (PCL 49)* [Poster] 📄

Chiu, Chenhao, Chang, Cheng-Hsiang, Huang, Jian-Zhi, & **Huang, Po-Hsuan**. (2024–May 17). Enhancing lip contrasts between /u/ and /y/ in Taiwan Mandarin. *The 13th International Seminar on Speech Production (ISSP 2024)* 📄

Chiu, Chenhao, **Huang, Po-Hsuan**, & Huang, Jian-Zhi. (2024–June 25). Coordination of tongue and lips in Taiwan Mandarin high rounded vowels. *Ultrafest XI: Conference on Ultrasound Imaging for Speech and Language Research* [Poster] 📄

Huang, Po-Hsuan. (2024b–May 17). Production and perception of tonal coarticulation through computational communication simulation. *The 13th International Seminar on Speech Production (ISSP 2024)* 📄

Huang, Po-Hsuan & Chiu, Chenhao. (2023c–May 27). Tonal coarticulation in Taiwan Mandarin and Taiwan Southern Min. *Hanyang International Symposium on Phonetics and Cognitive Sciences of Language (HisPhonCog)* 📄

Huang, Po-Hsuan & Liu, Yi-Chen. (2023). Ultrasonic-and-optical-imaging-assisted automated speech correctness judgment model. *Tunghai International Conference on Second Language Teaching and Research (SLTR.THU)* [Poster] 📄

Wang, Chi-Wei, Chen, Bo-Wei, **Huang, Po-Hsuan**, Lai, Ching-Hung, & Chiu, Chenhao. (2023–May 27). Evaluating forced alignment for under-resourced languages: A test on Squliq Atayal. *Hanyang International Symposium on Phonetics and Cognitive Sciences of Language (HisPhonCog)* 📄

Huang, Po-Hsuan & Chiu, Chenhao. (2022a–November 4). Articulation and syllabic affiliation of prenuclear glide in Taiwan Mandarin. *Ultrafest X: Conference on Ultrasound Imaging for Speech and Language Research* [Poster] 📄

Huang, Po-Hsuan & Chiu, Chenhao. (2022b–January 9). Vowel-glide distinction in high vocoid diphthong structures in Squliq Atayal: An ultrasound and acoustic study. *Annual Meeting of the Linguistic Society of America (AML)* 📄

Huang, Po-Hsuan, Lai, Ching-Hung, & Liu, Te-Hsin. (2022–September 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 (NACCL)* [Poster] 📄

Huang, Po-Hsuan. (2021). Vowel–glide distinction in high vocoid diphthong structures in Squliq Atayal: An ultrasound and acoustic study. *National Conference on Linguistics (NCL)* [Poster] 📄

Huang, Po-Hsuan and Her, One-Soon. (2021–October 16). On a two-way distinction of questions in Paiwan. *Young Scholars' Symposium on Taiwan Languages (YSSTL)* [Poster] 📄

Working papers

Huang, Po-Hsuan. (2024a). Informativity and its allocation in tonal coarticulation in Taiwan Southern Min and Taiwan Mandarin [Poster] 📄

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 [Poster] 📄

Research Experience

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

Teaching

Spring semester, 2023	Teaching Assistant	Technology of Brain Science Graduate Institute of Brain and Mind Sciences, National Taiwan University (Lecturers: Prof. Joshua G.O. Soo & Prof. Chia-Lin Lee)
Spring semester, 2022/2023	Teaching Assistant	Uncovering Languages Graduate Institute of Linguistics, National Taiwan University (Lecturer: Prof. Chenhao Chiu)
Fall semester, 2020/ Spring semester, 2021	Teaching Assistant	Freshman English Department of Foreign Languages and Literatures, National Taiwan University (Lecturer: Prof. Prof. Wen-Hsien Hsu)

Invited Talks

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

ACADEMIC SERVICE

Reviewer

Annual Meeting of the Association for Computational Linguistics (ACL), Bangkok   *2024*

ACTIVITES

Organizer   *Feb–Aug, 2024*
Education Camp for Rural Schools, NCCU
President of Activity   *Jul, 2017–Jun, 2018*
Changhua Student Association, NCCU
Vice organizer   *Sep, 2016–Jan, 2017*
Education Camp for Rural Schools, NCCU
Leading actor   *May, 2017*
Concours universitaire national de théâtre, Taiwan, NCCU
Project manager   *Aug, 2016*
Education Camp for Rural Schools, NCCU
Voluntary after-school tutor   *Spring semester, 2016*
Wanhsing Elementary School, Taipei

SKILLS & KNOWLEDGE

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

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

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

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 Laboratory instrumentation: ultrasound; electromyography; electroglottography

LICENSES & CERTIFICATIONS

Deep Learning Specialization [View]   Issued by: Coursera

Last updated: *November 19, 2024*