

## HUANG Po-Husan

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### EDUCATION

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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

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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 Google Scholar


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#### Journal Articles


Huang, Po-Hsuan & Chiu, Chenhao. (Under review). Production and perception of coarticulated tones: The cases of Taiwan Mandarin and Taiwan Southern Min. *Journal of the Acoustical Society of America*.


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/cons1.00033.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. *The 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. 

## Presentations

- Huang, Po-Hsuan** & Shih, Stephanie S. (2025). *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 (SLTR.THU), 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 (HisPhonCog), 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 (HisPhonCog), 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 (NACCL), Bloomington, IN, United States. 
- 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*. Annual Meeting of the Linguistic Society of America (AML), Washington, DC, United States. [Poster] 
- 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 (NCL), Taipei, Taiwan. 
- 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. 

## 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

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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)
Aug, 2023 –Dec, 2023	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)
Jun, 2018 –Jul, 2020	Research Assistant	Graduate Institute of Linguistics, National Chengchi Univer- sity (PI: Dr. One-Soon Her)

## TEACHING

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

## INVITED TALKS

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

## ACADEMIC SERVICE

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## Reviewer

The 3 <sup>rd</sup> International Conference on Tone and Intonation (TAI), Herrsching	2025
Annual Meeting of the Association for Computational Linguistics (ACL), Bangkok	2024

## SKILLS & KNOWLEDGE

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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

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

Issued by: Coursera

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February 7, 2025