

# HUANG Po-Hsuan

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## EDUCATION

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

## AWARDS & HONORS

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

## PUBLICATIONS Google Scholar

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### 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 20<sup>th</sup> 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 20<sup>th</sup> 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](https://doi.org/10.1007/978-981-97-5930-9_3).

## Presentations

- 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 & Shao, Hsuan-Lei. (2025, November 20–22). *Information-theoretic conditioning in terminological alternations in specialized domains: The cases of Taiwan Mandarin legal language and English biomedical language*. The 37<sup>th</sup> Conference on Computational Linguistics and Speech Processing (ROCLING 2025), Taipei, Taiwan.
- 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 (NWA 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 3<sup>rd</sup> 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 13<sup>th</sup> 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 13<sup>th</sup> 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.
- 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]
- 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.
- 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>.

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## 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
–Oct, 2022		(PI: Dr. Te-Hsin Liu)
Jun, 2018	Research Assistant	Graduate Institute of Linguistics, National Chengchi University
–Jul, 2020		(PI: Dr. One-Soon Her)

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## TEACHING

2025 Fall	Teaching Assistant	Language and Society Department of Linguistics, University of Southern California (Instructor: Prof. Andrew Simpson)
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<i>2023 Spring</i>	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 &amp; 2023 Spring</i>	Teaching Assistant	Uncovering Languages Graduate Institute of Linguistics, National Taiwan University (Instructor: Prof. Chenhao Chiu)
<i>2020 Fall &amp; 2021 Spring</i>	Teaching Assistant	Freshman English Department of Foreign Languages and Literatures, National Taiwan University (Instructor: 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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### **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**

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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**

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

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