

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


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/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. *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, 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 (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** & Shih, Stephanie S. (Under review). *Interaction of cognitive and linguistic constraints in communication: The case of informativity and the actuation of tonal coarticulation in Taiwan Southern Min and Taiwan Mandarin*. CogSci 2025, San Francisco, CA, United States. 

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 – 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 University (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
“Using PCA and LDA for ultrasound image classification”
The 1st NTU GIL Ultrasound Workshop, NTU, Taipei

Nov, 2022

Nov, 2021

ACADEMIC SERVICE

Reviewer

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

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

February 7, 2025