

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** & Breiss, Canaan. (Under review). *What's in a name? Phonetic and phonological conditioning of personal names in Taiwan Mandarin*. Penn Linguistics Conference (PLC 49), Philadelphia, PA, United States 
- Huang, Po-Hsuan** & Shih, Stephanie S. (Under review). *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

| | | |
|-----------------------|------------------------------|---|
| 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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|---|--------------------|---|
| 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. Wen-Hsien Hsu) |

INVITED TALKS

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| “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 1 st NTU GIL Ultrasound Workshop, NTU, Taipei | Nov, 2021 |

ACADEMIC SERVICE

Reviewer

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

ACTIVITIES

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

December 24, 2024