

## 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 & 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

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**. (Under review). Informativity and its allocation in tonal coarticulation in Taiwan Southern Min and Taiwan Mandarin. *Third International Conference on Tone and Intonation* 
- 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** & 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> 
- Huang, Po-Hsuan** & Chiu, Chenhao. (2023c). Production and perception of coarticulated tones: The cases of Taiwan Mandarin and Taiwan Southern Min. SSRN. <https://ssrn.com/abstract=4637487>

## 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)
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

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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 <sup>st</sup> NTU GIL Ultrasound Workshop, NTU, Taipei	Nov, 2021

## ACADEMIC SERVICE

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### Reviewer

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

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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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*November 22, 2024*