

HUANG Po-Husan

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EDUCATION


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


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 & Her, One-Soon. (2024). On a dichotomy of question types: The case of Pailan. *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. (2023a). 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 (PCL 49)* 

- Chiu, Chenhao, Chang, Cheng-Hsiang, Huang, Jian-Zhi, & **Huang, Po-Hsuan**. (2024–May 17). Enhancing lip contrasts between /u/ and /y/ in Taiwan Mandarin. *The 13th International Seminar on Speech Production (ISSP 2024)* [Poster] 
- Chiu, Chenhao, **Huang, Po-Hsuan**, & Huang, Jian-Zhi. (2024–June 25). Coordination of tongue and lips in Taiwan Mandarin high rounded vowels. *Ultrafest XI: Conference on Ultrasound Imaging for Speech and Language Research* 
- Huang, Po-Hsuan**. (2024b–May 17). Production and perception of tonal coarticulation through computational communication simulation. *The 13th International Seminar on Speech Production (ISSP 2024)* [Poster] 
- Huang, Po-Hsuan** & Chiu, Chenhao. (2023c–May 27). Tonal coarticulation in Taiwan Mandarin and Taiwan Southern Min. *Hanyang International Symposium on Phonetics and Cognitive Sciences of Language (HisPhonCog)* [Poster] 
- Huang, Po-Hsuan** & Liu, Yi-Chen. (2023). Ultrasonic-and-optical-imaging-assisted automated speech correctness judgment model. *Tunghai International Conference on Second Language Teaching and Research (SLTR.THU)* 
- Wang, Chi-Wei, Chen, Bo-Wei, **Huang, Po-Hsuan**, Lai, Ching-Hung, & Chiu, Chenhao. (2023–May 27). Evaluating forced alignment for under-resourced languages: A test on Sqliq Atayal. *Hanyang International Symposium on Phonetics and Cognitive Sciences of Language (HisPhonCog)* [Poster] 
- Huang, Po-Hsuan** & Chiu, Chenhao. (2022a–November 4). Articulation and syllabic affiliation of prenuclear glide in Taiwan Mandarin. *Ultrafest X: Conference on Ultrasound Imaging for Speech and Language Research* 
- Huang, Po-Hsuan** & Chiu, Chenhao. (2022b–January 9). Vowel-glide distinction in high vocoid diphthong structures in Sqliq Atayal: An ultrasound and acoustic study. *Annual Meeting of the Linguistic Society of America (AML)* [Poster] 
- Huang, Po-Hsuan**, Lai, Ching-Hung, & Liu, Te-Hsin. (2022–September 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)* 
- Huang, Po-Hsuan**. (2021). Vowel–glide distinction in high vocoid diphthong structures in Sqliq Atayal: An ultrasound and acoustic study. *National Conference on Linguistics (NCL)* 
- Huang, Po-Hsuan** and Her, One-Soon. (2021–October 16). On a two-way distinction of questions in Paiwan. *Young Scholars’ Symposium on Taiwan Languages (YSSTL)* 

Working papers

- Huang, Po-Hsuan**. (2024a). Informativity and its allocation in tonal coarticulation in Taiwan Southern Min and Taiwan Mandarin 
- 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	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 –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

<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. Prof. Wen-Hsien Hsu)

INVITED TALKS

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

ACADEMIC SERVICE

Reviewer

ACTIVITIES

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

Last updated: *November 19, 2024*