Tzuyi Tseng 曾子伊

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💡 Cognitive psycho-/neurolinguistics; Cross-linguistic comparison
Sensorimotor representations in language processing
Speech processing of articulatory features
Prosodic encoding of emotions
Structure and access of the mental lexicon

Professional background

Laboratoire Dynamique du Langage (DDL)
Associate researcher | speech processing, emotion recognition, cross-linguistic comparison, MVPA
Lyon, France
2025-

Laboratoire Dynamique du Langage (DDL)
Ph.D. Student (ANR funding 🔗) | speech perception, embodiment, fMRI, MVPA (decoding, RSA), Python
Lyon, France
2021-2025

Massachusetts Institute of Technology (MIT)
Project Assistant (MITx MOOCs funding 🔗) | project & pedagogical managements, foreign language teaching
remote, USA
2020-2021

Program in Teaching Chinese as a Second Language, National Chengchi University (NCCU)
Project Assistant (MOE funding 🔗) | project management, budgeting, scientific seminar organization, supervision
Taipei, Taiwan
2020-2021

Phonetics and Psycholinguistics Laboratory, NCCU
Research Assistant & Analyst (MOST/MOE funding) | phonemically aligned speech corpora, supervision
Taipei, Taiwan
2017-2020

Education

Ph.D. in Neuroscience, Université Lumière Lyon 2, France
Thesis: Sensorimotor Representations for Native and Non-native Phoneme Perception 📄
Supervisors: Véronique Boulenger (CNRS), Claudio Brozzoli (Inserm), Alice C. Roy (CNRS)
2021-2025

Master of Arts in Linguistics, National Chengchi University, Taiwan
Thesis: Lexical Organization in Taiwan Mandarin: Evidence from Word Association Tasks 📄 | 2021 Best Thesis Award
2017-2020

Graduate Exchange Program, University of Mississippi, USA
Training: Speech Language Pathology, Phonological disorders, Quantitative linguistics | International Outgoing Exchange Programs Award
2018 Fall

Bachelor of Arts in English, National University of Tainan, Taiwan
2013-2017

Skills

Language	Mandarin (native), English (proficient), French (intermediate)
Neuroimaging	fMRI (3T sparse/continuous sequence), **MVPA (decoding, RSA)**
Programming/Statistical analysis	**Python (Nilearn, scikit-learn, rsatoolbox)**, R (tidyverse)
Speech processing	Praat
Experimental design	PsychoPy/Pavlovia, Opensesame/Jatos

Academic services

2025	大腦語語工作坊 (The Brain Talks Seminar). Public seminar organizer & presenter of **Brain Mappers of Tomorrow Satellite Mandarin Session in Lyon, France** for 2025 Human Brain Mapping (OHBM) annual meeting, Brisbane, Australia 🔗
2023 - 2024	**Co-organizer of a laboratory seminar "Dendy'n Science"**, Laboratoire Dynamique du Langage (DDL), Lyon, France

Ongoing project preparation & collaborations

Preliminary pilots Lyon, Saint-Etienne, France	Conducting a preliminary investigation of cross-linguistic emotion recognition in verbal and non-verbal vocalizations, in collaboration with Aitana Garcia Arasco (DDL & ENES).
External collaborator Paris, France	Ongoing external collaborator of the Inidex EFL project on the grammatical encoding of expressivity and emotions, in collaboration with Lisa Brunetti (Université Paris Cité).
Preliminary EEG MVPA Aix-en-Provence, France	Developing a funding application for a research project of Ladislas Nalborczyk (CNRS) on uncovering the neural dynamics of inner speech from EEG signals.
Future M/EEG project Aix-en-Provence, France	Developing a funding application for a new research project of **T. Tseng** on articulatory imagery in foreign language learning, in collaboration with Ladislas Nalborczyk (CNRS).

Publications

in preparation	**Tseng, T.**, Thibault, S., Krzonowski, J., Canault, M., Roy, A. C., Brozzoli, C. & Boulenger, V. Decoding articulatory phonetic features: somatotopic and sensorimotor representations in native and non-native phoneme perception.
accepted	**Tseng, T.**, Krzonowski, J., Brozzoli, C., Roy, A. C. & Boulenger, V. Embodied speech: sensorimotor contributions to native and non-native language processing and learning. Neurobiology of Language. doi.org/10.31234/osf.io/fqwe8 🖹
2025	**Tseng, T.** Sensorimotor Representations for Native and Non-native Phoneme Perception. Doctoral Thesis, Université Lumière Lyon 2, France. 🖹
2020	**Tseng, T.** Lexical organization in Taiwan mandarin: evidence from word association tasks. Master's Thesis, National Chengchi University, Taiwan. doi.org/10.6814/NCCU202000123 🖹
2020	**Tseng, T.** Lexical networks between sounds and meanings in Taiwan mandarin: evidence from psycholinguistics. Crossroads. A Journal of English Studies 29, 37-52. doi.org/10.15290/cr.2020.29.2.03

Conferences

Oral presentation

2024	**Tseng, T.**, Krzonowski, J., Roy, A., Brozzoli, C. & Boulenger, V. Decoding degraded speech in the motor cortex. Embodied and Situated Language Processing (ESLP 2024), Berlin, Germany.
2020	**Tseng, T.** Lexical networks between sounds and meanings in Taiwan mandarin: evidence from psycholinguistics. 3rd International Białystok－Kyiv Conference on Theoretical and Applied Linguistics, Białystok, Poland.

Poster presentations

2024	**Tseng, T.**, Krzonowski, J., Roy, A., Brozzoli, C. & Boulenger, V. Beyond speech production: sensorimotor contribution to native and non-native phoneme perception. 13th International Seminar on Speech Production (ISSP 2024), Autrans, France.
2023	**Tseng, T.**, Krzonowski, J., Roy, A., Brozzoli, C. & Boulenger, V. Cortical representations for native and non-native phoneme perception. 5th Annual Meeting of the Society for the Neurobiology of Language (SNL 2023), Marseille, France.

Invited talks

2025	**Tseng, T.** Sensorimotor representations of native and foreign phoneme perception: an fMRI study. LingLunch seminar, Laboratoire de Linguistique Formelle, Université Paris Cité, Paris, France. 🔗
2025	**Tseng, T.** How does the human brain process native and non-native speech sounds? (大腦如何辨識母語與外語語音？). Graduate Institute of Linguistics, National Chengchi University, Taipei, Taiwan. 🔗
2025 (online)	**Tseng, T.** Sensorimotor representations of phoneme perception: an fMRI study with multivariate analyses. NeuroImaging Club, Centre de Recherche en Neurosciences de Lyon (CRNL), Bron, France. 🔗
2022	**Tseng, T.** PhD in France: Motor Representation and Speech Processing in Foreign Language Learning (法國博士生研究什麼：腦動神經於外語語音學習的歷程). Graduate Institute of Linguistics, National Chengchi University, Taipei, Taiwan. 🔗

Presentations

2025	**Tseng, T.** What do know about emotion, language and the brain? A glimpse into current research. Laboratory presentation at ImpAct Journal Club, Centre de Recherche en Neurosciences de Lyon (CRNL), Bron, France.
2025	**Tseng, T.** First steps toward emotion recognition across languages: a preliminary behavioral and fMRI protocol. Laboratory presentation at Club PAD (Club Protocole à la Demande/Protocol on Demand) DENDY, DDL, Lyon, France.
2025	**Tseng, T.** Sensorimotor representation of native and non-native phoneme perception and its application for foreign language learning (大腦辨識母語與非母語語音的機制與外語學習的應用【語言所第 363 次學術演講】). Public talk at Graduate Institute of Linguistics, National Taiwan University, Taipei, Taiwan. 🔗
2024	**Tseng, T.** Introduction to Taiwanese. Laboratory workshop presenter at Atelier Café Doctorants, Laboratoire Dynamique du Langage (DDL), Lyon, France.
2023, 2022	Public workshop presenter, Stage d'Orthophonie, DDL, Lyon, France.
2022	**Tseng, T.** Motor representation and speech processing in foreign language learning. Laboratory presentation at ImpAct Journal Club, Centre de Recherche en Neurosciences de Lyon (CRNL), Bron, France.
2022	**Tseng, T.** Processing of phonemes in a foreign language: an fMRI study. Laboratory presentation at Club PAD DENDY, DDL, Lyon, France.
2022	Public workshop presenter, Biennale des Langues 2022, Lyon, France. 🔗

Awards & Grants

2025	Laboratoire Dynamique du Langage (DDL) research funding (est. ~500€) to support the organization of a one-day seminar for local young children to learn science as a part of OHBM 2025 annual conference.
2024	DDL training and travel funding (est. 250€) to support the participation of a 3-day BrainHack Marseille 2024 winter school in the campus Timone, Aix-Marseille Université, Marseille, France.
2022	DDL & National Chengchi Univeristy (NCCU) research funding (est. ~1600€) to support a 3-day **international academic visiting** (as a Ph.D. researcher) at the Graduate Institute of Linguistics, NCCU, Taipei, Taiwan.
2021	**Centre National de la Recherche Scientifique (CNRS) Ph.D. full-time funded contract** (3 years, monthly salary 2135€).
2021	**NCCU Annual Best Master's Thesis Award** (est. 910€).
2019	Ministry of Science and Technology (MOST, Taiwan) conference travel grants (est. 750€) to the 3rd International Białystok－Kyiv Conference on Theoretical and Applied Linguistics, Białystok, Poland.
2018	NCCU International Outgoing Exchange Programs Award (one-semester tuition waiver) to do graduate-level study exchange at the University of Mississippi, USA.
2017	NCCU Academic Performance Award.

Teaching

Lecturer for graduate level

2022 Fall	Introduction to Linguistics in English. Université Lumière Lyon 2, Lyon, France UE: 41DCAA01 - TD - General overview of SDL upgrade in English.

Teaching assistant for undergraduate level

2018 Spring	Introduction to Phonology, Department of English, National Chengchi University (NCCU), Taiwan.
2018 Spring	Language and Civilization, Center of General Education, NCCU, Taiwan.
2017 Fall	Cross-strait Humanities and Society Study Camp, NCCU, Taiwan.
2017	Language Center, Office of International Affairs, National University of Tainan.

Participation in projects

2025 - **inIdEx, France**	**External collaborator.** Funded research project. This ten-year inIdEx EFL (Empirical Foundations of Linguistics) project aims to open up new perspectives through an integrative approach, promoting the sharing of data, methods, and theoretical viewpoints across various branches of linguistics. I collaborate closely with Lisa Brunetti (Université Paris Cité) within the project's axis focused on the grammatical encoding of expressivity and emotion.
2021 - 2025 **ANR, France**	**Full-time Ph.D. student**. Funded research project (ANR-19-CE28-0015). This five-year ANR (Agence nationale de la recherche) AnchorFL project (2020-2026) of Véronique Boulenger (CNRS), Alice C. Roy (CNRS) and Claudio Brozzoli (Inserm) exploits embodied sensorimotor encodings of phonemes and benefits of manual gestures to enrich phonological representations in a foreign language.
2020 - 2021 **MITx MOOCs, USA**	**Assistant**. Funded teaching project on www.edx.org. The online MITx MOOCs courses directed by Haohsiang Liao (MIT) aims to help the learners without prior background in the language develop skills in Mandarin Chinese to communicate and to develop an understanding of Chinese interpersonal behavioral culture and related thought patterns.
2020 - 2021 **MOE, Taiwan**	**Full-time Assistant**. Funded research project (MOE 109H122-02; MOE 110H122-02). This three-year MOE (Ministry of Education) project (2019-2021) of Hsun-Huei Chang (NCCU) conducts the Higher Education Sprout Project: Sustained progress and rise of universities in Taiwan.
2020 - 2021 **MOE, Taiwan**	**Assistant**. Funded research project (MOE 109H124E-11). This one-semester project (2020-2021) of Hsun-Huei Chang (NCCU) provides an international course with both online and in-class learning and both campus and overseas professionals (https://eel-hub.nccu.edu.tw/lecture/161766001/).
2018 - 2021 **MOST, Taiwan**	**Assistant & Analyst**. Funded research project (MOST 107-2410-H-004-127; MOST 108-2410-H-004 -098 -MY2). This three-year MOST (Ministry of Science and Technology) project (2018-2021) of I-Ping Wan (NCCU) investigates the error analysis of Thai students learning Taiwan Mandarin: a corpus-driven and cross-sectional study.
2018 - 2019 **MOST, Taiwan**	**Assistant & Analyst**. Funded research project (MOST 107-2420-H-002-007-MY3-W10806). This one-year project (2018-2019) of I-Ping Wan (NCCU) established an academic research website for AI and machine learning in sentiment analysis: Corpora studies in natural language processing (http://emotioncorpus.nccu.edu.tw/).
2017 - 2018 **MOE, Taiwan**	**Assistant**. Funded research project (MOE 107F107016) of I-Ping Wan (NCCU) carried out a one-year (2017-2018) research project on the New South Bound Policy (NSP) for Thai students learning Mandarin lexical tones.