

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)

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

2021-2025

Thesis: Sensorimotor Representations for Native and Non-native Phoneme Perception 

Supervisors: Véronique Boulenger (CNRS), Claudio Brozzoli (Inserm), Alice C. Roy (CNRS)

Master of Arts in Linguistics, National Chengchi University, Taiwan

2017-2020

Thesis: Lexical Organization in Taiwan Mandarin: Evidence from Word Association Tasks  | 2021 Best Thesis Award

Graduate Exchange Program, University of Mississippi, USA

2018 Fall

Training: Speech Language Pathology, Phonological disorders, Quantitative linguistics | International Outgoing Exchange Programs Award

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

Ongoing project preparation & collaborations

Future neuroimaging project	Independently developing a funding application for a new research project of T. Tseng on emotion recognition across languages; open to collaborations .
Preliminary pilots Paris, France	Conducting a preliminary investigation of cross-linguistic emotion recognition in French and Mandarin verbal phrases and non-verbal vocalizations, in collaboration with Aitana Garcia Arasco (DDL & ENES).
External collaborator Paris, France	Ongoing external collaborator of the Inindex EFL project on the grammatical encoding of expressivity and emotions, in collaboration with Lisa Brunetti (Université Paris Cité).
Preliminary analysis Aix-en-Provence, France	Developing a funding application for a research project of Ladislás Nálborský (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 Ladislás Nálborský (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.
- under revision* **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. *Embodying 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.

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

Invited talks

- Scheduled* **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 University (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

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.

Referees

Doctoral thesis supervisor

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Doctoral thesis co-supervisor

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Doctoral thesis co-supervisor

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Project director

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Chinese Language Program
Massachusetts Institute of Technology, MA, USA

Master's thesis advisor & academic collaborator

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