YUAN, DI

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My research primarily focuses on the relationship between neural plasticity and individual experiences. I delve into language and social interactions within both typical and atypical populations, including children with hearing loss and patients with stroke-induced aphasia. Utilizing a combination of behavioral and neuroimaging techniques such as MRI and fNIRS, I investigate brain structure and function from both single- and multi-brain perspectives.

EDUCATION

2021.08-2025.10 **PhD in Psychology**
The Chinese University of Hong Kong, Hong Kong SAR, China
Supervisor: Prof. Patrick Wong, Prof. Urs Maurer

2016.09-2019.06 **MA.Sc in Psychology**
East China Normal University, Shanghai, China
Supervisor: Prof. Xianchun Li

2012.09-2016.06 **B.S in Psychology**
Jilin University, Jilin, China

EXPERIENCE

2019.06-2021.06 **Research Assistant**
Shenzhen Institute of Neuroscience,
Guangdong-Hongkong-Macau Institute of CNS Regeneration and Ministry of Education CNS Regeneration Collaborative Joint Laboratory
Principle Investigator: Prof. Li-Hai Tan

PUBLICATIONS

*[*corresponding author, # co-first author]*

Yuan, D., Chan, J., Shoaib, Z., Chan, K.-Y., Kielman, A., Wong, P.C.M. (Under Review). The Social Nature of Music: Interpersonal Neural Coupling in Asymmetrical and Symmetrical Musical Performance. *Neuroimage*.

Wang, Y.[#], **Yuan, D.**[#], Dettman, S., Choo, D,. Xu, S. E., Thomas, D., Ryan, M. E., Wong, P.C.M., Young, N.M. (Under Review). Neural Prediction of Spoken Language Improvements in Children with Cochlear Implants: A Multicenter Study. *JAMA Otolaryngology–Head & Neck Surgery*.

Yuan, D., Chang, W. T., Ng, I. H., Tong, M. C. F., Chu, W. C. W., Young, N. M., & Wong, P.C.M. (2025). Predicting Auditory Skill Outcomes After Pediatric Cochlear Implantation Using Preoperative Brain Imaging. *American Journal of Audiology*

Yuan, D., Tournis, E., Ryan, M. E., Lai, C. M., Geng, X., Young, N. M., & Wong, P.C.M. (2024). Early-stage use of hearing aids preserves auditory cortical structure in children with sensorineural hearing loss. *Cerebral Cortex*, *34*(4), bhae145.

Yuan, D., Ng, I., Feng, G., Chang, W-T., Tong, M., Young, N.M., Wong, P.C.M. (2023). The Extent of Hearing Input Affects the Plasticity of Auditory Cortex in Children with Hearing-loss: A Preliminary Study. *American Journal of Audiology*, 1-12.

Shao, X., Luo, D., Zhou, Y., Xiao, Z., Wu, J., Tan, L. H., ... & **Yuan, D**[*]. (2022). Myeloarchitectonic Plasticity in Elite Golf Players' Brains. *Human Brain Mapping*, *43*(11), 3461-3468.

Yuan, D., Luo, D., Kwok, V. P., Zhou, Y., Tian, H., Yu, Q., ... & Tan, L. H. (2021). Myeloarchitectonic asymmetries of language regions in the human brain. *Cerebral Cortex*, *31*(9), 4169-4179.

Yuan, D.[#], Tian, H.[#], Zhou, Y., Wu, J., Sun, T., Xiao, Z., ... & Tan, L. H. (2021). Acupoint-brain (acubrain) mapping: common and distinct cortical language regions activated by focused ultrasound stimulation on two language-relevant acupoints. *Brain and Language*, *215*, 104920.

Yuan, D., Zhang, R., Liu, J., Feng, D., Hu, Y., Li, X., ... & Zhou, X. (2022). Interpersonal neural synchronization could predict the outcome of mate choice. *Neuropsychologia*, *165*, 108112.

Zhu, Y., Xu, M., Lu, J., Hu, J., Kwok, V. P., Zhou, Y., **Yuan, D.,** Wu, B., Zhang, J., Wu, J. & Tan, L. H. (2022). Distinct spatiotemporal patterns of syntactic and semantic processing in human inferior frontal gyrus. *Nature Human Behaviour*, *6*(8), 1104-1111.

Zhang, R., Zhou, X., Feng, D., **Yuan, D.**, Li, S., Lu, C., & Li, X. (2021). Effects of acute psychosocial stress on interpersonal cooperation and competition in young women. *Brain and Cognition*, *151*, 105738.

Liu, J., Qiu, S., Chen, X., Zhou, Y., Wu, J., Sun, T., **Yuan, D.**, Tian, H., Kwok, V., Tan, L. H. (2020). Focused ultrasound stimulation on human language-related acupoints modulates brain activity in cortical language processing regions. *Human Behaviour and Brain*, *1*(1), 22-27.

Li, X., **Yuan, D.**, Fan, Y., Yan, C., & Gao, L. (2019). Effect of motion perception on intertemporal choice is associated with the altered time perception. *Psychological Reports*, *122*(1), 117-134.

Liu, J., Zhang, R., Geng, B., Zhang, T., **Yuan, D.**, Otani, S., & Li, X. (2019). Interplay between prior knowledge and communication mode on teaching effectiveness: interpersonal neural synchronization as a neural marker. *NeuroImage*, *193*, 93-102.

Wang, C., Zhang, T., Shan, Z., Liu, J., **Yuan, D.**, & Li, X. (2019). Dynamic interpersonal neural synchronization underlying pain-induced cooperation in females. *Human Brain Mapping.* 40(11), 3222-3232.

Li, X., Bei, L., **Yuan, D.**, Ding, Y., & Feng, D. (2018). The brain-to-brain correlates of social interaction in the perspective of hyperscanning approach. *Journal of Psychological Science.* (6), 29. [in Chinese]

PATENT

The detection technique, system and storage medium of hemispheric asymmetry (*Shenzhen Institute of Neuroscience, ZL 2020 1 0367686.3*)

CONFERENCE PROCEEDINGS

Yuan, D., Wang, Y., Dettman, S., Choo, D., Xu, E. S., Thomas, D., Ryan, M.E., Wong, P.C.M., Young, N. (2024). Neural Prediction of Spoken Language Improvements in Children with Cochlear Implants. *Society for the Neurobiology of Language 16th Annual Meeting*, October, Brisbane, Australia. [Merit Award]

Yuan, D., Xu, E., NG, I., Chang, W.T., Tong, M., Young, N.M., Wong, P.C.M. (2024). Preoperative Neuroanatomical Features Outperform Non-Neural Features in Predicting

Auditory Skills in Chinese-Learning Children with Cochlear Implants. *CI2024.* July, Vancouver, BC.

Yuan, D., Young, N.M., Wong, P.C.M. (2023). Preoperative Neuroanatomical Differences Predict Speech Development in Children with Cochlear Implants: Cross-Validation and Preliminary External Validation. *14th Asia Pacific Symposium on Cochlear Implant and Related Sciences*, November, Coex Seoul, Korea.

Yuan, D., Young, N.M., Wong, P.C.M. (2023). Preoperative Neural Networks Predict Children's Speech and Language Improvement 24 Months After Cochlear Implantation. *Society for the Neurobiology of Language 15th Annual Meeting*, October, Marseilles, France.

Yuan, D., Tournis, E., Ryan, M.E., Lai, C.M., Geng,X., Young, N.M., Wong, P.C.M. (2023). The Degree of Hearing Loss Moderates the Benefit of Pre-operative Hearing Aid Use in Preserving Children's Auditory Cortex. *CI2023*. June, Dallas, Texas.

Yuan, D., NG, I., Chang, W.T., Chu, W., Young, N.M., Wong, P.C.M. (2022). Extent of Hearing Loss, Pre-operative Hearing Aid Use and Cortical Structural Alteration in Pediatric Cochlear Implant Candidates. *Neuroscience 2022.* November, San Diego, California.

Yuan, D., Li, X. (2018). Interpersonal neural synchronization as a neural signature of outcome of mate choice. *fNIRS 2018.* October, 2018, Tokyo, Japan.

Yuan, D., Li, X. (2017). Synchronous brain activity during cooperative reading depends on reciprocal attraction. *2nd Symposium on Inter-Brain Cognition.* April, 2017, Shanghai, China.

Yuan, D., Li, B. (2016). The effect of subliminal affective priming on directed forgetting. *Shanghai Psychological Society.* November, 2016, Shanghai, China.

Yuan, D., Li, B. (2015). The effect of subliminal affective priming on directed forgetting. "*Psychology for the 21st century" Undergraduate Academic Forum in Peking University.* April, 2015, Beijing, China.

INVITED TALKS

- The neural plasticity of human brain bridges the past and future of children with hearing loss. *The 6th Advanced Cochlear implant workshop*, July 2025, Bangalore, India. [Keynote Speaker]
- The Extent of Hearing Input Affects the Plasticity of the Auditory Cortex in Children with Sensorineural Hearing-loss. *The Chinese University of Hong Kong ENT Conference 2023,* May, Hong Kong SAR, China.
- Microstructural Asymmetries of Language Regions in the Human Brain, *2022 First Conference on Biolinguistics and Language Acquisition*, October, Beijing, China.

AD HOC REVIEWING

Science Advances, Pediatrics, Ear and Hearing, Frontiers in Neuroscience, BMC Psychology, Behavioural Brain Research, Psychology of Sport and Exercise, Neuroscience Letters

TEACHING ASSISTANTSHIPS

- *PSYC1000B General Psychology*, The Chinese University of Kong Kong
- *PSYC9094 Practicum in Psychology and Health*, The Chinese University of Kong Kong
- *Statistical Consulting*, The Chinese University of Kong Kong
- *PSYC7012 Neuroimaging Methods in Psychology*, The Chinese University of Kong Kong

AWARDS & HONOR

- *Best Presentation Award,* Brain and Mind Institute Data Blitz (2024)
- Postgraduate Scholarship (PGS) (2021-2025)
- *Best Presentation Award*, Title "Interpersonal neural synchronization predicts the outcome of mate choice", *School of Psychology and Cognitive Science, East China Normal University* (2018)
- The National Grant for Full-time Graduate Student (2016~2019)
- Wisdom Scholarship of East China Normal University (2019)
- The National College Students' Innovation and Entrepreneurship Training Program (2014)
- The Individual Scholarship (2013~2014)
- The Second Prize Scholarship (2014~2015)
- The Second Prize Scholarship (2012~2013)

LANGUAGE

Mandarin (Native), English (Proficient)