

Chennan Zeng

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EDUCATION

Dual bachelor's degrees in Biological Sciences

Sep 2022 - Jul 2026

Xi'an Jiaotong-Liverpool University and University of Liverpool

Suzhou, China

- **University of Liverpool:** BSc (Hons) Biological Sciences - Upper Second Class Honours (2:1).
- **Xi'an Jiaotong-Liverpool University:** Bachelor of Science in Biological Sciences.

RESEARCH EXPERIENCE

Final Year Project

Jun 2025 - May 2026

Prof. Alan V. Kaluev's Lab, Xi'an Jiaotong-Liverpool University

Suzhou, China

- Established a reserpine-induced zebrafish (*Danio rerio*) model and quantified locomotor and anxiety-like phenotypes using the novel tank test.
- Performed whole-brain dissection, tissue homogenisation, cortisol ELISA.
- Conducted total-RNA extraction, reverse transcription, qRT-PCR.
- Analysed brain RNA-seq data using DESeq2, PCA, and KEGG enrichment, with visualisation in R and inferential statistics in GraphPad Prism.

Research Assistant

Jun 2025 - Present

Prof. Liang Gong's Lab, Department of Neurology

Chengdu, China

Sichuan University Affiliated Chengdu Second People's Hospital

- Conducted resting-state fMRI seed-to-voxel functional-connectivity analyses and related locus-coeruleus network changes to MMSE and MoCA outcomes.
- Used neuronavigation-guided rTMS targeting and resting-state fMRI processing, including ROI-mask construction and cluster extraction.

Research Intern

Dec 2022 - Mar 2023

Prof. Jiatang Li's Lab, Chengdu Institute of Biology, Chinese Academy of Sciences

Chengdu, China

- Contributed to a large-scale morphological and genomic investigation of adaptive traits in snakes.
- Performed animal handling, surgical tissue extraction, paraffin embedding, H&E staining, and tissue sectioning.

PUBLICATIONS

1. F. Wang and **C. Zeng**. "Multiscale Attention Enhancement Network for Remote Sensing Object Detection." In *Advanced Intelligent Computing Technology and Applications: ICIC 2026, Part VI*, CCIS 3039, pp. 202–212. Springer. doi: 10.1007/978-981-92-3554-4_17. **[ICIC; CCF-C]**
2. F. Wang and **C. Zeng**. "Symbolic Learning for any-to-any Generative Tasks." In *Advanced Intelligent Computing Technology and Applications: ICIC 2026, LNCS 16672*, pp. 17–28. Springer. doi: 10.1007/978-981-92-3520-9_2. **[ICIC; CCF-C]**
3. L. Gong, **C. Zeng (co-first author)**, et al. "Research on TMS Therapy for Mild Cognitive Impairment Based on Individualized Locus-Coeruleus Functional-Connectivity Targets." Manuscript in preparation.

TECHNICAL SKILLS

- **Neuroimaging:** Resting-state fMRI preprocessing and functional-connectivity analysis (MATLAB, SPM12, WFU_PickAtlas); ROI-mask construction; seed-to-voxel analysis; cluster extraction; SPSS; Python.
- **Transcriptomics:** differential-expression analysis; PCA; KEGG enrichment; visualisation in R.
- **Molecular and biochemical:** Total-RNA extraction; reverse transcription; qRT-PCR; cortisol ELISA;
- **Behavioural and animal:** Zebrafish handling and reserpine exposure; novel tank testing; whole-brain dissection; tissue homogenisation; histology (H&E staining, paraffin embedding, tissue sectioning).
- **Clinical:** Neuronavigation-guided rTMS; eye-tracking operation.