

Ao Xie

Email: aoa1220@163.com | Website: ao1220.github.io

EDUCATION

University of Electronic Science and Technology of China (UESTC)

Master of Electronic Information (Biomedical Engineering)

Sep.2022 - current

GPA: 3.65 / 4.0 (Percentage: 85.63/100)

Chongqing Medical University (CQMU)

Bachelor of Medical Information Engineering

Sep.2018 - Jun.2022

GPA: 3.73 / 5.0 (Percentage: 88.66/100 Ranking: 2/40)

RESEARCH EXPERIENCE

Brain Mechanism in MCI Patients During Movie-watching State

Key laboratory for Neuroinformation of Ministry of Education

Jun.2023 - current

- Discovered the potential difference in power and functional connectivity relative to cognitive functions such as memory in MCI patients by EEG during movie-watching. [\[link\]](#)
- Analyzed cortical electrical activity using EEG source analysis, and studied relation in conjunction with PET, exploring the physiological mechanisms of abnormal electrical activity in MCI.
- Developed a brain-computer interface application: the neurofeedback system to enhance cognitive function by movie-watching in older such as MCI. [\[link\]](#)
- EEG data recording and processing, EEG power and connectivity analysis, EEG source analysis.

A Blue-green Light Intervention Study on Subjective Memory Complaints in Women

Key laboratory for Neuroinformation of Ministry of Education

Oct.2022 - Dec.2023

- Analyzed MRI data under blue-green light intervention to describe the key moderating effects of cerebral perfusion.
- Validation of results.

EEG Finger-Print of fMRI Deep Hippocampus Activation

Key laboratory for Neuroinformation of Ministry of Education

Jul.2022 - Oct.2023

- Constructed model to predict specific brain activity as measured by fMRI at deep hippocampus region.
- EEG and fMRI data processing, time-frequency analysis, model building using machine learning methods.

WORKING PAPERS

- [1] Ao Xie, Wei Jian, Yulin He, Haiyang Sun, et al. 'Absence frontal-parietal EEG network in theta band in MCI patients during high-recall movie-watching state' 2024. Organization for Human Brain Mapping (Conference Abstract)
- [2] Shaolun Ma, Li Dong, Haojie Huang, Ao Xie, et al. 'Cerebral perfusion as a modulator of structural-functional coupling and depressive symptoms: A blue-green light intervention study on subjective memory complaints in women' (under review)
- [3] Ao Xie, et al. 'Movie-watching elicits memory recall EEG synchrony connectivity pattern in people with MCI' (in preparation)

AWARDS & HONORS

First Prize of Biomedical Engineering Innovation Design Competition of Sichuan Province (speaker)	2024
Excellent Graduation Design of Chongqing City	2022
First Prize Scholarship of UESTC (two times)	2022 - 2023
Honorary Title of 'Excellent Graduate' of CQMU	2021
First Prize Scholarship of CQMU (three times)	2018 - 2020

SKILLS & LANGUAGES

Programming: MATLAB (EEGLAB, Fieldtrip, DPABI, SPM), E-Prime, R, Python, java, C, SQL Server

Signal analysis: EEG recording & preprocessing, ERP & time frequency analysis, connectivity, microstates, fMRI recording & preprocessing, functional connectivity

English: CET 6, IELTS (6.0)

ACTIVITIES

President of the Student Council: organized and participated volunteer activities	2019-2020
Excellent Volunteer Team: organized a team to study the sales of agricultural products in the epidemic	2020