Rui Ma

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EDUCATION

University of Electronic Science and Technology of China (UESTC) Chengdu, China

- Master of Electronic Information Engineering Cumulative GPA 3.7/4.0 09/2022 - Present
- Bachelor of Biomedical Engineering Cumulative GPA 3.0/4.0 09/2018 - 06/2022

PUBLICATION

- [1] **Rui Ma**, Liangfeng Feng, Xiaolong Guo, SiJia Guo, Siyu Long, Hua Yang, Jing Lu. Effects of music composition on structural and functional connectivity in the orbitofrontal cortex, 2024, Brain-Apparatus Communication: A Journal of Bacomics, 10.1080/27706710.2024.2346498

- [2] **Rui Ma,** Sijia Guo, Jing Lu. Modeling the hierarchy of the brain network for the music effect on cognitive aging, 2024, The Neurosciences and Music-VIII (Conference Abstract)

- [3] **Rui Ma,** Sijia Guo, Haoyu Bian, Yan Li, Jing Lu, Dezhong Yao. Task-related spontaneous activity in prefrontal regions and the reward system reflects the compensatory effect on older musicians, 2024, submitted to Human Brain Mapping

RESEARCH EXPERIENCE

Patient Intervention (MCI & controls) under Multisensory Stimulation 09/2022 - Present
Key Laboratory for Neuroinformation of Ministry of Education Chengdu, China
& Baycrest Academy for Research and Education University of Toronto

- Researching on task-state multisensory stimulation in MCI under EEG recording
- Data processing: EEG recording, neural-variability, phase-locking value, microstate analysis, clustering & classification, ERP & time frequency, source analysis

Task-related Spontaneous Activity in Reward System reflects the compensatory effect on aging musicians
09/2023 -Present
Key Laboratory for Neuroinformation of Ministry of Education Chengdu, China

- Modeling the directed and hierarchical architecture of the network in musical and aging interventions (Link)
- Spontaneous activity in the basal ganglia during the activation state on aging in a music training intervention (Link)
- Publishing paper: The Neurosciences and Music – VIII (NMVIII)

Effects of Music Composition on Structural and Functional Connectivity to the Brain (Link) 09/2022 - Present
Key Laboratory for Neuroinformation of Ministry of Education Chengdu, China

- Researching on the structural and functional connectivity with the region of orbitofrontal cortex in aging composers
- fMRI data processing: fMRI data recording, diffusion tensor imaging (DTI), the based spatial statistics (TBSS)
- Publishing paper: Brain-Apparatus Communication: A Journal of Bacomics (TBAC)

HONORS & AWARDS

- First Prize, Excellent Individual in Summer Practice Activities 2019
- Top Ten Student Council President in UESTC 2020
- Model Student Scholarship 2020
- Yunhui Specialized Scholarship in UESTC 2021

TECHNICAL SKILL

- **Programming** MATLAB (EEGLAB, Brainstorm, SPM, Dpabi, FSL, AFNI), Python, C, CAD, E-prime, GraphPad, R, SPSS
- **English** IELTS: 6.5 (Listening: 6, Reading: 8, Writing: 5.5, Speaking: 5.5)

VOLUNTEERING

Undergraduate Council President 01/2019 - 06/2020

- Represented the student body at school and district meetings and to communicate ideas with school administration
- Lead and organized student activities, developed agenda and presided at student council meetings
- Followed parliamentary procedures, assisted professors, and worked with students to solve problems and improve professional skills

Team Leader - Teaching Volunteer Project 07/2019 - 08/2019

- First Prize, Excellent Individual in summer volunteer activities