

Changzhao
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Research Interests

Computational Neuroscience, Complex Brain Networks, Neural Dynamics

Education

M.Sc. (Neuroscience), Faculty of Science, Xi'an University of Science and Technology
Sep 2020 – Jul 2023

Advisor: Associate Professor Wang Rong

Thesis: "Modal Analysis-Based Mechanisms of Typical Psychiatric Disorders Brain Networks."

B.Sc. (Engineering Mechanics), Faculty of Science, Xi'an University of Science and Technology
Sep 2015 – Jul 2020

Research Projects

Associate Professor Wang Rong's Team (Xi'an University of Science and Technology, Faculty of Science)
Sep 2020 – Present

- Large-scale dynamics of psychiatric disorders
- Research on clinical features of bipolar disorder and schizophrenia
- Complex network analysis of the brain in psychiatric disorders

Professor Zhou Changsong's Lab (Hong Kong Baptist University, Department of Physics)
Apr 2022 – Dec 2022

- Study of brain network patterns in health and disease (Research Assistant)
- Study on the functional brain networks of autism (Part-time, Jun 2023 – Present)

Publications

1. Chang Z, Wang X, Wu Y, et al. Segregation, integration, and balance in resting-state brain functional networks associated with bipolar disorder symptoms. *Human Brain Mapping*, 2022.
2. Wang X[#], Chang Z[#], Wang R. Opposite effects of positive and negative symptoms on resting-state brain networks in schizophrenia. ([#]equal contribution) *Communications Biology*, 2022.
3. Wang R, Su X, Chang Z, et al. Flexible brain transitions between hierarchical network segregation and integration associated with cognitive performance during a multisource interference task. *IEEE Journal of Biomedical and Health Informatics*, 2021.
4. Qiong W[#], Chang Z[#], Wang R. Segregation and integration of brain functional networks in schizophrenia patients during task-switching ([#]equal contribution, under review)
5. Wu D, Chang Z, et al. High-order network degree revealed shared and distinct features among schizophrenia, bipolar disorder and ADHD (under review)
6. Wang R, Chang Z, Wang X. Method for judging the state of balance between segregation and integration based on hierarchical modules; CN202011472734.1[P]. 2023.
7. Wang R, Chang Z. Brain functional pattern extraction method based on characteristic patterns and hierarchical modules; CN202011297449.0[P]. 2023.
8. Wang Rong; Chang Zhao; Computer software for diagnosis of mental diseases based on brain segregation/integration feature and machine learning methods.

Awards

- Outstanding Graduate, Xi'an University of Science and Technology Jul 2023
- Graduate Academic Scholarship 2023
- Third Prize, 18th "Huawei Cup" China Graduate Mathematical Modeling Contest Dec 2021

- First Prize, Xi'an University of Science and Technology Graduate Mathematical Modeling Contest
Jul 2021

Conferences Attended

- 17th Chinese Network Science Forum, Linyi University, Shandong Jun 2021
- 18th National Conference on Nonlinear Vibrations and 15th National Conference on Nonlinear Dynamics and Motion Stability, Guangzhou University, Guangzhou Mar 2021

Skills

- 🏆 Hearthstone: Legend rank (ID: Bgaha@1879 Server:Asia)
- 🏆 League of Legends: Kindred's Forty-nine Kill Record (in Brawl)