Xianghan Cui

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Education

2023.12 – present, International Centre for Radio Astronomy Research (ICRAR)/Curtin Institute of Radio Astronomy (CIRA), Australia
Visiting PhD student, Mentor: Dr. Clancy W. James

2019.09 – present, University of Chinese Academy of Sciences (UCAS)/National Astronomical Observatories (NAOC), China
Master and PhD student, Mentors: Prof. Di Li and Prof. Chengmin Zhang

2017.03 – 2018.06, School of Management, Huazhong University of Science and Technology, China
Minor degree

2015.09 – 2019.06, Department of Physics, Wuhan University of Technology, China
Major B.S. degree, Mentor: associate Prof. Xinting Jia

Research interests

- Radio transient (fast radio burst): statistical and population analysis, physical mechanism
- Pulsar and neutron star: statistical and population analysis, evolution model

Awards

- 2024, President Award (Excellent Prize), Chinese Academy of Sciences
- 2024, Outstanding Student, UCAS
- 2023, Zhu Li Yuehua Outstanding Doctoral Scholarship, Chinese Academy of Sciences
- 2022, Scholarship of the Chinese Astronomical Society, Chinese Astronomical Society
- 2021, National Scholarship (for PhD students), Ministry of Education of P.R.China
- 2021, ACAMAR 7: People's Choice Poster Award, ACAMAR
- 2020, Merit Student, UCAS

Experience

Teaching Assistant

- High Energy Astrophysics and Gravitational Wave (070200M02048H), UCAS Graduate course Prof. Chengmin Zhang, 2021 – 2023

Selected Talks

- 2024.06 Astronomical Society of Australia Annual Scientific Meeting Perth Hub, Perth, Australia
- 2024.06 Chinese Fast Radio Burst Conference 2024, Wuhan, China
- 2024.02 East Asian Young Astronomers Meeting 2024, Chiang Mai, Thailand
- 2023.07 Scientific Program of FAST/Future Pulsar Symposium 12 (FPS 12), Nanyang, China
- 2023.07 Wuhan University of Technology Department of physics Invited Talk, Wuhan, China

PUBLICATIONS

First Author Publications

1. **Cui X.H.**, Wang Z.W., Zhang C.M., Niu C.H., Li D., et al., 2023, ApJ, 956, 35.
   Fast radio bursts generated by coherent curvature radiation from compressed bunches for FRB 20190520B
2. **Cui X.H.**, Zhang C.M., Li D., et al., 2022, Ap&SS, 367, 66.
   Luminosity distribution of fast radio bursts from CHIME/FRB Catalog 1 by means of the updated Macquart relation
3. **Cui X.H.**, Zhang C.M., Li D., et al., 2021, MNRAS, 508, 279.
   Statistical tests of young radio pulsars with/without supernova remnants: implying two origins of neutron stars
4. **Cui X.H.**, Zhang C.M., Wang S.Q., et al., 2021, RAA, 21, 211.
   Statistical properties of fast radio bursts elucidate their origins: magnetars are favored over gamma-ray bursts
5. **Cui X.H.**, Zhang C.M., Wang S.Q., et al., 2020, MNRAS, 500, 3275.
   Fast radio bursts: do repeaters and non-repeaters originate in statistically similar ensembles?
6. **Cui X.H.**, Wang C.L., Jia X.T., 2019, JOSA A, 36, 115.
   Nonparaxial propagation of vector vortex beams diffracted by a circular aperture

Main Contributor Publications

1. Zhu Y.H, Niu C.H., **Cui X.H.**, et al., 2023, Universe, 9, 251.
   Do Multi-Structural One-Off FRBs Trace Similar Cosmology History with Repeaters?
2. Zhang C.M., **Cui X.H.**, Li D., et al., 2022, Universe, 8, 628.
   Evolution of Spin Period and Magnetic Field of the Crab Pulsar: Decay of the Braking Index by the Particle Wind Flow Torque

More publications please see Google Scholar