

ZHAOTING CHEN

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EDUCATION

- Ph.D. in Astrophysics** (pending) 2020 - present
Jodrell Bank Centre for Astrophysics, University of Manchester, United Kingdom
Supervisor: Dr. Laura Wolz & Prof. Richard Battye
- Master of Science by Research in Astronomy and Astrophysics (Distinction)** 2019 - 2020
Jodrell Bank Centre for Astrophysics, University of Manchester, United Kingdom.
Supervisor: Dr. Laura Wolz
- Bachelor of Science in Physics** 2015 - 2019
School of the Gifted Young, University of Science and Technology of China, P.R. China.

EXPERIENCE

- Research Assistant** 2017 - 2019
CAS Key Laboratory for Research in Galaxy and Cosmology, USTC.
Supervisor: Prof. Yi-Fu Cai
Project: Forecasting Constraints on Dipole Asymmetry during EoR. Co-supervised by Prof. Yi Mao from Tsinghua University.
- Teaching Assistant** 2018
Department of Astronomy, USTC.
Course: Space and Time (Introductory Gravitational Physics)
- Research Assistant** 2018 - 2019
National Astronomical Observatories of China, Chinese Academy of Science.
Supervisor: Prof. Yidong Xu, Prof. Yougang Wang and Prof. Xuelei Chen
Project: Morphology of Reionization in Island Model.
- Visitor** 2019
Kavli Institute for the Physics and Mathematics of the Universe, University of Tokyo.
Invited by Dr. Wentao Luo
Project: Weak Lensing in Minimal $f(T)$ gravity. Also with Prof. Yi-Fu Cai and Prof. Manos Saridakis.
- Visitor** 2019
Institute for Astronomy, Stockholm University
Invited by Prof. Garrelt Mellema
Project: Ionizing Background during Epoch of Reionisation. Also with Dr. Sambit Giri.
- Teaching Assistant** 2020-
Department of Physics and Astronomy, University of Manchester.
Course: first year Mathematics.

PUBLICATION

- [5] **Z. Chen**, L. Wolz, M. Spinelli and S. G. Murray, Extracting HI Astrophysics from Interferometric Intensity Mapping, *submitted to MNRAS*. arXiv: 2010.07985
- [4] S. G. Murray, B. Diemer and **Z. Chen**, TheHaloMod: An online calculator for the halo model, *submitted to Astronomy and Computing*. arXiv: 2009.14066
- [3] **Z. Chen**, W. Luo, Y.-F. Cai, and E. Saridakis, New test on general relativity and $f(T)$ torsional gravity from galaxy-galaxy weak lensing surveys, *Phys. Rev. D* 102 (2020), 104044. arXiv: 1907.12225

[2] B. Li, **Z. Chen**, Y.-F. Cai, and Y. Mao, Testing the scale-dependent hemispherical asymmetry with the 21-cm power spectrum from the epoch of reionization, *Mon.Not.Roy.Astron.Soc.* 487 (2019) 4, 5564-5571. arXiv: 1904.04683

[1] **Z. Chen**, Y. Xu, Y. Wang and X. Chen, Stages of Reionization as revealed by the Minkowski Functionals, *Astrophys.J.* 885 (2019) 23. arXiv: 1812.10333

RESEARCH INTERESTS

- Intensity Mapping. It's the main focus of my PhD. I'm a member of the SKA cosmology group working on the theory side of it.
- Cosmic Reionisation. I'm mainly interested in the morphology of Cosmic Reionisation and how to use it to interpret semi-analytical models of EoR.
- Weak Lensing. I'm mainly interested in using weak lensing to constrain modified gravity.
- Astrophysical Computing. I work a bit on development of `halomod` and `IslandFAST`.

INVITED TALKS

1. **Halo Model, Interferometric Intensity Mapping and HI Shot Noise**

09/2020

SWIFAR Colloquim

Yunnan University