CHEN, ZHAOTING

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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.

RESEARCH EXPERIENCE

Research Assistant 2017 - 2019
CAS Key Laboratory for Research in Galaxy and Cosmology, USTC.
Supervisor: Prof. Yi-Fu Cai

Summer Intern 2018 - 2019
National Astronomical Observatories of China, Chinese Academy of Science.
Supervisor: Prof. Yidong Xu, Prof. Yougang Wang and Prof. Xuelei Chen

Visitor 2019
Kavli Institute for the Physics and Mathematics of the Universe, University of Tokyo.
Invited by Dr. Wentao Luo

Visitor 2019
Institute for Astronomy, Stockholm University
Invited by Prof. Garrelt Mellema

TEACHING EXPERIENCE

Teaching Assistant 2018
Department of Astronomy, USTC.
Course: Space and Time (Introductory Gravitational Physics)

Teaching Assistant 2020-
Department of Physics and Astronomy, University of Manchester.
Course: PHYS10071 Mathematics 1; PHYS10191 Introduction to Astrophysics and Cosmology; PHYS10352 Properties of Matter; PHYS10372 Mathematics 2.

OTHER EXPERIENCE

Organiser of JBCA cosmology lunch seminar 2021-
Jodrell Bank Centre for Astrophysics, University of Manchester.

Organiser of JBCA intensity mapping journal club 2021-
Jodrell Bank Centre for Astrophysics, University of Manchester.

PUBLICATION

[5] **Z. Chen**, L. Wolz, M. Spinelli and S. G. Murray, Extracting HI Astrophysics from Interferometric Intensity Mapping, *Mon.Not.Roy.Astron.Soc.* 502 (2021) 4, 5259–5276. arXiv: 2010.07985

[4] S. G. Murray et al. (including **Z. Chen**), TheHaloMod: An online calculator for the halo model, *Astron.Comput.* 36 (2021) 100487. 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 Science Working Group.

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`.

TALKS

3. **Extracting HI Astrophysics from Interferometric Intensity Mapping** 07/2021

UK National Astronomy Meeting 2021 University of Bath

2. **Extracting HI Astrophysics from Interferometric Intensity Mapping** 03/2021

2021 SKA Science Conference SKA Organisation

1. **Halo Model, Interferometric Intensity Mapping and HI Shot Noise** 09/2020

SWIFAR Colloquium Yunnan University

LANGUAGES

I am interested in the phonology of Sinitic languages and speak a few myself. A list of languages I speak, in the order of my proficiency:

- Huzhounese. It's a dialect of Taihu Wu which belongs to the linguistic group of Wu Chinese. Native.
- Standard Mandarin. Native.
- English. Fluent.
- Shanghainese. Fluent.
- Standard Cantonese. Intermediate.
- Amoy Hokkien. Amateur.