
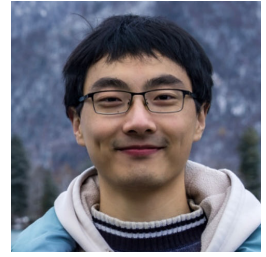




# Lingrui Lin, Ph.D. student



✉ Work: lingruiphd@mail.nju.edu.cn  
Work: lingruiism@gmail.com Other: llrw@163.com  
🌐 <https://astronlin.github.io/>  <https://github.com/Astronlin>  
🐦 @LingruiISM



## Education







- 2021 – present  **Ph.D. student, School of Astronomy and Space Science, Nanjing University**  
Thesis goal: *Multi-scale kinematics and dynamics of interstellar medium in galaxies*  
Supervisor: Zhi-Yu Zhang
- 2017 – 2021  **B.Sc., School of Astronomy and Space Science, Nanjing University**  
Thesis title: *Atomic gas kinematics of supernova remnant IC 443*  
Supervisor: Zhi-Yu Zhang

## Visitor Experience


- Sep 23, 2023 – Sep 30, 2023  **Visitor**, Arcetri Astrophysical Observatory, Florence, Italy  
Host: Federico Lelli
- Oct 1, 2023 – Dec 22, 2023  **Early-Career Scientific Visitor**, European Southern Observatory (ESO), Garching bei München, Germany  
Host: Carlos De Breuck

## Research

### Journal Articles

- 1 **L. Lin**, Z.-Y. Zhang, and Coauthors, “Inadequate turbulent support in low-metallicity molecular clouds,” *Under review at Nature Astronomy*,
- 2 F. Li, Z.-Y. Zhang, J. Wang, G. Luo, **L. Lin**, and J. Zhou, “Dense gas properties around the centre of the Circinus galaxy,” *Mon. Not. R. Astron. Soc.*, vol. 527, no. 1, pp. 531–543, Jan. 2024.  DOI: 10.1093/mnras/stad3241.
- 3 Y. Sun, Z.-Y. Zhang, J. Wang, *et al.*, “An improved method to measure  $^{12}\text{C}/^{13}\text{C}$  and  $^{14}\text{N}/^{15}\text{N}$  abundance ratios: revisiting CN isotopologues in the Galactic outer disc,” *Mon. Not. R. Astron. Soc.*, vol. 527, no. 3, pp. 8151–8192, Jan. 2024.  DOI: 10.1093/mnras/stad3643. arXiv: 2311.12971 [astro-ph.GA].
- 4 Y. Deng, Z.-Y. Zhang, P. Zhou, *et al.*, “Multiple gas phases in supernova remnant IC 443: mapping shocked  $\text{H}_2$  with VLT/KMOS,” *Mon. Not. R. Astron. Soc.*, vol. 518, no. 2, pp. 2320–2340, Jan. 2023.  DOI: 10.1093/mnras/stac3139. arXiv: 2210.16909 [astro-ph.GA].
- 5 F. Lelli, Z.-Y. Zhang, T. G. Bisbas, *et al.*, “Cold gas disks in main-sequence galaxies at cosmic noon: Low turbulence, flat rotation curves, and disk-halo degeneracy,” *Astron. Astrophys.*, vol. 672, A106, A106, Apr. 2023.  DOI: 10.1051/0004-6361/202245105. arXiv: 2302.00030 [astro-ph.GA].
- 6 G. Luo, Z.-Y. Zhang, T. G. Bisbas, *et al.*, “Dependence of Chemical Abundance on the Cosmic-Ray Ionization Rate in IC 348,” *Astrophys. J.*, vol. 942, no. 2, p. 101, Jan. 2023.  DOI: 10.3847/1538-4357/aca657. arXiv: 2211.13380 [astro-ph.GA].
- 7 L. Zhang, Z.-Y. Zhang, J. W. Nightingale, *et al.*, “Discovery of a radio jet in the Cloverleaf quasar at  $z = 2.56$ ,” *Mon. Not. R. Astron. Soc.*, vol. 524, no. 3, pp. 3671–3682, Sep. 2023.  DOI: 10.1093/mnras/stad2069. arXiv: 2212.07027 [astro-ph.GA].

## Conference Proceedings

- 1 C. De Breuck, B. Emonts, W. Wang, *et al.*, “ALMA observations of high redshift radio galaxies,” in *ALMA at 10 years: Past, Present, and Future*, Dec. 2023, 50, p. 50.  DOI: 10.5281/zenodo.10244516.

## Telescope Proposals

I am familiar with both single-dish and interferometers.

### Successful telescope projects as P.I.:



ALMA; NOEMA; SMA; IRAM 30-m; SMT; JCMT; FAST; GBT; Effelsberg

### Successful telescope projects as Co.I.:






ALMA; NOEMA; VLA; IRAM 30-m; SMT; JCMT; FAST; GBT; Effelsberg; JWST; CFHT; Gemini

## Skills

### Astronomical Expertise





Software	 GILDAS/CLASS, GILDAS/PIIC, CASA, <sup>3D</sup> BAROLO, CARTA, Montage, Starlink, MIR, Glue, ...
Telescope data reduction	 Good at dealing with data observed by telescopes which I use as P.I. Together with another teammate in the NJU group, we develop an easy-to-use pipeline (FAST Interstellar H I, FISH) to reduce the FAST data.

### General

Languages	 Mandarin Chinese (Native), English (Fluent).
Coding	 Python, Fortran, C++, $\LaTeX$ , HTML, ...
OS	 Linux (help to maintain the Ubuntu/CentOS Server in our group and establish remote connection), Mac OS (PC), Windows (PC)
Sports	 Table tennis (ping-pong, advanced), Swimming (proficient), Basketball (competent), Badminton (competent), Tennis (novice), ...
Photograph	 Adobe Photoshop/Camera Raw, Adobe Premiere

## Miscellaneous Experience

### Responsibilities

2017 – 2018	 Academic Representative, NJU Astronomy Class 2017
2018 – 2021	 Monitor, NJU Astronomy Class 2017
2018 – 2019	 Coordinator, Academic Division of NJU Great Astronomy Fans Association
	 Captain, NJU Astronomy Table Tennis team

### Awards and Achievements

### Certification