ZEFENG LI

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EDUCATION & EMPLOYMENT

Postdoctoral Research Associate, Durham University Oct 2023 - present

Ph.D., Astronomy & Astrophysics, Australian National University Oct 2019 - Jul 2023
Thesis: *metallicity correlations in galaxies* Advisor: Mark Krumholz & Emily Wisnioski

Algorithm Engineer, Cloudwalk Technology Oct 2018 - May 2019

B.S., Physics, Astronomy, Peking University Sept 2013 - Jul 2017

VISITING EXPERIENCES

Undergraduate Visiting Research, University of Arizona Mar 2016 - Jul 2016

Summer Research, Australian National University Oct 2017 - Jan 2018

CONFERENCES & TALKS

Contributed talk, Metal Production and Distribution in a Hierarchical Universe	Santiago, Nov, 2023
Seminar talk at PKU / KIAA	Beijing, Sept, 2023
Seminar talk at JLU	Changchun, Sept, 2023
Seminar talk at SHAO	Shanghai, Sept, 2023
Seminar talk at NJU	Nanjing, Sept, 2023
Seminar talk at UWA / ICRAR	Perth, April, 2023
Attendee, CSST workshop	Beijing, Jul 2022
Poster, From Stars to Galaxies II	Gothenburg, Jun 2022
Oral talk, star formation group meeting at SHAO	Shanghai, Jan, 2022
Poster, KIAA Forum on Gas in Galaxies	Beijing, Nov 2021
Poster, MOS-Galaxy STScI workshop	Baltimore, May 2021
Contributed talk, Annual Conference of the Chinese Astronomical Society	Wuhan, Nov 2016

PROFESSIONAL EXPERIENCE

Team

- MUSE-JELS large program of star formation and AGN in the COSMOS field (MUSE proposal): Co-I
- MUSE-ALMA Unveiling the Virgo Environment (MAUVE): member
- Spatial variations of a metal field in the disk settling epoch (ERIS proposal): Co-I
- DECODE, a Dynamical Exploration of CO in Discs in the Early universe (ALMA proposal): Co-I
- Resolving the 870 μm dust emission in high-redshift SMGs (ALMA proposal): Co-I
- Constraining the evolution of star-forming regions in high-redshift galaxies (HST proposal): Co-I

Computation

- Python packages ADABIN (adaptive binning) and METCORR (two-point correlation computation)
- Enterprise-class machine learning / deep learning (convolutional neural network)

Observation

· 6-m class telescope (Multiple Mirror Telescope): 5 nights
· 2-m class telescope (Bok Telescope, Siding Spring 2.3m Telescope): 18 nights

AWARDS

RSAA HDR travel fund (A$5,000) — Australian National University, Dec 2022
ASTRO 3D travel fund (A$3,000 in total) — Australian National University, Dec 2022
Vice Chancellor travel fund (A$1,500) — Australian National University, Dec 2022
Summer Research Scholarship (A$2,000) — Australian National University, Oct 2017
Weiming Scholarship for outstanding thesis (top 10%) — Peking University, Jul 2017
Lin-Qiao Scholarship for outstanding undergraduate research (top 20%) — Peking University, Oct 2016
Shenkeqi Scholarship (top 30%) — Peking University, Sept 2014

PUBLICATIONS

All the published papers can be found in my ORCID homepage, among which astronomy-related refereed papers can be found in the ADS library (**h-index = 9**).

Corresponding-author (4 papers in total):
Li, Z., Grand, R. J. J., Wisnioski, E., Mendel, J. T., Krumholz, M. R., Ting, Y.-S., Pakmor R., Fragkoudi, F., Gómez, F. A., Marinacci, F., Ciucă, I. 2024, accepted for MNRAS
Cosmological evolution of metallicity correlation functions from the Auriga simulations
Li, Z., Wisnioski, E., Mendel, J. T., Krumholz, M. R., Kewley, L. J., López-Cobá, C., Sánchez, S. F., Anderson, J. P., Galbany, L. 2023, MNRAS, 518, 286 (7 citations)
Spatial metallicity distribution statistics at ~ 100 *pc scales in the AMUSING++ nearby galaxy sample*
Li, Z., Krumholz, M. R., Wisnioski, E., Mendel, J. T., Kewley, L. J., Sánchez, S. F., Galbany, L. 2021, MNRAS, 504, 5496 (15 citations)
Detection of metallicity correlations in 100 nearby galaxies
Li, Z., McGreer, I. D., Wu, X.-B., Fan, X., Yang, Q. 2018, ApJ, 861, 6 (19 citations)
The Ensemble Photometric Variability of Over 10^5 *Quasars in the Dark Energy Camera Legacy Survey and the Sloan Digital Sky Survey*

Co-author (15 papers in total):
Chen, Q.-H., Grasha, K., Battisti, A. J., Wisnioski, E., **Li, Z.** + 11 authors 2024, in preparation
Myszka, A. et al. (including **Li, Z.**) 2024, in preparation
Li, S. et al. (including **Li, Z.**) 2024, in submission
Chen, Q.-H. et al. (including **Li, Z.**) 2024, MNRAS, 527, 2991
Zhu, Z., Campbell, I. H., Allen, C. M., **Li, Z.** 2023, Geochimica et Cosmochimica Acta, 346, 133
Di, Y., **Li, Z.**, Amelin, Y. 2021, Journal of Analytical Atomic Spectrometry, 36: 1489-1502
Kinemuchi, K. et al. (including **Li, Z.**) 2020, ApJS, 250, 10
Di, Y., Tian, W., Chen, M., **Li, Z.**, Chu, Z., Liang, J. 2020, American Mineralogist, 105 (2): 149-161
Wolf, C. et al. (including **Li, Z.**) 2020, MNRAS, 491, 1970
Grier, C. J. et al. (including **Li, Z.**) 2019, ApJ, 887, 1
Zou, H. et al. (including **Li, Z.**) 2019, ApJS, 245, 4
Shen, Y. et al. (including **Li, Z.**) 2019, ApJ, 883, 14
Zou, H. et al. (including **Li, Z.**) 2017, AJ, 153, 276
Wang, F. et al. (including **Li, Z.**) 2017, ApJ, 839, 27
Yang, J. et al. (including **Li, Z.**) 2017, AJ, 153, 184