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EDUCATION & EMPLOYMENT

Ph.D., Astronomy & Astrophysics, Australian National University Oct 2019 - present
Advisor: Mark Krumholz & Emily Wisnioski ACT, Australia
Title: *spatial metallicity correlations in galaxies*

Algorithm Engineer, Cloudwalk Technology Oct 2018 - May 2019
Optical Character Recognition (OCR, see the arXiv paper) Shanghai, China

B.S., Astronomy, Peking University Sept 2013 - Jul 2017
Advisor: Xue-Bing Wu Beijing, China

VISITING EXPERIENCES

Undergraduate Visiting Research, University of Arizona Mar 2016 - Jul 2016
Aadvisor: Ian McGreer & Xiaohui Fan Tucson, the United States

Summer Research, Australian National University Oct 2017 - Jan 2018
Advisor: Christian Wolf & Fuyan Bian ACT, Australia

AWARDS

Summer Research Scholarship (A$2,000) Australian National University, Oct 2017
Weiming Scholarship for oustanding thesis (top 10%) Peking University, Jul 2017
Lin-Qiao Scholarship for oustanding undergraduate research (top 20%) Peking University, Oct 2016
Shenkeqi Scholarship (top 30%) Peking Univeristy, Sept 2014

CONFERENCES & TALKS

Poster, IAU 377: Early Disk-Galaxy Formation from JWST to the MW Kuala Lumpur, Feb 2023
Poster, From Stars to Galaxies II Gothenburg, Jun 2022
E-poster, KIAA Forum on Gas in Galaxies Beijing, Nov 2021
E-poster, MOS-Galaxy STScI workshop Baltimore, May 2021
Oral talk, Annual Conference of the Chinese Astronomical Society Wuhan, Nov 2016

PROFESSIONAL EXPERIENCE

Team

· Spatial variations of a metal field in the disk settling epoch (an ESO ERIS proposal): Co-I
· MUSE and ALMA Unveiling the Virgo Environment (MAUVE): member

Observion

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

Computation

- · Python packages ADABIN (adaptive binning) and METCORR (two-point correlation computation and end-to-end MCMC parametric estimates)
- · Enterprise-class machine learning / deep learning (convolutional neural network)
- · Multi-processing deployment and code speed-up optimization

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, 258 citations in total**).

First-author:

- · (1) **Li, Z.**, Wisnioski, E., Mendel, J. T., Krumholz, M. R., Kewley, L. J., López-Cobá, C., Sánchez, S. F., Anderson, J. P., Galbany, L. 2022, MNRAS, 518, 286
  Spatial metallicity distribution statistics at ~ 100 pc scales in the AMUSING++ nearby galaxy sample

- · (2) **Li, Z.**, Krumholz, M. R., Wisnioski, E., Mendel, J. T., Kewley, L. J., Sánchez, S. F., Galbany, L. 2021, MNRAS, 504, 5496 (10 citations)
  Detection of metallicity correlations in 100 nearby galaxies

- · (3) **Li, Z.**, McGreer, I. D., Wu, X.-B., Fan, X., Yang, Q. 2018, ApJ, 861, 6 (12 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:

- · (4) Di, Y., **Li, Z.**, Amelin, Y. 2021, Journal of Analytical Atomic Spectrometry, 36: 1489-1502
- · (5) Kinemuchi, K. + 18 authors + **Li, Z.** + 11 authors 2020, ApJS, 250, 10
- · (6) Di, Y. + 2 authors + **Li, Z.** + 2 authors 2020, American Mineralogist, 105 (2): 149-161
- · (7) Wolf, C. + 5 authors + **Li, Z.** + 2 authors 2020, MNRAS, 491, 1970
- · (8) Grier, C. J. + 22 authors + **Li, Z.** + 10 authors 2019, ApJ, 887, 1
- · (9) Zou, H. + 25 authors + **Li, Z.** + 21 authors 2019, ApJS, 245, 4
- · (10) Shen, Y. + 23 authors + **Li, Z.** + 10 authors 2019, ApJ, 883, 14
- · (11) Zou, H. + 15 authors + **Li, Z.** + 11 authors 2017, AJ, 153, 276
- · (12) Wang, F. + 7 authors + **Li, Z.** + 13 authors 2017, ApJ, 839, 27
- · (13) Yang, J., + 11 authors + **Li, Z.**, + 3 authors 2017, AJ, 153, 184