

# Lulu Zhang

## Curriculum Vitae

Kavli Institute for Astronomy and Astrophysics  
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### Research Interests

- Characteristics of polycyclic aromatic hydrocarbons in different types of galaxies
- Spatially resolved studies of the interstellar medium in nearby galaxies
- Feedback of star formation & AGN activities on molecular gas
- Multiwavelength diagnostics of galaxy properties

### Education

2017–present **PhD candidate, Astrophysics, Peking University**, Beijing, China.

Advisor: Luis C. Ho

2013–2017 **BS, Applied Physics, Shandong University**, Weihai, Weihai, China.

### Awards

2017 – 2021 Award for Academic Excellents

Award for Research Excellents

2017 Award for Outstanding Undergraduate of Shandong Province

Award for Outstanding Undergraduate Thesis (Advisor: Lulu Fan)

2013 – 2016 The First Prize of Shandong University Scholarship

Award for 100 Outstanding Undergraduates

### Assets

- Experienced in reducing IFU-like and IFU data cube of Spitzer/IRS and VLT/MUSE
- Experienced in reducing multiband imaging data of GALEX, 2MASS, WISE, AKARI/IRC, Spitzer/IRAC, Spitzer/MIPS, and etc.
- Experienced in Python programing
- Experienced with MIR/Optical full spectrum fitting using our own code and pPXF
- Experienced with galaxy 2-dimensional fitting using MgeFit & GALFIT
- Experienced with galaxy dynamics and kinematics modeling using JAM
- Familiar with Bayesian statistics and Markov Chain Monte Carlo method

### Approved Proposal

2021 **3.6m Devasthal Optical Telescope (DOT-2021-C2-P63; Co-I.)**, *Unraveling the Hot Molecular and Ionized Gas in the Inner Kilo-parsecs of Nearby Active Galaxies*, PI: Ravi Joshi.

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## Conferences & Workshop

- 2021 Nov **KIAA Forum on Gas in Galaxies: for Early Career Scientists**, *Online*, (oral talk).
- 2021 Oct **Chinese Astronomical Society Annual Meeting**, *Nanchong, China*, (oral talk), postponed.
- 2021 Oct **East Asia AGN Workshop 2021**, *Chongqing, China*, (poster).
- 2021 June **The 11th C-MaNGA Workshop and the CSST-IFS Science Meeting**, *Zhuhai, China*, (oral talk, session chair), postponed.
- 2021 May **The 23th Guoshoujing Workshop and the Galaxy & Cosmology Frontier Workshop 2021**, *Hangzhou, China*, (poster).
- 2020 Oct **Super Massive Black Hole Workshop**, *Lijiang, China*, (oral talk).
- 2019 Sep **KIAA Forum on Gas in Galaxies: Probing the Activities and Power Engines from Local to Distant Universe**, *Beijing, China*, (poster).
- 2019 Sep **Chinese Astronomical Society Annual Meeting**, *Delingha, China*, (oral talk).
- 2019 Jan **East Asia AGN Workshop 2019**, *Taipei, China*, (poster).
- 2018 July **Thirty Meter Telescope-MICHI and China: a Workshop on Thermal-IR Astronomy**, *Beijing, China*, (oral talk).
- 2018 July **The 20th Guoshoujing Workshop and the Galaxy & Cosmology Frontier Workshop 2018**, *Sanmenxia, China*, (poster).

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## Publications

- 2021 Zhang, L., Ho, L. C., & Xie, Y., "A Method to Extract Spatially Resolved Polycyclic Aromatic Hydrocarbon Emission from Spitzer Spectra: Application to M51", 2021, *The Astronomical Journal*, 161, 29
- 2021 Zhang, L., & Ho, L. C., "Spatially Resolved Analysis of the Mid-Infrared Aromatic Features. I. The Unique Aromatic Characteristics in Low-Luminosity AGN due to Mechanical Effect by Shocks", 2021, submitted
- 2021 Zhang, L., & Ho, L. C., "Spatially Resolved Analysis of the Mid-Infrared Aromatic Features. II. The Quantification for Contribution of Evolved Stars on Mid-Infrared Aromatic Emission", 2021, submitted
- 2021 Zhang, L., & Ho, L. C., "Spatially Resolved Analysis of the Mid-Infrared Aromatic Features. III. The Mechanism for Tight Correlation between PAH Emission and Molecular Gas", 2021, to be submitted
- 2021 Zhang, L., & Ho, L. C., "Spatially Resolved Analysis of the Mid-Infrared Aromatic Features. IV. The Implication for Negative Feedback around Active Galactic Nuclei from PAH Deficit", 2021, to be submitted

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## Outreach

- 2020 Spring TA for Graduate Course – "Astrophysics of Diffuse Interstellar Medium" (Online)
- 2019 – 2021 Volunteer Cashier for Graduates' Funding (Donated by Graduates) of KIAA
- 2019 – 2020 Volunteer Manager for a Astro-wiki Page of our Biweekly ISM&Galaxy Group Meeting
- 2019 Oct LOC for International Conference – "Cosmic Evolution of Quasars" at KIAA
- 2019 Sep Volunteer for International Conference – "KIAA Forum on Gas in Galaxies" at KIAA
- 2018 – 2019 Volunteer Organizer for Weekly "Happy Hour" of KIAA
- 2018 May Volunteer for the 120th Anniversary of Peking University