

# Yuming Fu

## Curriculum vitae

Leiden Observatory  
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### Employment

- 01-06-2023 – **Postdoctoral Researcher**, *Leiden Observatory, Leiden University, The Netherlands*  
○ Advisor: Dr. R.J. Bouwens (Leiden), and Prof. Dr. Karina Caputi (Groningen)
- Sep. 2021 – **CSST Postdoctoral Research Fellow**, *Kavli Institute for Astronomy and Astrophysics,*  
May. 2023 *Peking University, Beijing, China*  
○ Advisor: Prof. Xue-Bing Wu

### Education

- Sep. 2016 – **Ph.D. in Astrophysics**, *Department of Astronomy, Peking University, Beijing*  
Jul. 2021 ○ Supervisor: Prof. Xue-Bing Wu  
○ Thesis: A Survey for Quasars behind the Galactic Plane  
○ Outstanding Graduate of Beijing Higher Education Institutions (2021)
- Apr. 2019 – **Visiting Ph.D. student**, *Leiden Observatory, Leiden*  
Aug. 2019 ○ Supervisor: Prof. Dr. Anthony G. A. Brown
- Sep. 2012 – **Bachelor of Science (Geophysics)**, *School of Geophysics and Information Technology,*  
Jul. 2016 *China University of Geosciences, Beijing*  
○ Supervisor: Prof. Guoming Jiang  
○ Thesis: High-precision Research on the Velocity Structure of Double Seismic Zone beneath Tohoku Region in Japan  
○ Outstanding Graduate of Beijing Higher Education Institutions (2016)

### Teaching & Mentoring

- Jul. 2022 **Lecturer**, *Lesson: Decomposition of the one-dimensional spectra of quasars and galaxies,*  
CSST Summer School on Galaxy Sciences, Peking University
- Sep. 2018 – **Class advisor**, *The Undergraduate Class of 2018, Department of Astronomy, School of*  
Jul. 2022 *Physics, Peking University*
- Sep. 2019 – **Mentor of seven students/sub-projects**, *Undergraduate Student Research Project,*  
Jun. 2022 *Peking University*
- Sep. 2019 – **Teaching assistant**, *Course: Observational Experiments for Astrophysics (Optical),*  
Jan. 2020 *Peking University*

### Grants

- 2023 **Candidate Selections for the CSST Quasar Survey with Multi-band Photometry and Slitless Spectroscopy**, *General Program of China Postdoctoral Science Foundation, No. 2022M720266, 80,000 CNY, PI*
- 2022 – 2026 **A Survey of Quasars behind the Galactic Plane**, *NSFC Key Grant, No. 12133001, 3.10 million CNY, Co-I*

### First-author papers

- [2] **Yuming Fu**, Xue-Bing Wu, Linhua Jiang, Yanxia Zhang, Zhi-Ying Huo, et al. "Finding Quasars behind the Galactic Plane. II. Spectroscopic Identifications of 204 Quasars at  $|b| < 20^\circ$ ". In: *ApJS* 261.2, 32 (Aug. 2022), p. 32. DOI: 10.3847/1538-4365/ac7f3e.
- [1] **Yuming Fu**, Xue-Bing Wu, Qian Yang, Anthony G. A. Brown, Xiaotong Feng, et al. "Finding Quasars behind the Galactic Plane. I. Candidate Selections with Transfer Learning". In: *ApJS* 254.1, 6 (May 2021), p. 6. DOI: 10.3847/1538-4365/abe85e.

## Co-authored papers

- [6] Jun-Jie Jin, Xue-Bing Wu, **Yuming Fu**, Su Yao, Yan-Li Ai, et al. "The Large Sky Area Multi-Object Fiber Spectroscopic Telescope (LAMOST) Quasar Survey: Quasar Properties from Data Releases 6 to 9". In: *ApJS* 265.1, 25 (Mar. 2023), p. 25. DOI: 10.3847/1538-4365/acaf89.
- [5] Qinchun Ma, Xue-Bing Wu, Huapeng Gu, Yuhan Wen, and **Yuming Fu**. "The  $H\alpha$  Broad-band Photometric Reverberation Mapping of Four Seyfert 1 Galaxies". In: *ApJ* 949.1, 22 (May 2023), p. 22. DOI: 10.3847/1538-4357/acc4c1.
- [4] Jiang-Tao Li, Feige Wang, Jinyi Yang, Yuchen Zhang, **Yuming Fu**, et al. "Chandra Detection of Three X-Ray Bright Quasars at  $z > 5$ ". In: *ApJ* 906.2, 135 (Jan. 2021), p. 135. DOI: 10.3847/1538-4357/abc750.
- [3] Su Yao, Xue-Bing Wu, Y. L. Ai, ..., **Yuming Fu**, et al. "The Large Sky Area Multi-object Fiber Spectroscopic Telescope (LAMOST) Quasar Survey: The Fourth and Fifth Data Releases". In: *ApJS* 240.1, 6 (Jan. 2019), p. 6. DOI: 10.3847/1538-4365/aaef88.
- [2] Qian Yang, Xue-Bing Wu, Xiaohui Fan, ..., **Yuming Fu**, et al. "Discovery of 21 New Changing-look AGNs in the Northern Sky". In: *ApJ* 862.2, 109 (Aug. 2018), p. 109. DOI: 10.3847/1538-4357/aaca3a.
- [1] Qian Yang, Xue-Bing Wu, Xiaohui Fan, ..., and **Yuming Fu**. "Quasar Photometric Redshifts and Candidate Selection: A New Algorithm Based on Optical and Mid-infrared Photometric Data". In: *AJ* 154.6, 269 (Dec. 2017), p. 269. DOI: 10.3847/1538-3881/aa943c.

## Softwares

- [2] **Yuming Fu**. *QSOFITMORE: a python package for fitting UV-optical spectra of quasars*. 2021. DOI: 10.5281/ZENODO.4893646.
- [1] **Yuming Fu**. *PyFOOSC: a pipeline toolbox for BFOSC/YFOOSC long-slit spectroscopy data reduction*. 2020. DOI: 10.5281/ZENODO.3915021.

## Conference Talks

- Dec. 2021 **Finding Iron Low-ionization Broad Absorption Line Quasars with SDSS**, *2020 Annual Meeting of Chinese Astronomical Society*, Nanchong, China
- May. 2021 **A Survey for Quasars behind the Galactic Plane**, *The 23rd CAS Guoshoujing Symposium on Galaxies and Cosmology*, Hangzhou, China  
The Best Oral Presentation
- Apr. 2019 **Uncovering Hidden Quasars behind the Galactic Plane with ALLWISE, Pan-STARRS and Gaia**, *ESLAB# 53: The Gaia Universe*, Noordwijk, Netherlands

## Observations

- 2017 – 2022 **The 2.16-meter Telescope**, *Xinglong Observatory, National Astronomical Observatories, Chinese Academy of Sciences (NAOC)*, PI/Co-I, on-site/remote  
Allocated time: > 350 hours
- 2017 – 2022 **The 2.4-meter Telescope**, *Lijiang Observatory, Yunnan Observatories (YNAO), Chinese Academy of Sciences*, PI/Co-I, on-site/remote  
Allocated time: > 180 hours
- 2019 – 2021 **The McGraw-Hill 1.3-m Telescope**, *MDM Observatory*, PI/Co-I, remote  
Allocated time: > 100 hours
- 2018 – 2022 **The 200-inch Hale Telescope (P200)**, *Palomar Observatory*, Co-I, remote  
Allocated time: > 50 hours

## Training/Schools

- Jul. 2018 **The 2nd East Asian Workshop on Astrostatistics**, *Purple Mountain Observatory*, Nanjing, China
- Nov. 2017 **The Ninth Xinglong Observational Astrophysics Workshop: High Resolution Spectroscopy**, *Xinglong Observatory, NAOC*, Xinglong, China
- Sep. 2017 **TIARA Summer School on Astrostatistics and Big Data**, *TIARA, ASIAA*, Taipei, China
- Jul. 2017 **LAMOST Users Workshop 2017**, *NAOC/UCAS*, Beijing, China
- Aug. 2016 **The Sixth Xinglong Observational Astrophysics Workshop: Time Domain Astronomy**, *Xinglong Observatory, NAOC*, Xinglong, China

## Skills

- Observation **Photometric and spectroscopic observations. Data reduction with IRAF, Python, etc.**
- Coding **Python, MATLAB, Shell, Fortran, C**
- Database **ADQL, TOPCAT, MySQL, ClickHouse**
- Big Data **Data Mining, Statistical Machine Learning, Deep Learning**

## Outreach

- Mar. 2022 **Public Talk: Quasars in the Distant Universe**, *AstroSalon# 6 of the Peking University Youth Astronomy Society*, Beijing
- Jan. 2022 **Public Talk: The Beauty of the Space**, *Library of Jianyang City*, Chengdu
- Jan. 2020 **Public Talk: A Brief History of Black Holes**, *Library of Jianyang City*, Chengdu
- Jan. 2019 **Public Talk: The Big Eyes: A Glimpse at the Telescopes**, *Library of Jianyang City*, Chengdu
- Feb. 2018 **Public Talk: Astronomy in Everyday Life**, *Hangzhou Arts and Crafts Museum*, Hangzhou

## Honors & Awards

- 2020 **Merit Student**, *Peking University*, Beijing
- 2018, 2020 **Dedicated Scholarship for Outstanding PhD Students**, *Peking University*, Beijing
- 2020 **Outstanding Teaching Assistant**, *Peking University*, Beijing
- 2017, 2019 **Award for Scientific Research**, *Peking University*, Beijing
- 2017 **The Third Prize of CASC Scholarship**, *Peking University*, Beijing