

# WUJI WANG

—Curriculum Vitae—

◇ Caltech/IPAC, M/C 314-6, 1200 E. California Blvd. Pasadena, CA91125, USA

◇ email: [wujiwang@ipac.caltech.edu](mailto:wujiwang@ipac.caltech.edu) ◇ personal website: [wujiwang-astro.github.io](http://wujiwang-astro.github.io)

## RESEARCH INTERESTS

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I am interested in galaxy evolution and AGN feedback at high-redshift ( $z > 1$ ). I study star formation, AGN processes, and their impact on interstellar medium to circumgalactic medium and stars of high- $z$  galaxies using observations from various instruments.

## SKILLS

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Expert in the analysis of data from multi-wavelength IFU instruments on both ground-based and space telescopes: ALMA, JWST NIRSpec & MIRI IFU, and VLT/MUSE.

## CAREER & EDUCATION & RESEARCH

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• **Postdoctoral Researcher, Caltech, Pasadena/CA, USA** Sep. 2024 – 2027

**Projects:** *Multiwavelength, ALMA+JWST, analysis of  $z > 1$  star forming galaxies*

**Supervisors:** Andreas Faisst, Kyle Finner

• **PhD, Astronomy, Heidelberg University/IMPRS, DE** Oct. 2020 – Jul. 2024

**Thesis:** *3D view of the circumgalactic to interstellar medium around distant radio galaxies – magna cum laude*

**Supervisors:** Dominika Wylezalek, Joël Vernet, Carlos De Breuck

• **MSc, Astronomy, Munich University (LMU)/ESO, DE** Apr. 2018 – Jul. 2020

**Thesis:** *MUSE View of the CGM around a  $z \sim 4.5$  Radio Galaxy*

**Supervisors:** Dominika Wylezalek, Joël Vernet, Carlos De Breuck, Benjamin Moster

**Grade:** 1.26 – German system

• **BSc, Astronomy, Nanjing University, CN** Sep. 2013 – Jul. 2017

**Thesis:** *Investigating the high- $z$  tidal disruption event candidate in the Chandra Deep Field*

**Supervisor:** Bin Luo

**Grade:** 4.38/5

• **Summer Intern, ESO, DE** Jun. 2016 – Aug. 2016

**Project:** *Research on White Dwarfs Polluted by Planetary Debris*

**Supervisor:** Siyi Xu

## AWARDED TELESCOPE TIME

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- **PI, ALMA Band 8**, 2021.1.00576.S, Cycle 8 (13.9h) *Pushing the frontier with ALMA: star formation at sub-kpc scale in distant radio-loud AGN hosts*  
800 EUR Travel support for data reduction at ARC Dutch node Allegro
- **PI, JWST MIRI MRS+NIRCam**, GO-7457, Cycle 4 (11.6h) *Quenching physics and age demographics of stellar populations in a massive radio-loud AGN host galaxy at  $z \sim 3.5$*
- **PI, JWST NIRSpec/IFU**, GO-1970, Cycle 1 (24.5h) *Zooming into the Monster's Mouth: Tracing Feedback from Their Hosts to Circumgalactic Medium in  $z = 3.5$  Radio-loud AGN*
- **PI, VLT/UVES**, 108.21WL.001, P108 (20h) *Spectrally Resolving the Complex CGM of High-redshift Radio-loud AGN using UVES*
- Co-I, JWST/MIRI LRS, GO-7492 (42.2h); Co-I, NOEMA, S23BT (30h); Co-I, VLA, 24B-147 (8h)

## PUBLICATIONS

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Full list is attached to the end; Selected first-author papers on joint ALMA+JWST analysis:

- [Wang, W. et al. 2025a ApJL, 987, L37](#); • [Wang, W. et al. 2025b, A&A, 696, A88](#).

## TEACHING & MENTORING

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- **Co-advisor** of Julian Groth, Heidelberg University  
MSc Thesis [Mar. 2024 – Apr. 2025](#)
- **Co-advisor** of Jelena Ritter, Heidelberg University  
MSc Thesis/Ritter et al. submitted [Jun. 2023 – Jul. 2024](#)
- **Co-advisor** of Yu-Ruei Wang, Heidelberg University  
BSc Project & Thesis [Oct. 2022 – Jun. 2023](#)
- **Co-advisor** of Chuanming Mao, Heidelberg University  
BSc Thesis [Mar. 2021 – Jul. 2021](#)
- Lab Experiment **tutor**, Heidelberg University  
CCD photometry in modern astronomy (FP30) [Oct. 2021 – Jun. 2022](#)
- Lecture **tutor**, Heidelberg University  
Galactic and Extragalactic Astronomy (MVastro3) [Mar. 2021 – Jul. 2021](#)

## TALKS & MEDIA & OUTREACH

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### Media

- Apr. 20th 2021, [ZAH Press release](#)
- Aug. 1st 2021, UNI SPIEGEL (Heidelberg University news)

### Invited talks & workshops

- July.11th 2025, Caltech Postdoc Launch Seminar talk, CA USA
- Oct. 2023, The importance of jet-induced feedback on galaxy scales, workshop, NL
- Jun. 30th 2021, Group meeting talk at Tsinghua High-z Team, online

## Conferences & seminars

- Jun. 2025, NA-TW joint ALMA workshop 2025, Contributed talk
- Jun.2nd 2025, Caltech Tea talk, Seminar talk, CA USA
- May 2025, COSMOS team meeting 2025, Contributed talk, FR
- Apr.16th/2025, Caltech/IPAC lunch talk, Seminar talk, CA USA
- Jun. 2024, ARI Institute Colloquium, Seminar talk, DE
- Dec.4th/2023, Caltech Tea talk, Seminar talk, CA USA
- Dec.1st/2023, Steward Observatory UA [EURECA](#), Seminar talk, AZ USA
- Nov.28th/2023, STScI & JHU Galaxy Journal Club, Seminar talk, MD USA
- Sep.11–15th/2023, AGN on the beach, Contributed talk, IT
- Jul.10–14th/2023, EAS 2023, Contributed talk, PL
- Feb.23rd 2023, MPIA Galaxy Coffee, Seminar talk, DE
- Dec.1st/2022, ARI Institute Colloquium, Seminar talk, DE
- Sep.26–30th/2022, What drives the growth of black holes, Poster, IS
- Sep.12–16th/2022, What matter(s) around galaxies 2022, Contributed talk, IT
- Jan.27th/2022, MPIA Galaxy Coffee, Seminar talk, DE
- Jan.26th/2022, Quasars and Galaxies through Cosmic Time, [Contributed talk](#), online
- Nov.3rd/2021, 1st KooGiG-Junior, Contributed talk, online
- Jun.28th–July.2nd/2021, EAS 2021, [ePoster](#), online
- Jun.17th/2021, ARI Institute Colloquium, Seminar talk, DE

## OUTREACH

- Apr.29th/2025, STEM for family at Caltech, IR Camera
- Sept.28th/2024, Explore Caltech, IR Camera

## SERVICE & EXPERIENCE

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- Referee MNRAS, A&A, and ApJ
- Scientific assistant, ESO Observing Programmes Committee (OPC) 104, 105

## LANGUAGES

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Native speaker of Mandarin Chinese; Fluent in English (TOEFL 106/120); Basic German

## ADDITIONAL INFORMATION

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Proficient in Python, Linux/Mac OS programming and data reduction using ESO Recipe Execution Tool, JWST pipeline and CASA; Experienced in reduction of data from Chandra, echelle spectrograph on Magellan telescope and Arizona Radio Observatory (ARO)

## LIST OF REFEREED PUBLICATIONS

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- ORCID: 0000-0002-7964-6749
- Link to [ADS library](https://ui.adsabs.harvard.edu/public-libraries/BRKFteavQGK2qrtljtTo_w) of Wuji Wang's publications: [https://ui.adsabs.harvard.edu/public-libraries/BRKFteavQGK2qrtljtTo\\_w](https://ui.adsabs.harvard.edu/public-libraries/BRKFteavQGK2qrtljtTo_w)

### First-author

- **Wang, W.**, De Breuck, and et al. (2025b) *Gas-Poor Hosts and Gas-Rich Companions of  $z \approx 3.5$  RLAGN: ALMA Insights into Jet Triggering and Feedback*, [ApJL](#), **987**, L37
- **Wang, W.**, De Breuck, and et al. (2025a) *JWST + ALMA ubiquitously discover companion systems within  $\lesssim 18$  kpc around four  $z \approx 3.5$  RLAGN*, [A&A](#), **696**, A88.
- **Wang, W.**, Wylezalek, and et al. (2024) *JWST discovers an AGN ionization cone but only weak radiatively driven feedback in a powerful  $z \approx 3.5$  RLAGN*, [A&A](#), **683**, A169.
- **Wang, W.**, Wylezalek, D., Vernet, J., and et al. (2023) *3D tomography of the giant intrinsic Ly $\alpha$  nebulae of  $z \approx 3-5$  radio-loud AGN*, [A&A](#), **680**, A70.
- **Wang, W.**, Wylezalek, D., De Breuck, C., and et al. (2021) *Mapping the “invisible” circumgalactic medium around a  $z \sim 4.5$  radio galaxy with MUSE*, [A&A](#), **654**, A88.

### Co-author

- Ritter, J., **Wang, W.**, ... (2025) A&A submitted (my PI VLT/UVES data analysis)
- Faist, A., ..., **Wang, W.**, ... (2025) ApJ submitted
- Peluso, G., ..., **Wang, W.**, ... (2025) A&A submitted
- Ren, W., ..., **Wang, W.**, ... (2025) MNRAS submitted
- Davies, R., ..., **Wang, W.**, ... (2025) Nature Astronomy submitted
- Solimano, M., ..., **Wang, W.**, ... (2024) [A&A](#), **963**, A70.
- Kolwa, S., ..., **Wang, W.**, ... (2023) [MNRAS](#), **525**, 5831.
- Zhang, S., ..., **Wang, W.**, ... (2023) [ApJ](#), **952**, 124Z.
- Bertemes, C., ..., and **Wang, W.** (2023) [MNRAS](#), **518**, 5500.
- Wylezalek, D., ..., **Wang, W.**, ... (2022) [MNRAS](#), **510**, 3119.
- Falkendal, T., ..., and **Wang, W.** (2021) [A&A](#), **645**, A120.

## REFERENCES AVAILABLE TO CONTACT

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**Prof. Dr. Dominika Wylezalek**

PhD supervisor

*Full professor, ARI Heidelberg University, Germany*

**Email:** [dominika.wylezalek@uni-heidelberg.de](mailto:dominika.wylezalek@uni-heidelberg.de)

**Dr. Andreas Faisst**

Postdoc supervisor

*Associate Scientist, Caltech/IPAC, USA*

**Email:** [afaisst@ipac.caltech.edu](mailto:afaisst@ipac.caltech.edu)

**Dr. Joël Vernet**

PhD co-supervisor/collaborator

*ELT Instrumentation project scientist, ESO, Germany*

**Email:** [jvernet@eso.org](mailto:jvernet@eso.org)

**Dr. Carlos De Breuck**

PhD co-supervisor/collaborator

*Full astronomer and ALMA development scientist, ESO, Germany*

**Email:** [cdebreuc@eso.org](mailto:cdebreuc@eso.org)

**Dr. Matthew Lehnert**

collaborator

*Director, Centre de Recherche Astrophysique de Lyon - CRAL, France*

**Email:** [matthew.lehnert@univ-lyon1.fr](mailto:matthew.lehnert@univ-lyon1.fr)