WUJI WANG

—Curriculum Vitae—

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

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RESEARCH INTERESTS

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 cirumgalactic medium and stars of high-z galaxies using observations from various instruments.

SKILLS

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

- **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 & OBSERVING

• **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* $z \sim 3.5$ -Grant, $\sim 120,000$ USD

• **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**, **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*

• **PI**, **VLT/UVES**, 108.21WL.001, P108 (20h) *Spectrally Resolving the Complex CGM of High-redshift Radio-loud AGN using UVES*

• **PI**, **VLA**, 26A-383 (21.5h) *A VLA+ALMA+JWST Cold Gas Study in a z=3.5 radio-loud AGN traced dense system*

• PI, 2 Nights Palomar, 200-inch/CWI
• 2 Nights Keck/KCWI

• Co-I, JWST/MIRI LRS, GO-7492 (42.2h) • Co-I, ALMA, 2025.1.00591.S (12.2h) • Co-I, ALMA/ACA, 2025.1.00217.S (20.2h) • Co-I, ALMA, 2025.1.00161.S (35.9h) • Co-I, NOEMA, S23BT (30h) • Co-I, VLA, 24B-147 (8h)

PUBLICATIONS

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

• **Co-advisor** of Julian Groth, Heidelberg University — Mar. 2024 – Apr. 2025
MSc Thesis

• **Co-advisor** of Jelena Ritter, Heidelberg University — Jun. 2023 – Jul. 2024
MSc Thesis/Ritter et al. submitted

• **Co-advisor** of Yu-Ruei Wang, Heidelberg University — Oct. 2022 – Jun. 2023
BSc Project & Thesis

• **Co-advisor** of Chuanming Mao, Heidelberg University — Mar. 2021 – Jul. 2021
BSc Thesis

• Lab Experiment **tutor**, Heidelberg University — Oct. 2021 – Jun. 2022
CCD photometry in modern astronomy (FP30)

• Lecture **tutor**, Heidelberg University — Mar. 2021 – Jul. 2021
Galactic and Extragalactic Astronomy (MVastro3)

TALKS & MEDIA & OUTREACH

Media

- Jan. 6th 2026, Caltech News
- Apr. 20th 2021, ZAH Press release
- Aug. 1st 2021, UNI SPIEGEL (Heidelberg University news)

Invited talks & workshops

- Dec.5th 2025, Arizona State University group talk, online
- 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

- Nov.11th 2025, UCLA lunch talk, Seminar talk, CA USA
- Oct. 2025, Infrared Spectroscopy from Space, Contributed talk, CA USA
- Aug. 2025, The 2025 Greater IPAC Science Symposium, Contributed talk, CA USA
- Jun. 2025, NA-TW joint ALMA workshop 2025, Contributed talk, TW
- 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

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

LANGUAGES

Native speaker of Mandarin Chinese; Fluent in English; Basic German

ADDITIONAL INFORMATION

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

- ORCiD: 0000-0002-7964-6749
- Link to ADS library of Wuji Wang's publications: https://ui.adsabs.harvard.edu/public-libraries/BRKFteavQGK2qrtljtTo_w

First-author

- **Wang, W.**, Faisst A., and et al. (2026) *ALPINE-CRISTAL-JWST Survey: The Chemical Differences Between the ISM and CGM of main-sequence Galaxies at* $z = 4-6$,ApJ accepted
- **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 C., 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 D., 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*α *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

- Davies, R., ..., **Wang, W.**, ... (2026) MNRAS submitted
- Faisst, A., ..., **Wang, W.**, ... (2026a) ApJS published
- Faisst, A., ..., **Wang, W.**, ... (2026b) ApJ submitted

- Zavala, J., ..., **Wang, W.**, ... (2025) ApJL accepted
- Fujimoto, S., ..., **Wang, W.**, ... (2025) ApJS submitted
- Tsujita, A., ..., **Wang, W.**, ... (2025) ApJ published
- Finner, K., ..., **Wang, W.**, ... (2025) ApJL published
- Ritter, J., **Wang, W.**, ... (2025) A&A submitted (my PI VLT/UVES data analysis)
- Peluso, G., ..., **Wang, W.**, ... (2025) A&A published
- Accard, C., ..., **Wang, W.**, ... (2025) A&A 702, A206
- Ren, W., ..., **Wang, W.**, ... (2025) MNRAS 544 211
- 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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ELT Instrumentation project scientist, ESO, Germany
Email: jvernet@eso.org

Dr. Carlos De Breuck PhD co-supervisor/collaborator
Full astronomer and ALMA development scientist, ESO, Germany
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Dr. Matthew Lehnert collaborator
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