XIN WANG

Personal Information Current Status: Associate Professor at University of Chinese Academy of Sciences xwang@ucas.ac.cn | +86-13121987901 | https://people.ucas.ac.cn/~wxn EMAIL, PHONE, WEB: 20A Datun Road, Room B447, National Astronomical Observatories Mailing Address: Chaoyang District, Beijing 100101, China **Education and Employment** Sept. 2022-School of Astronomy and Space Science, University of Chinese Academy of Sciences Present Associate Professor Aug. 2019-Infrared Processing and Analysis Center, Caltech Postdoctoral Research Associate Aug. 2022 Sept. 2015-Department of Physics and Astronomy, University of California, Los Angeles Jun. 2019 Ph.D. in Astronomy & Astrophysics Sept. 2013-Physics Department, University of California, Santa Barbara Jun. 2015 Master of Arts in Physics Sept. 2010-School of Astronomy and Space Sciences, Nanjing University Jun. 2013 Master of Science in Astrophysics Sept. 2006-Department of Astronomy, Nanjing University Bachelor of Science in Astronomy Jun. 2010 Awards and Honors Aug. 2024 ACAMAR visiting fellow, Swinburne University of Technology, Melbourne, Australia MAR. 2024 | Xiaomi Young Scholar, University of Chinese Academy of Sciences Sept. 2023 | Linguan Gold Medal, University of Chinese Academy of Sciences Mar. 2020 Kavli Visiting Fellow, Peking University Jun. 2019 | UCLA Physics and Astronomy Commencement Speaker Jun. 2018 | UCLA Dissertation Year Fellowship (\$47k: stipend+tuition) Apr. 2018 IAU grant for participating the XXXth General Assembly ($\in 0.75$ k) APR. 2018 AAS International Travel Grant (\$2k) Talks and Colloquia Dec. 2024 | Invited colloquium, @ Zhejiang Lab Nov. 2024 | Invited talk, @ 2024 Chinese-American Kavli Frontiers of Science, Beijing Nov. 2024 | Invited talk, @ CSST Galaxy and Cosmology Conference @ Suzhou Oct. 2024 | Invited talk, @ 2024 Chinese Astronomical Society GA @ Hangzhou SEP. 2024 | Invited talk, @ 2024 Lensing Conference @ Jiexiu Jul. 2024 | Invited lecture, @ NAOC Galaxy Cluster Summer School Jul. 2024 | Invited lecture, @ PKU CSST Summer School Jun. 2024 | Invited lecture, @ COSPAR/IAU Workshop on JWST, Chiangmai, Thailand Jun. 2024 | Invited colloquium, @ SWIFAR, Yunnan University May 2024 | Invited colloquium, @ PKU May 2024 | **Invited talk**, @ 26th Guoshoujing Meeting @ Suzhou Apr. 2024 Invited talk, @ Co-evolution of galactic eco-systems and their large-scale environments, Hangzhou DEC. 2023 | Invited colloquium, @ University of Science and Technology of China, Hefei Invited colloquium, @ Shanghai Astronomical Observatories, Shanghai Jun. 2023 Jun. 2023 | Invited colloquium, @ Shanghai Jiao Tong University, Shanghai

CV: Xin Wang 1

Apr. 2023 | **Invited colloquium**, @ Xiamen University, Xiamen

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JAN. 2023 | Invited talk, @ AAS 241, Seattle
Nov. 2022 | Invited colloquium, @ Nanjing University, Nanjing
Nov. 2022 | Invited colloquium, @ Tsinghua University, Beijing
Oct. 2022
             Invited colloquium, @ NAOC FLAT (FAST and LAMOST Associated Scientific Colloquium),
 Jun. 2022 | Invited talk, @ AAS 240, Pasadena
JAN. 2021 | Contributed talk, @ AAS 237, virtual
DEC. 2020 | Invited colloquium, @ Department of Physics and Astronomy, University of Missouri
Dec. 2019 | Invited talk, @ Purple Mountain Observatory, Nanjing
DEC. 2019 | Invited talk, @ 2019 Nanjing University Youth Forum, Nanjing
DEC. 2019 | Invited talk, @ Shanghai Astronomical Observatory
DEC. 2019 | Invited talk, @ Shanghai Jiao Tong University, Shanghai
Aug. 2019 | Lunch talk, @ The Kavli Institute for Astronomy and Astrophysics at Peking University
Aug. 2019 | Invited talk, @ National Astronomical Observatories of China, Beijing
Aug. 2019 | Invited talk, @ Key Laboratory of Space Utilization, CAS
 Jun. 2019 | Invited talk, @ CLEAR collaboration meeting, STScI
FEB. 2019 | Contributed talk, @ Extremely Big Eyes on the Early Universe, UCLA
Jan. 2019 | Dissertation talk, @ AAS 233, Seattle
DEC. 2018 | Astronomy Seminar @ Columbia
Dec. 2018 | Galread Extragalactic Discussion Group @ Princeton
Dec. 2018 | Galaxy Journal Club @ STScI
DEC. 2018 | Galaxies & Cosmology Seminar @ CfA Harvard & Smithsonian
Nov. 2018 | IMPS Seminar @ UC Santa Cruz
Nov. 2018 | Lunch Talk @ Carnegie Observatories, Pasadena, CA
Oct. 2018 | Astronomy Tea Talk @ Caltech, Pasadena, CA
Aug. 2018 | Contributed Talk, @ Focus Meeting 7 at the XXXth IAU General Assembly, Vienna, Austria
 Jul. 2018 | Invited Talk, @ University of Science and Technology of China, Hefei
Jun. 2018 | Contributed Talk with Conference Fellowship, @ KIAA Forum on Gas in Galaxies, Beijing
 MAY 2018 | Invited Talk, @ 2018 Nanjing University Youth Forum, Nanjing
FEB. 2018 | Colloquium Talk, @ IPAC, Caltech, Pasadena, CA
JAN. 2018 | Lunch Talk, @ Carnegie Observatories, Pasadena, CA
Sept. 2017 | Invited Talk, @ Tsinghua University, Beijing
Sept. 2017 | Invited Talk, @ Nanjing University, Nanjing
Sept. 2017
             Invited Talk, @ Shanghai Jiao Tong University, Shanghai
Jun. 2017
             Contributed talk, @ Special Session 11 at European Week of Astronomy and Space Science,
             Prague, Czech Republic
Jan. 2017 | Colloquium talk, @ Steward Observatory, University of Arizona, Tucson, AZ
Aug. 2016 | Colloquium talk, @ Department of Astronomy, University of Michigan, Ann Arbor, MI
 Jul. 2016 | Invited talk, @ Tsinghua University, Beijing
Jun. 2016 | Invited talk, @ Nanjing University, Nanjing
Jun. 2016 | Invited talk, @ Purple Mountain Observatory, Nanjing
Jun. 2016 | Invited talk, @ National Astronomical Observatories of China, Beijing
Aug. 2015 | Contributed talk, @ Focus Meeting 22 at the XXIXth IAU General Assembly, Honolulu, HI
Nov. 2012
             Contributed talk, @ Tsinghua Transient Workshop 2012, Tsinghua University, Beijing
             Contributed talk, @ A mini-workshop on "Gamma-ray Sky from Fermi: Neutron Stars and
Jun. 2010
             their Environment", Hong Kong, China
Apr. 2009
             Contributed talk, @ Frontiers of Space Astrophysics: Neutron Stars & Gamma Ray Bursts —
             Recent Developments & Future Directions, Cairo & Alexandria, Egypt
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Approved Observing Proposals

- 16 Keck 2022A_U016, 2023A_U139, 2024A_U245, 2024B_U423, PI Malkan, 8 Full Nights: The Most Massive Galaxy Protoclusters at Cosmic Noon—Impact on Galaxy Evolution
- 15 JWST-GO-03050, PI Goldsmith, Contact Wang: A hot view of cold gas

- 14 JWST-GO-03426, PI Jones: Confirming the population of disk galaxies at z>3
- 13 HST-GO-17159, **PI Wang**, 38 Primary Spacecraft Orbits: Escaping Lyman Continuum from the Overdensities of Extreme Emission Line Galaxies at z∼2.2
- 12 HST-GO-16667, PI Bradac: The Final Frontier: HST and JWST Exploration of Galaxies Across Cosmic Epochs
- 11 HST-AR-16621, PI Koekemoer: SUPERCAL: Unified Reprocessing of the Large HST Cosmology Survey Fields New Science, Archival Legacy, and Pathfinder for JWST
- 10 JWST-GO-01571, PI Malkan: PASSAGE–Parallel Application of Slitless Spectroscopy to Analyze Galaxy Evolution
- 9 JWST-GO-02136, PI Jones: The emergence of the modern Hubble sequence revealed by JWST slit-stepping
- 8 HST-GO-16276, **PI Wang**, 45 Primary Spacecraft Orbits: WFC3 Spectroscopy of the Most Massive Galaxy Protoclusters at Cosmic Noon
- 7 JWST-ERS-01324, PI Treu: Through the Looking GLASS: A JWST Exploration of Galaxy Formation and Evolution from Cosmic Dawn to Present Day
- 6 HST-GO-15647, PI Teplitz: Ultraviolet Imaging of the Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey Fields (UVCANDELS)
- 5 VLT-0101.B-0418(A), PI Sanchez-Janssen: Chemodynamics of lensed dwarf galaxies at $1 \lesssim z \lesssim 2$
- 4 Keck 2017A_U037, 2017B_U058, 2018A_U158, 2018B_U061, 2019A_U130, 2019B_U057, PI Jones: Dissecting Galaxy Formation and Testing Feedback Models on 100 pc Scales: An OSIRIS Survey of Lensed Galaxies at $z\simeq 2$
- 3 HST-DDT-14922, PI Kelly: Probing the Nature of Dark Matter with Individual Stars Highly Magnified by a Galaxy Cluster
- 2 HST-AR-14280, PI Bradac: Breaking Cosmic Dawn: Observing the z>7 Universe Through Cosmic Telescopes 1 HST-GO-13459, PI Treu: The Grism Lens-Amplified Survey from Space (GLASS)

Observing Experience

- Keck OSIRIS, 16 nights
- Keck MOSFIRE, 11 night
- Lick Observatory Shane telescope, 1 night
- Palomar Observatory P200 telescope, 2 nights

• Keck DEIMOS, 3 nights

- Keck ESI, 1 night
- Steward Observatory Bok telescope, 6 nights

Professional Service

- Referee for ApJ, ApJS, PASJ, A&A
- External reviewer for Large JWST proposals in Cycle 2
- External reviewer for Large HST proposals in Cycles 29, 30, 31
- External reviewer for Chinese Telescope Access Program Time Allocation Committee
- Selected participant in the inaugural JWST Master Class
- Organizer of the KIAA JWST Proposal Planning Workshop and the UCLA JWST Proposal Planning Workshop
- Organizer of Treu Group Meetings, @ UCSB & UCLA
- Organizer of Graduate Journal Club in School of Astronomy and Space Sciences, NJU

Teaching and Mentoring

2022-Present	Xunda Sun, Hang Zhou, Yiming Yang, Qianqiao Zhou, Shengzhe Wang, Pengfei Ren,
	graduate students at University of Chinese Academy of Sciences
2020-Present	Zihao Li, graduate student at Tsinghua University, co-advised with Prof. Zheng Cai
2018 – 2019	Jessie Hirtenstein, graduate student at UC Davis, co-advised with Prof. Tucker Jones
FebJun. 2024	Sole lecturer of <i>Introduction to Astronomy</i> , a core course for astronomy majors at Univer-
	sity of Chinese Academy of Sciences

Working Experience and Outreach Activities

2015 - 2017	Demonstrator of Astronomy experiments to local K12 schools in Los Angeles
2015 - 2017	Volunteer in the annual Exploring Your Universe! events, UCLA

Publications Full list available at ADS

1st/2nd Author Papers in Refereed Academic Journals

- 23 Sun, X., **Wang, X.** et al. The physical origin of positive metallicity radial gradients in high-redshift galaxies: insights from the FIRE-2 cosmological hydrodynamic simulations. 2024, *Astrophys. J.*, submitted (arXiv:2409.09290) [5 citations]
- Wang, X. et al. The Lyman Continuum Escape Fraction of Star-forming Galaxies at $2.4 \lesssim z \lesssim 3.0$ from UVCANDELS. 2025, Astrophys. J., 980, 74 (arXiv:2308.09064) [14 citations]
- 21 Li, S., Wang, X. et al. Early Results from GLASS-JWST. XXV. Electron Density in the Interstellar Medium at $0.7 \lesssim z \lesssim 9.3$ with NIRSpec High-resolution Spectroscopy. 2025, Astrophys. J. Letters, 979, L13 (arXiv:2412.08382) [2 citations]
- Ju, M., Wang, X. et al. MSA-3D: Metallicity Gradients in Galaxies at $z \sim 1$ with JWST/NIRSpec Slit-stepping Spectroscopy. 2025, Astrophys. J. Letters, 978, L39 (arXiv:2409.01616) [4 citations]
- 19 Wang, X. et al. A strong He II $\lambda 1640$ emitter with extremely blue UV spectral slope at z=8.16: presence of Pop III stars? 2024, Astrophys. J. Letters, 967, L42 (arXiv:2212.04476) [37 citations]
- Jiang, H., Wang, X. et al. The Lyα non-detection by JWST NIRSpec of a strong Lyα emitter at z=5.66 confirmed by MUSE. 2024, Astrophys. J., 972, 121 (arXiv:2312.04151) [7 citations]
- 17 Sun, L., Wang, X. et al. The UV luminosity function at 0.6 < z < 1 from UVCANDELS. 2024, Astrophys. J., 972, 8 (arXiv:2311.15664) [11 citations]
- He, X., Wang, X. et al. Early results from GLASS-JWST. XXVII. The mass-metallicity relation in lensed field galaxies at cosmic noon with NIRISS. 2023, Astrophys. J. Letters, 960, L13, (arXiv:2312.01932) [11 citations]
- Shi, D., Wang, X. et al. The Emergence of Brightest Cluster Galaxy in the Most Massive Protocluster Core. 2024, Astrophys. J., 963, 21 (arXiv:2303.09726) [7 citations]
- Wang, X. et al. Ultraviolet and Blue Optical Imaging of UVCANDELS. 2024, Res. Notes AAS, 8, 26 (DOI 10.3847/2515-5172/ad1f6f) [7 citations]
- Wang, K., Wang, X., Chen, Y. Environmental Dependence of the Mass-Metallicity Relation in Cosmological Hydrodynamical Simulations. 2023, Astrophys. J., 951, 66 (arXiv:2305.08161) [11 citations]
- Wang, X. et al. Early results from GLASS-JWST. IV. Spatially resolved metallicity in a low-mass $z \sim 3$ galaxy with NIRISS. 2022, Astrophys. J. Letters, 938, L16 (arXiv:2207.13113) [15 citations]
- Li, Z., Wang, X. et al. First Census of Gas-phase Metallicity Gradients of Star-forming Galaxies in OverdenseEnvironments at Cosmic Noon. 2022, Astrophys. J. Letters, 929, L8 (arXiv:2204.03008) [17 citations]
- 10 Wang, X. et al. The mass-metallicity relation at cosmic noon in overdense environments: first results from the MAMMOTH-Grism HST slitless spectroscopic survey. 2022, Astrophys. J., 926, 70 (arXiv:2108.06373) [26 citations]
- 9 Wang, X. et al. A Census of Sub-kiloparsec Resolution Metallicity Gradients in Star-forming Galaxies at Cosmic Noon from HST Slitless Spectroscopy. 2020, Astrophys. J., 900, 183 (arXiv:1911.09841) [45 citations]
- 8 Wang, X. et al. Discovery of Strongly Inverted Metallicity Gradients in Dwarf Galaxies at $z\sim2$. 2019, Astrophys. J., 882, 94 (arXiv:1808.08800) [59 citations]
- Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS) X. Sub-kiloparsec resolution gas-phase metallicity maps at cosmic noon behind the Hubble Frontier Fields cluster MACS1149.6+2223. 2017, Astrophys. J., 837, 89 (arXiv:1610.07558) [63 citations]
- 6 Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS) IV. Mass reconstruction of the lensing cluster Abell 2744 from frontier field imaging and GLASS spectroscopy. 2015, Astrophys. J., 811, 29 (arXiv:1504.02405) [59 citations]
- Jones, T., Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS) II. Gas-Phase Metallicity and Radial Gradients in an Interacting System At z~2. 2015, Astron. J., 149, 107 (arXiv:1410.0967) [65 citations]
- 4 Wang, X., Meng, X.-L., & Huang, Y. F., Testing X-ray Measurements of Galaxy Cluster Gas Mass Fraction Using the Cosmic Distance-Duality Relation and Type Ia Supernovae. 2013, RAA, 13, 1013 (arXiv:1305.2077) [4 citations]
- Wang, X., Meng, X.-L. et al. Observational Constraints on Cosmic Neutrinos and Dark Energy Revisited. 2012, J. Cosmol. Astropart. Phys., 11, 018 (arXiv:1210.2136) [32 citations]

- Wang, X., Huang, Y. F., & Kong, S. W. Constraint on the Counter-jet Emission in GRB Afterglows from GRB 980703. 2010, Sci. China-Phys. Mech. Astron., 53 (Suppl.1), 259 [4 citations]
- Wang, X., Huang, Y. F., & Kong, S. W. On the Afterglow from the Receding Jet of Gamma-Ray Bursts. 2009, Astron. Astrophys., 505, 1213 (arXiv:0903.3119) [11 citations]

Contributing Author Papers in Refereed Academic Journals (incomplete)

- 22 Prichard, L. J., ..., Wang, X. et al. Lyman Continuum Galaxy Candidates in COSMOS. 2021 Astrophys. J. in press (arXiv:2110.06945) [3 citations]
- Abramson, L. E., ..., Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS). XIII. G800L optical spectra from the parallel fields. 2020, MNRAS, 493, 952 (arXiv:1906.00008) [4 citations]
- 20 Bradac, M., ..., Wang, X. Hubble Frontier Field photometric catalogues of Abell 370 and RXC J2248.7-4431: multiwavelength photometry, photometric redshifts, and stellar properties. *MNRAS*, 489, 99 (arXiv:1906.01725) [10 citations]
- 19 Morishita, T., ..., **Wang, X.**. Massive Dead Galaxies at z~2 with HST Grism Spectroscopy. I. Star Formation Histories and Metallicity Enrichment. 2019, *Astrophys. J.*, 877, 141 (arXiv:1812.06980) [28 citations]
- Hirtenstein, J., Jones, T., Wang, X. et al. The OSIRIS Lens-Amplified Survey (OLAS) I: Dynamical Effects of Stellar Feedback in Low Mass Galaxies at z~2. 2018, Astrophys. J., 880, 54 (arXiv:1811.11768) [13 citations]
- 17 Strait, V., ..., Wang, X. et al. Mass and Light of Abell 370: A Strong and Weak Lensing Analysis. 2018, Astrophys. J., 868, 129 (arXiv:1805.08789) [19 citations]
- Finney, E., ..., Wang, X. et al. Mass Modeling of Frontier Fields Cluster MACS J1149.5+2223 Using Strong and Weak Lensing. 2018, Astrophys. J., 859, 1 (arXiv:1806.00698) [9 citations]
- Morishita, T., Abramson, L. E., Treu, T., **Wang, X.** et al. Metal Deficiency in Two Massive Dead Galaxies at z∼2. 2018, *Astrophys. J. Letters*, 856, L4 (arXiv:1803.01852) [12 citations]
- Abramson, L. E., ..., **Wang, X.** et al. The Grism Lens-Amplified Survey from Space (GLASS). XII. Spatially Resolved Galaxy Star Formation Histories and True Evolutionary Paths at z>1. 2018, *Astron. J.*, 156, 29 (arXiv: 1710.00843) [10 citations]
- 13 Kelly, P. L., ..., Wang, X. et al. Extreme magnification of an individual star at redshift 1.5 by a galaxy-cluster lens. 2018, *Nature Astronomy*, 2, 334 (arXiv:1706.10279) [75 citations]
- Williams, P. R., ..., **Wang**, **X.** Discovery of three strongly lensed quasars in the Sloan Digital Sky Survey. 2018, MNRAS, 477L, 70 (arXiv:1706.01506) [16 citations]
- 11 Schmidt, K. B., ..., Wang, X. The Grism Lens-Amplified Survey from Space (GLASS). XI. Detection of CIV in Multiple Images of $z=6.11~{\rm Ly}\alpha$ Emitter Behind RXCJ2248.7-4431. 2017, Astrophys. J., 839, 17 (arXiv:1702.04731) [39 citations]
- Morishita, T., Abramson, L. E., Treu, T., Schmidt, K. B., Vulcani, B., Wang, X. Characterizing Intracluster Light in the Hubble Frontier Fields. 2017, Astrophys. J., 846, 139 (arXiv:1610.08503) [54 citations]
- 9 Vulcani, B., ..., Wang, X. The Grism lens-amplified survey from space (GLASS). VIII. The influence of the cluster properties on Halpha emitter galaxies at 0.3 < z < 0.7. 2017, Astrophys. J., 837, 126 (arXiv:1610.04615) [15 citations]
- 8 Morishita, T., ..., Wang, X., et al. The Grism Lens-Amplified Survey from Space (GLASS). IX. The dual origin of low-mass cluster galaxies as revealed by new structural analyses. 2017, Astrophys. J., 835, 254 (arXiv:1607.00384) [35 citations]
- 7 Huang, K., ..., Wang, X. Detection of Lyman-Alpha Emission From a Triple Imaged z=6.85 Galaxy Behind MACS J2129.4-0741. 2016, Astrophys. J. Letters, 823L, 14 (arXiv:1605.05771) [30 citations]
- 6 Hoag, A., ..., Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS). VI. Comparing the Mass and Light in MACSJ0416.1-2403 using Frontier Field imaging and GLASS spectroscopy. 2016, Astrophys. J., 831, 182 (arXiv:1603.00505) [34 citations]
- 5 Schmidt, K. B., ..., Wang, X. The Grism Lens-Amplified Survey from Space (GLASS). III. A census of Ly α Emission at $z \gtrsim 7$ from HST Spectroscopy. 2016, Astrophys. J., 818, 38 (arXiv:1511.04205) [56 citations]

- 4 Rodney, S., ..., Wang, X., et al. Illuminating a Dark Lens: A Type Ia Supernova Magnified by the Frontier Fields Galaxy Cluster Abell 2744. 2015, Astrophys. J., 811, 70 (arXiv:1505.06211) [59 citations]
- 3 Treu, T., Schmidt, K. B., Brammer, G. B., Vulcani, B., Wang, X. et al. The Grism Lens-Amplified Survey from Space (GLASS). I. Survey Overview and First Data Release. 2015, Astrophys. J., 812, 114 (arXiv:1509.00475) [150 citations]
- 2 Schmidt, K. B., Treu, T., Brammer, G. B., Bradac, M., Wang, X. et al. Through the Looking GLASS: HST Spectroscopy of Faint Galaxies Lensed by the Frontier Fields Cluster MACSJ0717.5+3745. 2014, Astrophys. J. Letters, 782L, 36 (arXiv:1401.0532) [102 citations]
- 1 Meng, X.-L., Zhang, T.-J., Zhan, H., & Wang, X. Morphology of Galaxy Clusters: A Cosmological Model-Independent Test of the Cosmic Distance-Duality Relation. 2012, Astrophys. J., 745, 98 (arXiv:1104.2833) [62 citations]