

# XIN WANG

## Personal Information

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CURRENT STATUS: Postdoctoral Research Associate at Caltech/IPAC  
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## Education and Employment

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AUG. 2019– PRESENT	Infrared Processing and Analysis Center, Caltech <b>Postdoctoral Research Associate</b>
SEPT. 2015– JUN. 2019	Department of Physics and Astronomy, University of California, Los Angeles <b>Ph.D. in Astronomy &amp; Astrophysics</b>
SEPT. 2013– JUN. 2015	Physics Department, University of California, Santa Barbara <b>Master of Arts in Physics</b>
SEPT. 2010– JUN. 2013	School of Astronomy and Space Sciences, Nanjing University <b>Master of Science in Astrophysics</b>
SEPT. 2006– JUN. 2010	Department of Astronomy, Nanjing University <b>Bachelor of Science in Astronomy</b>

## Awards and Honors

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MAR. 2020	Kavli Visiting Fellow, Peking University
JUN. 2019	UCLA Physics and Astronomy Commencement Speaker
JAN. 2019	Chinese Government Award for Outstanding Graduate Students Abroad (\$6k)
DEC. 2018	UCLA Doctoral Student Travel Grant (\$1k)
JUL. 2018	UCLA Richardson Travel Fund (\$1.7k)
JUN. 2018	UCLA Dissertation Year Fellowship (\$47k: stipend+tuition)
MAY 2018	Rudnick-Abelmann Fellowship, UCLA (\$2k)
APR. 2018	IAU grant for participating the XXXth General Assembly (€0.75k)
APR. 2018	AAS International Travel Grant (\$2k)
APR. 2015	AAS International Travel Grant (\$1k)
JUN. 2014	1 <sup>st</sup> Prize for Excellent M.Sc. Thesis amongst all Universities and Colleges in Jiangsu Province
SEPT. 2013	Broida Fellowship, UCSB (\$3k)
DEC. 2012	National Scholarship for Graduate Students (CNY30k)
AUG. 2010	1 <sup>st</sup> Prize for Excellent B.Sc. Thesis amongst all Universities and Colleges in Jiangsu Province
OCT. 2009	Scholarship of National Astronomical Observatories, Chinese Academy of Sciences

## Talks and Colloquia

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JAN. 2022	<b>Contributed Talk</b> , @ <a href="#">AAS 239</a> , Salt Lake City
JAN. 2021	<b>Contributed Talk</b> , @ <a href="#">AAS 237</a> , virtual
DEC. 2020	<b>Invited Seminar</b> , @ Department of Physics and Astronomy, University of Missouri
DEC. 2019	<b>Invited Talk</b> , @ Purple Mountain Observatory, Nanjing
DEC. 2019	<b>Invited Talk</b> , @ 2019 Nanjing University Youth Forum, Nanjing
DEC. 2019	<b>Invited Talk</b> , @ Shanghai Astronomical Observatory
DEC. 2019	<b>Invited Talk</b> , @ Shanghai Jiao Tong University, Shanghai
AUG. 2019	<b>Lunch Talk</b> , @ <a href="#">The Kavli Institute for Astronomy and Astrophysics at Peking University</a>
AUG. 2019	<b>Invited Talk</b> , @ National Astronomical Observatories of China, Beijing
AUG. 2019	<b>Invited Talk</b> , @ Key Laboratory of Space Utilization, CAS
JUN. 2019	<b>Invited Talk</b> , @ <a href="#">CLEAR collaboration meeting</a> , 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  
 JUN. 2010 | **Contributed talk**, @ [A mini-workshop on “Gamma-ray Sky from Fermi: Neutron Stars and 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

### Approved Observing Proposals

- 12 HST-GO-17159, **PI Wang**, *38 Primary Spacecraft Orbits: [Escaping Lyman Continuum from the Overdensities of Extreme Emission Line Galaxies at  \$z \sim 2.2\$](#)*
- 11 Keck 2022A\_U016, PI Malkan, *2 Full Nights: The Most Massive Galaxy Protoclusters at Cosmic Noon—Impact on Galaxy Evolution*
- 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

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| <ul style="list-style-type: none"> <li>• Keck OSIRIS, 16 nights</li> <li>• Keck MOSFIRE, 1 night</li> <li>• Lick Observatory Shane telescope, 1 night</li> <li>• Palomar Observatory P200 telescope, 2 nights</li> </ul> | <ul style="list-style-type: none"> <li>• Keck DEIMOS, 3 nights</li> <li>• Keck ESI, 1 night</li> <li>• Steward Observatory Bok telescope, 6 nights</li> </ul> |
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### Professional Service

- Referee for *ApJ*, *ApJS*, *PASJ*
- External reviewer for Large HST proposals in Cycle 29
- 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

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| 2020–PRESENT<br>2018–2019<br>MAR.–JUN. 2014<br>SEPT.–DEC. 2013<br>SEPT.–DEC. 2010 | Zihao Li, graduate student at Tsinghua University, co-advising with Prof. Zheng Cai<br>Jessie Hirtenstein, graduate student at UC Davis, co-advising with Prof. Tucker Jones<br>Teaching assistant of <i>Physics 3: Basic Physics</i> , University of California, Santa Barbara<br>Teaching assistant of <i>Physics 6 Lab</i> , University of California, Santa Barbara<br>Teaching assistant of <i>Theoretical Astrophysics</i> (upper division undergraduate course), NJU |
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### Working Experience and Outreach Activities

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| 2015–2017<br>2015–2017<br>2010–2012 | Demonstrator of Astronomy experiments to local K12 schools in Los Angeles<br>Volunteer in the annual EXPLORING YOUR UNIVERSE! events, UCLA<br>President of Graduate Student Union in School of Astronomy and Space Sciences, NJU |
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### Publications

Full list available at [ADS](#)

#### 1st/2nd Author Papers in Refereed Academic Journals

- 13 **Wang, X.** et al. The Lyman Continuum Escape Fraction of Star-forming Galaxies at  $z \gtrsim 2.4$  from UVCANDELS. In prep.
- 12 **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*, in press ([arXiv:2207.13113](#)) [2 citations]
- 11 Li, Z., **Wang, X.** et al. First Census of Gas-phase Metallicity Gradients of Star-forming Galaxies in Overdense Environments at Cosmic Noon. 2022, *Astrophys. J. Letters*, 929, L8 ([arXiv:2204.03008](#)) [3 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](#)) [5 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](#)) [19 citations]
- 8 **Wang, X.** et al. Discovery of Strongly Inverted Metallicity Gradients in Dwarf Galaxies at  $z \sim 2$ . 2019, *Astrophys. J.*, 882, 94 ([arXiv:1808.08800](#)) [31 citations]
- 7 **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](#)) [46 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](#)) [48 citations]
- 5 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  $z \sim 2$ . 2015, *Astron. J.*, 149, 107 ([arXiv:1410.0967](#)) [54 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](#)) [3 citations]
- 3 **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](#)) [27 citations]
- 2 **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 [3 citations]
- 1 **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](#)) [8 citations]

#### Contributing Author Papers in Refereed Academic Journals

- 22 Prichard, L. J., ..., **Wang, X.** et al. Lyman Continuum Galaxy Candidates in COSMOS. 2021 *Astrophys. J.* in press ([arXiv:2110.06945](#)) [3 citations]
- 21 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  $z \sim 2$  with HST Grism Spectroscopy. I. Star Formation Histories and Metallicity Enrichment. 2019, *Astrophys. J.*, 877, 141 ([arXiv:1812.06980](#)) [28 citations]
- 18 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  $z \sim 2$ . 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]
- 16 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]
- 15 Morishita, T., Abramson, L. E., Treu, T., **Wang, X.** et al. Metal Deficiency in Two Massive Dead Galaxies at  $z \sim 2$ . 2018, *Astrophys. J. Letters*, 856, L4 ([arXiv:1803.01852](#)) [12 citations]
- 14 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]
- 12 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  $z = 6.11$  Ly $\alpha$  Emitter Behind RXCJ2248.7-4431. 2017, *Astrophys. J.*, 839, 17 ([arXiv:1702.04731](#)) [39 citations]
- 10 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 H $\alpha$  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 $\alpha$  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]