Xin Wang

Personal Information

Current Status:	Postdoctoral Scholar at Caltech/IPAC
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Education and Employment

Aug. 2019–	Infrared Processing and Analysis Center, Caltech **Postdoctoral Scholar**
Present	Expertise: Space-based Slitless Spectroscopy, HST WFC3/UVIS Imaging `Advisors: Drs. Harry Teplitz, James Colbert, Marc Rafelski`
Sept. 2015–	Dept. of Physics and Astronomy, University of California, Los Angeles **Ph.D. in Astronomy & Astrophysics**
Jun. 2019	Field of Interest: Spatially Resolved Spectroscopy, Chemical Evolution of Galaxies, Extragalactic Nebular Emission, Strong Gravitational Lensing. `Advisors: Drs. Tommaso Treu, Tucker Jones, Emanuele Daddi`
Sept. 2013–	Physics Department, University of California, Santa Barbara **Master of Arts in Physics**
Jun. 2015	Graduate Course Cumulative GPA: 3.96
Sept. 2010–	School of Astronomy and Space Sciences, Nanjing University **Master of Science in Astrophysics**
Jun. 2013	Field of Interest: Cosmology, Galaxy Clusters, Gamma-ray Bursts. `Advisors: Drs. Yong Feng Huang, Charling Tao, Gong-Bo Zhao`
Sept. 2006–	Department of Astronomy, Nanjing University **Bachelor of Science in Astronomy**
Jun. 2010	Weighted Average Score: 87.68/100; Ranking: 2nd/26

Awards and Honors

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	1st Prize for Excellent M.Sc. Thesis amongst all Universities and Colleges in Jiangsu Province, China
Sept. 2013	Broida Fellowship, UCSB ($3k)
Dec. 2012	National Scholarship for Graduate Students (∼$4k) *The highest honorific scholarship in China conferred annually on excellent graduate students.*
Aug. 2010	1st Prize for Excellent B.Sc. Thesis amongst all Universities and Colleges in Jiangsu Province, China
Oct. 2009	Scholarship of National Astronomical Observatories, Chinese Academy of Sciences

Talks and Colloquia

Nov. 2018	**Colloquium talk** @ Carnegie Observatories, Pasadena, CA
Oct. 2018	**Colloquium 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, China
May 2018	**Invited talk**, @ 2018 Nanjing University Youth Forum, Nanjing, China
Feb. 2018	**Colloquium talk**, @ IPAC, Caltech, Pasadena, CA
Jan. 2018	**Colloquium 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
Aug. 2017	**Contributed talk**, @ Shedding Light on the Dark Universe with Extremely Large Telescopes, Lanzhou, China
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**, @ 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

Computer Skills

Python, IDL, MATLAB, FORTRAN, C, LaTeX, vim, Github, Mathematica

Approved Proposals (CoI)

1 JWST-ERS-1324, PI Treu: Through the Looking GLASS: A JWST Exploration of Galaxy Formation and Evolution from Cosmic Dawn to Present Day.

2 HST-14922, PI Kelly: Probing the Nature of Dark Matter with Individual Stars Highly Magnified by a Galaxy Cluster.

3 HST-14280, PI Bradac: Breaking Cosmic Dawn: Observing the z>7 Universe Through Cosmic Telescopes.

4 VLT-0101.B-0418(A), PI Sanchez-Janssen: Chemodynamics of lensed dwarf galaxies at $1 \lesssim z \lesssim 2$.

5 Keck, PI Jones: Dissecting Galaxy Formation and Testing Feedback Models on 100 pc Scales: An OSIRIS Survey of Lensed Galaxies at $z \simeq 2$.

Observing Experience

- Keck OSIRIS, 14 nights
- Keck DEIMOS, 3 nights
- Keck MOSFIRE, 1 night
- Keck ESI, 1 night
- Lick Observatory Shane telescope, 1 night
- Steward Observatory Bok telescope, 6 nights

Professional Service

- Referee for *Astrophysical Journal*, *Astrophysical Journal Supplement Series*
- External Reviewer for Chinese Telescope Access Program TAC
- Participant in the inaugural JWST Master Class
- Organizer of Treu Group Meetings, UCSB & UCLA
- Organizer of Graduate Journal Club in School of Astronomy and Space Sciences, NJU

Teaching Experience

Mar.–Jun. 2014	Teaching assistant of *Physics 3: Basic Physics*, UCSB
Sept.–Dec. 2013	Teaching assistant of *Physics 6 Lab*, UCSB
Sept.–Dec. 2010	Teaching assistant of *Theoretical Astrophysics* (upper division undergraduate course), Nanjing University

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
2010–2012	President of Graduate Student Union in School of Astronomy and Space Sciences, Nanjing University

Publications

1st/2nd Author Papers in Refereed Academic Journals

9 **Wang, X.** et al. First Census of Sub-kiloparsec Resolution Metallicity Gradients in Star-forming Galaxies at Cosmic Noon from HST Slitless Spectroscopy. 2019, *Astrophys. J.*, submitted (arXiv:1911.09841)

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)

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)

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)

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)

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 **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)

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

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)

Contributing Author Papers in Refereed Academic Journals

19 Abramson, L. E., ..., **Wang, X.** et al. The Grism Lens-Amplified Survey from Space (GLASS). XIII. G800L optical spectra from the parallel fields. 2019, *MNRAS*, submitted (arXiv:1906.00008)

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)

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)

16 Quinn, 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)

15 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*, 856L, 4 (arXiv:1803.01852)

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)

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)

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)

11 Schmidt, K. B., ..., **Wang, X.** The Grism Lens-Amplified Survey from Space (GLASS). XI. Detection of CIV in Multiple Images of $z = 6.11$ Lyα Emitter Behind RXCJ2248.7-4431. 2017, *Astrophys. J.*, 839, 17 (arXiv:1702.04731)

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)

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)

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)

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)

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)

5 Schmidt, K. B., ..., **Wang, X.** The Grism Lens-Amplified Survey from Space (GLASS). III. A census of Lyα Emission at $z \gtrsim 7$ from HST Spectroscopy. 2016, *Astrophys. J.*, 818, 38 (arXiv:1511.04205)

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)

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)

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)

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)