

Ji Wang

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| CONTACT INFORMATION | California Institute of Technology MC 249-17, 1200 East California Blvd Pasadena, CA 91125, USA | Office: +1-626-395-4981 Mobile: +1-352-328-4252 E-mail: ji.wang@caltech.edu |
| CITIZENSHIP | P.R.China, U.S. permanent resident | |
| RESEARCH INTERESTS | Exoplanet detection and characterization using the radial velocity technique, the transit method, high contrast imaging technique, and high resolution spectroscopy. High resolution imaging and interferometry. Planet formation and habitability in multiple stellar systems and planets at wide orbits. Stellar abundances on planet formation. | |
| EXPERIENCES | <p>California Institute of Technology, Pasadena, California, USA Postdoctoral Scholar, September 2015</p> <p>Yale University, New Haven, Connecticut, USA Postdoctoral Scholar, September 2012</p> <p>University of Florida, Gainesville, Florida, USA Ph.D., Astronomy, July 2012</p> <ul style="list-style-type: none">• Thesis Topic: <i>Toward Massive Detection of Planets Around M-Dwarfs Using the Radial Velocity Technique</i> <p>M.S., Astronomy, May 2008</p> <ul style="list-style-type: none">• Thesis Topic: <i>High-Contrast Imaging of Exoplanets Around Giant Stars</i> <p>University of Science and Technology of China, Hefei, Anhui, P.R.China B.S., Astrophysics, July 2006</p> | |
| PROJECTS AS PI | <p>Principle investigator for observations of 16 Keck nights, 21 Palomar nights, and a total of \$54,750 research funding as of Jan 2017.</p> <p>Mapping Clouds on Brown Dwarfs (Keck NIRSPEC 2017A)</p> <p>Spin-Orbit Misalignment of Young Eclipsing Brown Dwarfs (Keck NIRSPEC 2017A, co-PI with Lynne Hillenbrand)</p> <p>A Pilot High Contrast Imaging Survey of Close-separation Binaries in Young Moving Groups with the Stellar Double Coronagraph Instrument (Palomar SDC 2017A)</p> <p>High-Resolution Spectroscopy of Brown Dwarfs and Exoplanets: Chemical Composition and Cloud Map (Keck NIRSPEC 2016B)</p> <p>Studying the Formation of Planets in Multiple Stellar Systems (Keck HIRES 2016A)</p> <p>Searching For Planets In Binary Stars (K2 Cycle 2 GO Program \$30,000)</p> <p>Confirming the Planet-Metallicity Correlation For Small Planets (WIYN HYDRA 2015B NASA WIYN PI Data Award \$24,750)</p> | |

No Place to Hide: An Adaptive Optics Search For Stellar Companions Around Kepler Stars with Radial Velocity Measurements (**Keck NIRC2 2015A**)

Direct Imaging of Low-Mass Companions to Evolved Stars (**Palomar-P1640 2015A**)

Adaptive Optics Doppler Experiment (AODE): Searching and Confirming Hot Jupiters in Close Binaries (**Palomar SWIFT 2014B**)

What Causes the Migration of Hot Jupiters? (**Palomar PHARO+EAE 2014B**)

No Place to Hide: An Adaptive Optics Search For Stellar Companions Around Kepler Stars with Radial Velocity Measurements (**Keck NIRC2 2014B**)

What Causes the Migration of Hot Jupiters? (**Gemini-N DSSI 2014B**)

Planets Beyond The Habitable Zone: Connecting Exoplanet Frontiers to Future Missions (**Keck NIRC2 2014A**)

Naboo vs. Tatooine: Distinguishing Planet Occurrence Rate For Single and Multiple Stars (**Palomar PHARO 2014A**)

Searching For Planets Around M Dwarfs with EXPERT (**KPNO 2010B-0534**)

Multi-Band Study of Radial Velocity Induced by Stellar Activity with EXPERT (**KPNO 2011B-0450**)

REFEREED
PUBLICATIONS
(FIRST&
SECOND
AUTHOR)

17 first- and second-authored refereed publications and 3295 total citations, 275 citations for first- and second-authored refereed publications, h-index = 16 (as of Jan 2017)

Wang, J., Prato, Lisa; Mawet, Dimitri; 2017, submitted to ApJ, TIME-RESOLVED HIGH SPECTRAL RESOLUTION OBSERVATION OF 2MASSW J0746425+200032AB

Wang, J., Mawet, Dimitri; Ruane, Garreth; Renyu, Hu; Benneke, Bjorn; 2017, submitted to ApJ, Observing Exoplanets with High Dispersion Coronagraphy. I. The Scientific Potential of Current and Next-Generation Large Ground and Space Telescopes

Zhu, Wei; **Wang, J.**; Huang, Chelsea; 2016, ApJ, 832, 196, Dependence of Small Planet Frequency on Stellar Metallicity Hidden by Their Prevalence

Wang, J., Fischer, Debra A.; Barclay, Thomas; Picard, Alyssa; et al., 2015, ApJ, 815, 127, Planet Hunters. VIII. Characterization of 41 Long-period Exoplanet Candidates from Kepler Archival Data

Wang, J., Fischer, Debra A.; Ji-Wei, Xie; Ciardi, David; et al., 2015, ApJ, 813, 130, Influence of Stellar Multiplicity on Planet Formation. IV. Adaptive Optics Imaging of Kepler Stars with Multiple Transiting Planet Candidates

Wang, J., Fischer, Debra A., Horch, Elliott P., Xie, Ji-Wei., 2015, ApJ, 806, 248, Influence of Stellar Multiplicity on Planet Formation. III. Adaptive Optics Imaging of Kepler Stars With Gas Giant Planets

Wang, J. & Fischer, D. A. 2015, AJ, 149, 14, Revealing A Universal Planet-Metallicity Correlation For Planets of Different Sizes Around Solar-Type Stars

Wang, J., Fischer, Debra A., Horch, Elliott P., Huang, Xu., 2015, ApJ, 799, 229, On the Occurrence Rate of Hot Jupiters in Different Stellar Environments

- Wang, J.**, Fischer, Debra A.; Xie, Ji-Wei; Ciardi, David R., 2014, ApJ, 791, 111, Influence of Stellar Multiplicity On Planet Formation. II. Planets Are Less Common in Multiple Star Systems with Separations Smaller than 1500 AU
- Wang, J.**, Xie, Ji-Wei; Barclay, Thomas; Fischer, Debra A., 2014, ApJ, 783, 4, Influence of Stellar Multiplicity On Planet Formation. I. Evidence of Suppressed Planet Formation Due to Stellar Companions Within 20 AU and Validation of Four Planets From the *Kepler* Multiple Planet Candidates
- Schmitt, J. R., **Wang, J.**, Fischer, D. A., et al. 2014, AJ, 148, 28, Planet Hunters VI: The First Kepler Seven Planet Candidate System and 13 Other Planet Candidates from the Kepler Archival Data
- Wang, J.**, et al. 2013, ApJ, 776, 10, Planet Hunters. V. A Confirmed Jupiter-Size Planet in the Habitable Zone and 42 Planet Candidates from the Kepler Archive Data
- Wang, J.**, Ge, J., Wan, X., De Lee, N., & Lee, B. 2012, PASP, 124, 1159, Accurate Group Delay Measurement for Radial Velocity Instruments Using the Dispersed Fixed Delay Interferometer Method. II. Application of Heterodyne Combs Using an External Interferometer Filter
- Wang, J.**, Ge, J., Wan, X., Lee, B., & De Lee, N. 2012, PASP, 124, 598, Accurate Group-Delay Measurement for Radial-Velocity Instruments Using the Dispersed Fixed-Delay Interferometer Method
- Wang, J.**, & Ford, E. B. 2011, MNRAS, 418, 1822, On the eccentricity distribution of short-period single-planet systems
- Wang, J.**, Ge, J., Jiang, P., & Zhao, B. 2011, ApJ, 738, 132, Fundamental Performance of a Dispersed Fixed Delay Interferometer in Searching for Planets around M Dwarfs
- Wan, X.; **Wang, J.**; Ge, J. Accurate Measurement of Interferometer Group Delay Using Field-compensated Scanning White Light Interferometer. *Applied Optics*. Vol. 49 Issue 29, pp.5645-5653 (2010).
- Wan, X.; **Wang, J.**; Ge, J. Resolving Fringe Ambiguities of a Wide-field Michelson Interferometer Using Visibility Measurements of a Noncollimated Laser Beam. *Applied Optics*. Vol. 48 Issue 26, pp.4909-4916 (2009).

BOOK
CHAPTER

- Heliophysics: Active Stars, their Astrospheres, and Impacts on Planetary Environments. Edited by Carolus J. Schrijver, Frances Bagenal and Jan J. Sojka. Chapter 5. Characteristics of planetary systems by Debra Fischer and **Ji Wang**.

OTHER
REFEREED
PUBLICATIONS

23 contributing refereed publications (as of Jan 2017)

- Ma, Bo, et al., 2016, AJ, 152, 112, Very Low-mass Stellar and Substellar Companions to Solar-like Stars from MARVELS. VI. A Giant Planet and a Brown Dwarf Candidate in a Close Binary System HD 87646
- Ngo, Henry, et al., 2016, ApJ, 827, 8, Friends of Hot Jupiters. IV. Stellar Companions Beyond 50 au Might Facilitate Giant Planet Formation, but Most are Unlikely to Cause Kozai-Lidov Migration
- Roberts, Lewis C., et al. 2016, AJ, 151, 169, Characterization of the Companion μ Her
- Schmitt, J. R., et al. 2016, AJ, 151, 159, Planet Hunters. X. Searching for Nearby Neighbors of 75 Planet and Eclipsing Binary Candidates from the K2 Kepler extended mission

- Eastman, Jason D., et al., 2016, AJ, 151, 45, KELT-4Ab: An Inflated Hot Jupiter Transiting the Bright ($V \approx 10$) Component of a Hierarchical Triple
- Montet, Benjamin T., et al. 2015, ApJ, 813, 11, Dynamical Masses of Young M Dwarfs: Masses and Orbital Parameters of GJ 3305 AB, the Wide Binary Companion to the Imaged Exoplanet Host 51 Eri
- LaCourse, D. M., et al. 2015, MNRAS, 452, 3561, Kepler Eclipsing Binary Stars. VI. Identification of Eclipsing Binaries in the K2 Campaign 0 Data-set
- Alam, Shadab, et al., 2015, ApJS, 219, 12, The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III
- Fleming, S. W., et al. 2015, AJ, 149, 143, The APOGEE Spectroscopic Survey of Kepler Planet Hosts: Feasibility, Efficiency, and First Results
- Bieryla, A., et al. 2015, AJ, 150, 12, KELT-7b: A hot Jupiter transiting a bright $V=8.54$ rapidly rotating F-star
- Ghezzi, L., et al. 2014, AJ, 148, 105, Accurate Atmospheric Parameters at Moderate Resolution Using Spectral Indices: Preliminary Application to the MARVELS Survey
- Jiang, P., et al. 2013, AJ, 146, 65, Very Low Mass Stellar and Substellar Companions to Solar-like Stars from MARVELS. IV. A Candidate Brown Dwarf or Low-mass Stellar Companion to HIP 67526
- Pepper, J., et al. 2013, ApJ, 773, 64, KELT-3b: A Hot Jupiter Transiting a $V = 9.8$ Late-F Star
- De Lee, N., et al. 2013, AJ, 145, 155, Very Low Mass Stellar and Substellar Companions to Solar-like Stars from MARVELS. V. A Low Eccentricity Brown Dwarf from the Driest Part of the Desert, MARVELS-6b
- Wright, J. T., et al. 2013, arXiv:1305.0280, MARVELS-1: A face-on double-lined binary star masquerading as a resonant planetary system; and consideration of rare false positives in radial velocity planet searches
- Ma, B., et al. 2013, AJ, 145, 20, Very-low-mass Stellar and Substellar Companions to Solar-like Stars from Marvells. III. A Short-period Brown Dwarf Candidate around an Active G0IV Subgiant
- Ahn, C. P., et al. 2012, ApJS, 203, 21, The Ninth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Baryon Oscillation Spectroscopic Survey
- Fleming, S. W., et al. 2012, AJ, 144, 72, Very Low Mass Stellar and Substellar Companions to Solar-like Stars from MARVELS. II. A Short-period Companion Orbiting an F Star with Evidence of a Stellar Tertiary and Significant Mutual Inclination
- Wisniewski, J. P., et al. 2012, AJ, 143, 107, Very Low Mass Stellar and Substellar Companions to Solar-like Stars from MARVELS. I. A Low-mass Ratio Stellar Companion to TYC 4110-01037-1 in a 79 Day Orbit
- Eisenstein, D. J., et al. 2011, AJ, 142, 72, SDSS-III: Massive Spectroscopic Surveys of the Distant Universe, the Milky Way, and Extra-Solar Planetary Systems
- Aihara, H., et al. 2011, ApJS, 193, 29, The Eighth Data Release of the Sloan Digital Sky Survey: First Data from SDSS-III
- Lee, B. L., et al. 2011, ApJ, 728, 32, MARVELS-1b: A Short-period, Brown Dwarf Desert Candidate from the SDSS-III Marvells Planet Search
- Wright, J. T., et al. 2009, ApJ, 699, L97, A Third Giant Planet Orbiting HIP 14810

CONFERENCE
PROCEEDINGS

- Wang, J.**, Mawet, D., Renyu, Hu, & Benneke, B. 2016, Proc. SPIE, 9911, High-contrast imaging and high-resolution spectroscopy observation of exoplanets
- Ge, J., et al. 2012, Proc. SPIE, 8446, Design and performance of a new generation, compact, low cost, very high Doppler precision and resolution optical spectrograph
- Ge, J., et al. 2012, Proc. SPIE, 8446, High resolution Florida IR silicon immersion grating spectrometer and an M dwarf planet survey
- Zhao, B., Ge, J., Nguyen, D. C., **Wang, J.**, & Groot, J. 2010, Proc. SPIE, 7735, Design of a near-IR Doppler instrument for planet searches
- Ge, J., et al. 2010, Proc. SPIE, 7735, Design, performance, and early results from extremely high Doppler precision instruments in a global network
- Wang, J.**, Wan, X., & Ge, J. C. 2010, Proc. SPIE, 7734, Development of Monolithic Michelson Interferometer for RV measurement in IR
- Ge, J., et al. 2009, Proc. SPIE, 7440, A new generation multi-object Doppler instrument for the SDSS-III Multi-object APO Radial Velocity Exoplanet Large-area Survey

HONORS AND
AWARDS

- Yale Department Travel Fund Award, Aug, 2014
- Postdoctoral Scholars Travel Fund Award, Feb, 2014
- Graduate Travel Award, Dec, 2011
- Architect for MARVELS in SDSS III, May, 2011
- First Place for Poster Presentation in Probing the Diversity of Brown Dwarfs and Exoplanets Conference in Shanghai, China, Jul, 2008
- Good Student Award, University of Florida Jan, 2007
- Outstanding Student Scholarship, USTC Oct, 2005
- Outstanding Student Scholarship, USTC Oct, 2004
- Outstanding Student Scholarship, USTC Oct, 2003

INVITED TALKS

- "Searching Exoplanets in Habitable Zone Around Low Mass Stars", AAPT Winter Meeting, Jacksonville, FL, Jan, 2011
- "Advancing Our Knowledge of Planets in the Habitable Zone and Beyond", Exoplanet Talk, Princeton University, Nov, 2013
- "Stellar Multiplicity Influence on Planet Formation", seminar talk, Center for Exoplanets and Habitable Worlds, PSU, April 2014
- "Planets in Binary Stars", invited talk, CT Exoplanet Picnic, Wesleyan University, May 2014
- "Advancing Our Knowledge of Planets in the Habitable Zone and Beyond", Colloquium Talk, IPAC, California Institute of Technology, Jul 2014
- "Stellar Influence On Planet Formation", Connecticut Star Party, Ashford CT, Sep 2014
- "Planet Formation In Different Environments", Colloquium Talk, Wesleyan University, Nov 2014
- "Planet Formation Under Different Environments", Colloquium Talk, Wesleyan University, Nov 2014
- "Planet Formation Under Different Environments", Seminar Talk, Tsinghua University, Mar 2014
- "Planet Formation Under Different Environments", Seminar Talk, Yale Center for Astronomy and Astrophysics, Yale University, Mar 2014
- "Planet Formation Under Different Environments", Lunch Talk, The Carnegie Observatories, Mar 2014
- "Planet Formation Under Different Environments", Colloquium Talk, UCLA, Apr 2014
- "High-Contrast Imaging and High-Resolution Spectroscopy Observation of Exoplanets",

LUVOIR seminar Talk, Oct 2016
"Where and How to Find Habitable Planets", Colloquium Talk, IfA, University of Hawaii, Feb, 2017
"The New Frontier of Exoplanetary Science: High Dispersion Coronagraphy (HDC)", Colloquium Talk, IfA, University of Hawaii, Feb, 2017

OTHER TALKS "Development of A Monolithic Interferometer For Precise Radial Velocity Measurement", Flash Talk, University of Arizona, May, 2008
"Searching For Planets Around M Dwarfs Using the Radial Velocity Technique", AAS 219th Meeting, Austin, TX, Jan, 2012 "Advancing Our Knowledge of Planets in the Habitable Zone and Beyond", Special Colloquium Talk, University of Florida, Nov, 2013
"Revealing A Universal Planet-Metallicity Correlation", Oral presentation, AAS 223rd Meeting, National Harbor, Maryland, Jan 2014
"Advancing Our Knowledge of Planets in the Habitable Zone and Beyond", special seminar, University of Pennsylvania, April 2014
"Advancing Our Knowledge of Planets in the Habitable Zone and Beyond", Special Seminar Talk, UC Berkeley, Aug 2014
"Putting An End to Twinkling Litter Stars", Astro on Tap, New Haven CT, Sep 2014
"Planets in Binary Stars", Keck Science Meeting, California Institute of Technology, Oct 2014
"Planet Formation Under Different Environments", Lunch Talk, Kavli Institute for Astronomy and Astrophysics, Peking University, Mar 2014
"Planet Formation Under Different Environments", Lunch Talk, IPAC, Jun 2015

COMMUNITY SERVICES Reviewer for ApJ, ApJL, AJ, A&A, MNRAS, and Nature
Reviewer for the NASA Maturation of Instruments for Solar System Exploration (MatisSE) Program
Reviewer for the Swiss National Science Foundation
Member of admission committee at Yale University
Connecticut Star Party, Ashford, CT, Sep, 2014
Venus Transit Event, Gainesville, FL, Jun 2012
Wiles Science Symposium, Gainesville, FL, May 2010
Mercury Transit Event, Gainesville, FL, Nov 2006
Stars Shine on East Gainesville, FL, Sep 2006 and Oct 2010
Volunteer in Teaching Observatory at the University of Florida, Gainesville, 2006-2012

MEDIA COVERAGE USA Today: Volunteers spot jumbo planet in star's 'habitable zone'
NBC: NASA's Kepler mission uncovers 461 more potential planets to check out
LA Times: Kepler data point to more planets in habitable zone
Telegraph: Moons rather than planets are the best place to find aliens
SDSS Blog: Ji Wang: A Rising Star in the Search for Exoplanets
BBC: Seven-planet solar system found

TEACHING EXPERIENCE 2007-2009, Astro 1022L, Introduction to Astronomy, University of Florida

STUDENTS MENTOR Joseph Schmitt, graduate student, Yale University, 2012-2015
Lamiya Mowla, graduate student, Yale University, 2014-2015
Alyssa Picard, undergraduate student, Yale University, 2012-2015

Cory Combs, undergraduate student, Yale University, 2012-2015
Charles Margossian, undergraduate student, Yale University, 2013-

REFERENCES
AVAILABLE TO
CONTACT

Prof. Jian Ge (e-mail: jge@astro.ufl.edu; phone: +1-352-294-1850)

- Professor, Astronomy, University of Florida
- *Prof. Ge is my Ph.D. adviser.*

Prof. Debra Fischer (e-mail: debra.fischer@yale.edu; phone: +1-203-432-1613)

- Professor, Astronomy
Yale University
- *Prof. Fischer is my postdoc mentor.*

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California Institute of Technology
- *Prof. Mawet is my postdoc mentor.*

Prof. Eric B. Ford (e-mail: ericbford@gmail.com; phone: +1-814-863-5558)

- Professor, Astronomy
The Pennsylvania State University
- *Prof. Ford is my Ph.D. co-adviser and collaborator.*

Prof. Justin R. Crepp (e-mail: jcrepp@nd.edu; phone: +1-574-631-4092)

- Professor, Astronomy
University of Notre Dame
- *Prof. Crepp is my collaborator.*