

Songhu Wang, Ph.D.

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EDUCATION

NANJING UNIVERSITY, China
Ph.D. in Astronomy, 2016
Thesis: *CSTAR Exoplanet Detection and Transiting Exoplanet Follow-up Research*
Advisor: Ji-Lin Zhou

LANZHOU UNIVERSITY, China
B.S. in Physics, 2008

APPOINTMENTS

YALE UNIVERSITY, New Haven, CT 51 Pegasi b Fellow	2017 – Present
YALE UNIVERSITY, New Haven, CT Postdoctoral Research Associate	2016 – 2017
UNIVERSITY OF CALIFORNIA, Santa Cruz, CA China Scholarship Council Fellow	2014 – 2016

FELLOWSHIPS & AWARDS

- 51 Pegasi b Fellowship, 2017
- Nanjing University Outstanding Ph.D. Graduate Award, 2016
- China Scholarship Council Fellowship, 2014-2016
- Nanjing University Communications Holding Award (Outstanding Award), 2015
- Nanjing University Presidential Award, 2014

OBSERVING PROGRAMS

- Keck I, HIRESr, Do Multi-planet Systems Share Alignment with Their Parent Stars?, 2018A, 1 night, PI
- Keck I, HIRESr, Measuring the Spin-Orbit Alignment of a Multi-Planet System, 2017A, 1 night, PI
- SMARTS, CHIRON, Characterizing Hot Jupiters of the Southern Hemisphere, 2018A, 60 hours, PI
- SMARTS, CHIRON, Characterizing Hot Jupiters of the Southern Hemisphere, 2017B, 30 hours, PI
- Palomar Hale, WIRC, Assessing the Habitability of Trappist-1 Multiple-planet System, 2017B, 11 night, PI
- The Transiting Exoplanet Monitoring Project, 4*1m telescopes, 2014-Present, 200 nights/year, PI
- The Lick-Carnegie Exoplanet Survey, 2.4m Automated Planet Finder, 2014-Present, 140 nights/year, Co-I
- The Anglo-Australia Planet Search Program, 3.9m Anglo-Australia telescope, 2012A, 9 nights, Co-I

PUBLICATIONS (9 First Author, 6 Second Author, 22 Total)

First Author:

- *Transiting Exoplanet Monitoring Project (TEMP). I. Refined System Parameters and Transit Timing Variations of HAT-P-29b*
Songhu Wang, Yong-Hao Wang, Xiaojia Zhang et al. 2018, **The Astronomical Journal**, Under Review
- *Updated Masses for the TRAPPIST-1 Planet*
Songhu Wang, Dong-Hong Wu, Thomas Barclay, and Gregory Laughlin 2018, **The Astrophysical Journal Letter**, Under Review; arXiv:1704.04290
- *Transiting Exoplanet Monitoring Project (TEMP). III. On the Relocation of the Kepler-9~b Transit*

Songhu Wang, Dong-Hong Wu, Brett Addison et al. 2018, **The Astronomical Journal**, Accepted

- *Stellar Spin-Orbit Alignment for Kepler-9, a Multi-transiting Planetary System with Two Outer Planets Near 2:1 Resonance*

Songhu Wang, Brett Addison, Debra Fischer et al. 2018, **The Astronomical Journal**, Accepted

- *RV-detected Kepler-multi Analogs Exhibit Intra-system Mass Uniformity*

Songhu Wang 2017, **The Research Note of the American Astronomical Society**, 1, 26

- *Photometric Variability in the CSTAR Field: Results from the 2008 Data Set*

Songhu Wang, Hui Zhang, Xu Zhou et al. 2015, **The Astrophysical Journal Supplement**, 218, 20

- *Planetary Transit Candidates in the CSTAR Field: Analysis of the 2008 Data Set*

Songhu Wang, Hui Zhang, Ji-Lin Zhou et al. 2014, **The Astrophysical Journal Supplement**, 211, 26

- *The Correction of Diurnal Effects on CSTAR Photometry*

Songhu Wang, Xu Zhou, Hui Zhang et al. 2014, **Research in Astronomy and Astrophysics**, 14, 345

- *The Inhomogeneous Effect of Cloud on CSTAR Photometry and Its Correction*

Songhu Wang, Xu Zhou, Hui Zhang et al. 2012, **The Publications of the Astronomical Society of the Pacific**, 124, 1167

Second Author:

- *Transiting Exoplanet Monitoring Project (TEMP). V. Refined System Parameters and Transit Timing Variations of HAT-P-25b*

Xian-Yu Wang, **Songhu Wang**, Tobias Hinse, et al. 2017, **The Astronomical Journal**, Under Review

- *Kepler Multi-Planet Systems Exhibit Unexpected Intra-system Uniformity in Mass and Radius*

Sarah Millholland, **Songhu Wang**, Gregory Laughlin 2017, **The Astrophysical Journal Letters**, 849, 33

- *Transiting Exoplanet Monitoring Project (TEMP). II. Refined System Parameters and Transit Timing Variations of HAT-P-33b*

Yong-Hao Wang, **Songhu Wang**, Hui-Gen Liu et al. 2017, **The Astronomical Journal**, 154, 49

- *Stellar Flares in the CSTAR Field. Results from the 2008 Data Set*

En-Si Liang, **Songhu Wang**, Ji-Lin Zhou et al. 2016, **The Astronomical Journal**, 152, 168

- *On the Detection of Non-transiting Hot Jupiters in Multiple-Planet System*

Sarah Millholland, **Songhu Wang**, Gregory Laughlin 2016, **The Astrophysical Journal Letters**, 823, 7

- *Forever Alone? Testing Single Eccentric Planetary Systems for Multiple Companions*

Robert A. Wittenmyer, **Songhu Wang**, Jonathan Horner et al. 2013, **The Astrophysical Journal Supplement**, 208, 2

Contributing Author:

- *Detecting Habitable Planets in Multi-planet Systems via High Precision Astrometry*

Zhou-Yi Yu, Hui-Gen Liu, Dong-Hong Wu, **Songhu Wang**, et al. 2017, **Research in Astronomy and Astrophysics**, Under Review

- *The Study of Galactic Disk Kinematics with SCUSS and SDSS Data*

Xiyan Peng, Zhenyu Wu, Zhaoxiang Qi, and 5 coauthors including **Songhu Wang**, 2017, **The Monthly Notices of the Royal Astronomical Society**, Under Review

- *The Lick-Carnegie Exoplanet Survey: HD32963 - A New Jupiter Analog Orbiting A Sun-Like Star*

Dominick Rowan, Stefano Meschiari, Gregory Laughlin, and 9 coauthors including **Songhu Wang**, 2016, **The Astrophysical Journal**, 817, 104

- *A Six-Planet System Orbiting HD 219134*

Steven S. Vogt, Jennifer Burt, Stefano Meschiari, and 10 coauthors including **Songhu Wang**, 2015, **The Astrophysical Journal**, 814, 12

- *Eclipsing Binaries From the CSTAR Project at Dome A, Antarctica*

Ming Yang, Hui Zhang, **Songhu Wang** et al. 2015, **The Astrophysical Journal Supplement**, 217, 28

- *An Investigation of the Absolute Proper Motions of the SCUSS Catalog*

Xiyan Peng, Zhaoxiang Qi, Zhenyu Wu, and 21 coauthors including **Songhu Wang**, 2015, **The Publications of the Astronomical Society of the Pacific**, 127, 250

- *Ghost Image Correction in CSTAR Photometry*

Zeyang Meng, Xu Zhou, Hui Zhang, and 6 coauthors including **Songhu Wang**, 2013, **The Publications of the Astronomical Society of the Pacific**, 125, 1105

SELECTED TALKS AND CONFERENCES

- Invited Colloquium, Yale, New Haven, May. 2018 (Scheduled)
Characterizing the Galactic Planetary Census
- Invited Seminar, Williams Collage, Massachusetts, Jan. 2018 (Scheduled)
The Solar system in context of Exoplanetary systems
- Invited Seminar, Nanjing University, Nanjing, China, Dec. 2017
Origin of Exoplanetes
- Invited Colloquium, Purple Mountain Observatory, Nanjing, China, Dec. 2017
Placing Solar System into Galactic Planetary Census
- Invited Colloquium, National Astronomical Observatories of China (NAOC), Beijing, China, Dec. 2017
Understanding Planet Formation with Telescopes sized from 10cm to 10m
- Invited talk, Tsing Hua University, Beijing, China, Dec. 2017
Planets Know about Each other
- Lunch talk, The Kavli Institute for Astronomy and Astrophysics (KIAA), Beijing, China, Dec. 2017
Probing the Copernican Principle: Are We Special?
- Conference talk, T.D.Lee institute (TDLI), Shanghai, China, Dec. 2017
A New Look at an Old Classic: Kepler-9's Obliquity, Masses, and Resonant Properties
- Invited talk in WIRC+Pol/Spec progress meeting, Caltech, Pasadena, Aug. 2017
Transit Timing Variations
- Invited talk for ELS Community, New Haven, Aug. 2017
The Search for Alien Life
- Symposium talk, Heising-Simons Foundation, Los Altos, Aug. 2017
The Search for New Worlds
- Invited talk in Yale Society of Physics Students, Yale, New Haven, Jul. 2017
Solar System and Beyond
- Invited talk in Hartness Workshop, Hartness House Inn, Vermont, Jul. 2017
Finding Exoplanets with Small Telescopes
- Kepler Conference talk, NASA Ames, Pasadena, Jun. 2017
Updated Masses for Trappist-1 Planets with K2
- ERES Conference talk, Yale, New Haven, Jun. 2017
From K2 to K2
- Invited talk in Connecticut Exoplanet Picnic, Wesleyan University, May. 2017
Transit and Transit Timing Variations
- Pop talk in Northeast Astronomy Postdoc Retreat, Columbia University, New York, Mar. 2017
Mass vs Period
- Symposium talk, University of Bern, Switzerland, Feb. 2016
Multifaceted Exoplanet Detection
- 3 Seminar talks, ETH Zurich, University of Zurich, Geneva Observatory, Switzerland, Feb. 2016
Multifaceted Exoplanet Detection
- 1 Pops talk and 2 Posters, Sagan Exoplanet workshop, Caltech, Jul. 2015
Time-domain Astronomy with the Chinese Small Telescope ARray
Photometric Follow-up Observations of Transiting Hot Jupiter HAT-P-29
- Seminar talk, Xinjiang Observatory, China, Jan. 2014
Detection and Study of Exoplanets
- Seminar talk, Three Dimensional Structure of the Milky Way Group, NAOC, China, Dec. 2013
Search for Stellar Flares in the Kepler Light Curves
- Seminar talk, BATC group, NAOC, China, Dec. 2013
Detection and Characterization of Exoplanets
- Conference talk, Nanjing University, China, Oct. 2013
Exoplanet Candidates in the CSTAR Field
- Conference talk, Tsinghua University, China, Sep. 2013
Exoplanet Detection with CSTAR
- Workshop talk, NAOC, China, Nov. 2012

AST3 Transit Survey Pipeline

- Poster, ASA Annual Scientific Meeting, UNSW, Australia, Jun. 2012
The Inhomogeneous Effect of Cloud on CSTAR Photometry
- Workshop talk, Observational Astronomy Summer School, KIAA, China, Oct. 2011
High Precision Differential Photometry of the WASP-33b Using the BATC Telescope

STUDENTS AND POSTDOCS MENTORING

- Pia Cortes-Zuleta, Master student, University of Chile, 2018 (Scheduled)
- Trustin Henderson, 1st year undergraduate student, Yale, 2017-Present
- Xian-Yu Wang, 4th year undergraduate student, Shandong University, 2016 – Present
- Dong-Hong Wu, 5th year graduate student, Nanjing University, 2016-Present
- Yong-Hao Wang, 5th year graduate student, National Astronomical Observatory of China, 2014-Present
- En-Si Liang, 5th year graduate student, Nanjing University, 2014-2016
- Zhou-Yi Yu, 5th year graduate student, Nanjing University, 2014-2016