Xian-Yu Wang

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CURRENT POSITION

Indiana University — Bloomington, IN
Postdoctoral Research Associate — Feb. 2023 - present

EDUCATION

University of Chinese Academy of Sciences (UCAS) — Beijing, China
National Astronomical Observatories, Chinese Academy of Sciences (NAOC)
Ph.D in Astrophysics — Jan. 2023
Thesis: *Study of exoplanets based on high-precision photometric and spectroscopic observations*
Advisor: Zhen-Yu Wu

Shandong University — Weihai, Shandong, China
B.S in Space Science and Technology — Jun. 2018

AWARDS

2023 UCAS Outstanding Ph.D. Graduate Award
2023 Beijing Outstanding Ph.D. Graduate Award
2023 **National Scholarship**
Highest scholarship given by Ministry of Education of the People's Republic of China
2022 **Joint PhD Training Program Scholarship, UCAS**
Scholarship provided by UCAS to fund a year-long visit to Indiana University
2021 **Pacemaker to Merit Student, NAOC** Top 1%
2019 **Excellent Student Leader, NAOC**
2019 **Merit Student, NAOC** Top 20%
2018 **National Astronomical Observatory Scholarship**
Scholarship for outstanding undergrads in astronomy research
2018 **Outstanding Undergraduate Thesis Award**
2015-18 **Academic Scholarship** Undergraduate scholarship program at the Shandong University

OBSERVING PROGRAMS

TNG, HARPS-N, 2023B, 1 nights, Co-I: HD 80606 b's Spin-Orbit Misalignment Revisited
WIYN, NEID, 2022B, 5 nights, Co-I: Probing Stellar Obliquities with NEID
LCOGT-1m, 2020A, 30 hours, PI, Photometric Follow-Up of Apparent Decaying Orbital WASP-12 b
LCOGT-1m, 2021A, 30 hours, PI, Understanding the shortening period of WASP-12 system

STUDENTS MENTORING

Undergraduate:

* Jace Rusznak (third-year undergraduate student at Indiana University) — 2023 - present

Graduate:

* Jiamei Yang (now PhD Candidate at Beijing Normal University) — 2021

* Emma Dugan (first-year graduate student at Indiana University) 2023 - present
  co-supervised with Songhu Wang

PUBLICATIONS (5 First Author, 6 Second Author, 26 in total, H index=12, Citations=454)

First Author:

* *Single-Star Warm-Jupiter Systems Tend to Be Aligned, Even Around Hot Stellar Hosts: No $T_{\rm eff}$ -λ Dependency*
  Xian-Yu Wang, Malena Rice, Songhu Wang, et al. 2024, **The Astrophysical Journal Letters**, accepted
* *The Aligned Orbit of WASP-148b, the Only Known Hot Jupiter with a Nearby Warm Jupiter Companion, from NEID and HIRES*
  Xian-Yu Wang, Malena Rice, Songhu Wang, et al. 2022, **The Astrophysical Journal Letters**, 926, L8
* *Transiting Exoplanet Monitoring Project (TEMP). VI. The Homogeneous Refinement of System Parameters for 39 Transiting Hot Jupiters with 127 New Light Curves*
  Xian-Yu Wang, Yong-Hao Wang, Songhu Wang, et al. 2021, **The Astrophysical Journal Supplement Series**, 255, 15
* *Transiting Exoplanet Monitoring Project (TEMP). IV. Refined System Parameters, Transit Timing Variations and Orbital Stability of the Transiting Planetary System HAT-P-25*
  Xian-Yu Wang, Songhu Wang, Tobias Hinse, et al. 2018, **The Pulications of the Astronomical Society of the Pacific**, 130, 064401
* *New analysis of the fraction of observable nights at astronomical sites based on FengYun-2 satellite data*
  Xian-Yu Wang, Zhen-Yu Wu, Jing Liu, et al. 2022, **Monthly Notices of the Royal Astronomical Society**, 511, 4

Second Author:

* *The SNR of idealised radial velocity signals*
  David Kipping & **Xian-Yu Wang**. 2024, **Monthly Notices of the Royal Astronomical Society**, 532, 604
* *TOI-1670 c, a 40 day Orbital Period Warm Jupiter in a Compact System, Is Well Aligned*
  Jack Lubin, **Xian-Yu Wang**, Malena Rice, et al. 2023, **The Astrophysical Journal Letters**, 295, 5
* *Evidence for Low-Level Dynamical Excitation in Near-Resonant Exoplanet Systems*
  Malena Rice, **Xian-Yu Wang**, Songhu Wang, et al. 2023, **The Astronomical Journal**, 166, 266
* *The Spin-Orbit Misalignment of TOI-1842b: The First Measurement of the Rossiter-McLaughlin Effect for a Warm Sub-Saturn around a Massive Star*
  Kyle Hixenbaugh, **Xian-Yu Wang**, Malena Rice, Songhu Wang, 2023, **The Astrophysical Journal Letters**, 949, 35
* *Photometric follow-up observations and transit timing analysis of HAT-P-37b*
  Jia-Mei Yang, **Xian-Yu Wang**, Kai Li, et al. 2021, **Publications of the Astronomical Society of Japan**, 73, 1010
* *Transiting Exoplanet Monitoring Project (TEMP). I. Refined System Parameters and Transit variations of HAT-P-29*
  Songhu Wang, **Xian-Yu Wang**, Yong-Hao Wang, et al. 2018, **The Astronomical Journal**, 156, 181

Contributing Author:

* *SOLES XII. The Aligned Orbit of TOI-2533 b, a Transiting Brown Dwarf Orbiting an F8-type Star*
  Thiago Ferreira, Malena Rice, **Xian-Yu Wang**, Songhu Wang, 2024, **The Astronomical Journal**, accepted
* *Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Sub-Saturn Systems* Brandon T. Radzom, Jiayin Dong, Malena Rice, **Xian-Yu Wang**, et al 2024, **The Astronomical Journal**, 168 116

* *The PFS view of TOI-677 b: A spin-orbit aligned warm Jupiter in a dynamically hot system*
Qingru Hu, Malena Rice, **Xian-Yu Wang**, et al 2024, **The Astronomical Journal**, 167, 175

* *The GAPS Programme at TNG L – TOI-4515 b: An eccentric warm Jupiter orbiting a 1.2 Gyr-old G-star* I. Carleo, L. Malavolta, S. Desidera, and 68 coauthors including **Xian-Yu Wang**, 2023, **Astronomy & Astrophysics**, 682, 138

* *SOLES VII: The Spin-Orbit Alignment of WASP-106 b, a Warm Jupiter Along the Kraft Break*
Josette Wright, Malena Rice, **Xian-Yu Wang**, et al 2023, **The Astronomical Journal**, 166, 217

* *The Orbital Architecture of Qatar-6: A Fully Aligned Three-body System?*
Malena Rice, Songhu Wang, Konstantin Gerbig, and 5 coauthors including **Xian-Yu Wang**, 2023, **The Astronomical Journal**, 165, 65

* *TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain*
Fei Dai, Kento Masuda, Corey Beard and 60 coauthors including **Xian-Yu Wang**, 2023, **The Astronomical Journal**, 165, 33

* *A Tendency Toward Alignment in Single-star Warm-Jupiter Systems*
Malena Rice, Songhu Wang, **Xian-Yu Wang** et al. 2022, **The Astronomical Journal**, 164, 104

* *Revisiting the Full Sets of Orbital Parameters for the XO-3 System: No evidence for Temporal Variation of the Spin-Orbit Angle*
Keduse Worku, Songhu Wang, Jennifer Burt, and 14 coauthors including **Xian-Yu Wang**, 2022, **The Astronomical Journal**, 163, 158

* *SOLES I: The Spin–Orbit Alignment of K2-140 b*
Malena Rice, Songhu Wang, Andrew W. Howard, and 8 coauthors including **Xian-Yu Wang**, 2021, **The Astronomical Journal**, 162, 182

* *The Aligned Orbit of the Eccentric Warm Jupiter K2-232b*
Songhu Wang, Joshua N. Winn, Brett C. Addison, and 8 coauthors including **Xian-Yu Wang**, 2021, **The Astronomical Journal**, 162, 50

* *The Youngest Planet to Have a Spin-Orbit Alignment Measurement AU Mic b*
Brett C. Addison, Jonathan Horner, Brett C. Addison, and 8 coauthors including **Xian-Yu Wang**, 2021, **The Astronomical Journal**, 162, 50

* *TOI 564 b and TOI 905 b: Grazing and Fully Transiting Hot Jupiters Discovered by TESS*
Allen B. Davis, Songhu Wang, Matias Jones, and 54 coauthors including **Xian-Yu Wang**, 2020, **The Astronomical Journal**, 160, 229

* *HD 202772A b: A Transiting Hot Jupiter Around a Bright, Mildly Evolved Star in Discovered by TESS*
Songhu Wang, Matias Jones, Avi Shporer, and 57 coauthors including **Xian-Yu Wang**, 2018, **The Astronomical Journal**, 157, 51

* *A possible giant planet orbiting the cataclysmic variable LX Ser*
Li Kai, Hu Shaoming, Zhou Jilin and 6 coauthors including **Xian-Yu Wang**, 2017, **Publications of the Astronomical Society of Japan**, 69, 28

SELECTED TALKS AND CONFERENCES

Conference Talks:

* Warm Jupiters Tend to Be Aligned, Even Around Hot Stars,
TESS Science Conference III (plenary talk), MIT — Aug. 2024

* Warm Jupiters Tend to Be Aligned, Even Around Hot Stars,
Emerging Researchers in Exoplanet Science Symposium IX, Cornell University — Jul. 2024

* Tri-Angles: 0°, 90°, 180° — Hot Jupiters' Signature Spin-Orbit Angles, Exoplanet V,
Netherland — Jun. 2024

* Violence or Quiescence Probing Hot Jupiters' Migration Theories Using Photometric and Spectroscopic Observations, AAS 243 (thesis talk), New Orleans Jan. 2024
* Asia Oceania Geosciences Society (AOGS) Annual Meeting, Observational and Theoretical Aspects of Exoplanets, Singapore Aug. 2023
  3D Configuration of a Compact Multi-giant System Lying at the Stability Boundary
* Emerging Researchers in Exoplanet Science VII, The Pennsylvania State University Aug. 2022
  The Aligned Orbit of WASP-148b and the statistic implications from the distribution of stellar sky-projected obliquities
* Annual Conference of the Chinese Astronomical Society, Nanchong, China Dec. 2021
  Transiting Exoplanet Monitoring Project (TEMP)
* Annual Conference of the Chinese Astronomical Society, Nanchong, China Dec. 2021
  The Aligned Orbit of WASP-148b
* Lunch Talk, Indiana University Bloomington Sep. 2022
  Exoplanet characterization by photometric and spectroscopic observations
* Lunch talk, South-Western Institute For Astronomy Research, Kunming, China Mar. 2022
  Exoplanet characterization by photometry and spectroscopy

Conference Posters:

* Poster, Emerging Researchers in Exoplanet Science Symposium VIII, New Heaven (Scheduled) Jun. 2023
  Homogeneous Studies on the Stellar Obliquities
* Poster, 54th Division on Dynamical Astronomy, Michigan May. 2023
  3D configuration of a compact multi-giant system lying at the stability boundary

OUTREACH

* **Donation Organizer** organized a successful donation drive, providing 200+ astronomy books to underprivileged students in rural areas. Jun. 2021
* **Member of the Graduate Student Council** 2021
  organized communication activities between graduate students of National Astronomical Observatory of China and Beijing Institute of Genomics

TEACHING

Indiana University Bloomington

* AST-A 100 The Solar System 2024

Indiana University Bloomington

* AST-A 100 The Solar System 2023

University of Chinese Academy of Sciences

* Stellar Structure and Evolution, Teaching assistance 2019

Shandong University

* Optics, Teaching assistance 2015