Weicheng Zang

Personal Information

CfA Postdoctoral Fellow	Phone: +1 857 285 0649
Center for Astrophysics	Orcid: 0000-0001-6000-3463
Harvard & Smithsonian	Email: weicheng.zang@cfa.harvard.edu
Cambridge, MA 02138	3130102785@zju.edu.cn

Education

2017.08 – 2022.06	PhD in Astronomy, Tsinghua University, Beijing, China
	Thesis: Detecting Exotrasolar Planets with Microlensing
	Advisor: Prof. Shude Mao
2013.08 – 2017.06	BS in Physics, Zhejiang University, Hangzhou, China

Professional Appointments

2022.11 – 2026.10	**CfA Postdoctoral Fellow**, Center for Astrophysics, | Harvard & Smithsonian

Research Interests

Gravitational microlensing: Using the Gravitational microlensing technique to study extrasolar planets, binary stars and stellar remnants (e.g., black hole).

Membership

The Roman Galactic Exoplanet Survey Project Infrastructure Team	co-I
The Earth 2.0 microlensing project	PI
The LCOGT key project for high-magnification micorlensing events	co-PI
The CFHT microlensing survey	PI
The KMTNet microlensing survey	co-I
The *Spitzer* microlensing project	co-I

Fellowship & Awards

2022	CfA Fellowship
2022	51 Pegasi b Postdoctoral Fellowship (declined)
2021	Tsinghua University Special Scholarship (the highest in Tsinghua, 10 every year)
2018, 2019	China National Scholarship, Tsinghua University

2015	China National Scholarship, Zhejiang University
2017, 2018, 2020	First Prize in AMD Scholarship, Tsinghua University

Observing Experience (as PI or co-PI)

CFHT (55.7 hrs in total)	22.0 hrs in 2018A, 6.4 hrs in 2018B, 5.5 hrs in 2020A, 4.1 hrs in 2021B 11.7 hrs in 2022A, 6.0 hrs in 2022B
LCOGT (943 hrs in total)	48 hrs in 2017B, 40 hrs in 2018A, 50 hrs in 2018B, 60 hrs in 2019A, 60 hrs in 2019B, 60 hrs in 2020A, 150 hrs in 2020B, 100 hrs in 2021A, 85 hrs in 2021B, 220 hrs in 2022A, 100 hrs in 2022B, 190 hrs in 2023A

Students Advised

1. **Hanyue Wang**, Harvard University, undergraduate, 2021 Summer
   Paper: Wang, H., **Zang, W.**, Zhu, W., et al., 2022, MNRAS, 510, 1778
2. **Aislyn Bell**, University of Colorado Boulder, undergraduate, 2023–now
3. **Xiangyu Zhang**, Tsinghua University, undergraduate, 2018–2020
   Paper: Zhang, X., **Zang, W.**, Udalski, A., et al., 2020, AJ, 159, 116
4. **Jiyuan Zhang**, Tsinghua University, PhD student, 2021–now
   Paper: Zhang, J., **Zang, W.**, Jung, Y., et al. 2023, MNRAS 522, 6055
5. **Hongjing Yang**, Xiamen University, undergraduate, 2019 Spring
   Paper: Yang, H., Zhang, X., Hwang, K., **Zang, W.**, et al., 2020, AJ, 159, 98
6. **Yunyi Tang**, Tsinghua University, undergraduate, 2022–now
7. **Ruocheng Zhai**, Tsinghua University, undergraduate, 2022–now
8. **Yuqian Gui**, Tsinghua University, undergraduate, 2022–now
9. **Qiyue Qian**, Tsinghua University, PhD student, 2023–now
10. **Shi Yan**, Nankai University, undergraduate, 2022 Spring

Publication List

129 papers including: 9 first-author, 14 second-author, and 6 third-author; 1500+ total citations; h-index = 21; Full list: ADS Link

First-Author; ADS Link

1. **Zang, W.**, Jung, Y., Yang H., et al. *Systematic KMTNet Planetary Anomaly Search, Paper VII: Complete Sample of $q < 10^{-4}$ Planets from the First 4 yr Survey*, 2023, AJ, 165, 103
2. **Zang, W.**, Yang H., Han, C., et al., *Systematic KMTNet Planetary Anomaly Search. IV. Completed Statistical Sample of 2019 KMTNet Prime-Field Microlensing Planets*, 2022, MNRAS, 515, 928
3. **Zang, W.**, Shvartzvald, Y., Udalski, A., et al., *OGLE-2018-BLG-0799Lb: a $q \sim 2.7 \times 10^{-3}$ planet with Spitzer parallax*, 2022, MNRAS, 514, 5952
4. **Zang, W.**, Han, C., Konda, I., et al., *An Earth-mass planet in a time of Covid-19: KMT-2020-BLG-0414Lb*, 2021, RAA, 21, 239
5. **Zang, W.**, Hwang, K., Udalski, A., et al., *Systematic KMTNet Planetary Anomaly Search, Paper I: OGLE-2019-BLG-1053Lb, A Buried Terrestrial Planet*, 2021, AJ, 162, 163
6. **Zang, W.**, Dong, S., Gould, A., et al., *Spitzer + VLTI-GRAVITY Measure the Lens Mass of a Nearby Microlensing Event*, 2020, ApJ, 897, 180
7. **Zang, W.**, Shvartzvald, Y., Udalski, A., et al., *Spitzer Microlensing Parallax Reveals Two Isolated Stars in the Galactic Bulge*, 2020 ApJ, 891, 3
8. **Zang, W.**, Hwang, K., Kim, H., et al., *KMT-2016-BLG-1397b: KMTNET-only Discovery of a Microlens Giant Planet*, 2018, AJ, 156, 236
9. **Zang, W.**, Penny, M., Zhu, W., et al., *Measurement of Source Star Colors with the K2C9-CFHT Multi-color Microlensing Survey*, 2018, PASP, 130, 104401

Second- or Third- Author including Corresponding Author (*); ADS Link

1. *Zhang, J., **Zang, W.**, Jung, Y., et al. *KMT-2022-BLG-0440Lb: A New $q < 10^{-4}$ Microlensing Planet with the Central-Resonant Caustic Degeneracy Broken*, 2023, MNRAS, 522, 6055
2. *Hwang, K., **Zang, W.**, Gould, A., et al., *Systematic KMTNet Planetary Anomaly Search, Paper II: Five New $q < 2 \times 10^{-4}$ Mass-ratio Planets*, 2022, AJ, 163, 43
3. *Yee, J., **Zang, W.**, Udalski, A., et al., *OGLE-2019-BLG-0960Lb: The Smallest Microlensing Planet*, 2021, AJ, 162, 180
4. *Gould, A., **Zang, W.**, Mao, S., Dong, S., *Masses for free-floating planets and dwarf planets*, 2021, RAA, 21, 133
5. *Zhang, X., **Zang, W.**, Udalski, A., et al., *OGLE-2015-BLG-1771Lb: A Microlens Planet Orbiting an Ultracool Dwarf?*, 2020, AJ, 159, 116
6. Jung, Y., **Zang, W.**, Wang, H., et al., *Systematic KMTNet Planetary Anomaly Search. VIII. Complete Sample of 2019 Subprime Field Planets*, 2023, AJ, 165, 226
7. Kuang, R., **Zang, W.**, Mao, S., et al. *Simulations of Triple Microlensing Events I: Detectability of a scaled Sun-Jupiter-Saturn System*, 2023, MNRAS, 520, 4540

8. Jung, Y., **Zang, W.**, Han, C., et al., *Systematic KMTNet Planetary Anomaly Search. VI. Complete Sample of 2018 Sub-Prime-Field Planets*, 2022, AJ, 164, 262
9. Yang, H., **Zang, W.**, Gould, A., et al., *KMT-2021-BLG-0171Lb and KMT-2021-BLG-1689Lb: Two Microlensing Planets in the KMTNet High-cadence Fields with Followup Observations*, 2022, MNRAS 516, 1894
10. Kuang, R., **Zang, W.**, Jung, Y., et al., *OGLE-2019-BLG-1470LABc: Another Microlensing Giant Planet in a Binary System*, 2022, MNRAS 516, 1704
11. Wang, H., **Zang, W.**, Zhu, W., et al., *Systematic Korea Microlensing Telescope Network planetary anomaly search - III. One wide-orbit planet and two stellar binaries*, 2022, MNRAS, 510, 1778
12. Li, S., **Zang, W.**, Udalski, A., et al., *OGLE-2017-BLG-1186: first application of asteroseismology and Gaussian processes to microlensing*, 2019, MNRAS, 488, 3308
13. Han, C., **Zang, W.**, Jung, Y., et al., *KMT-2021-BLG-1547Lb: Giant microlensing planet detected through a signal deformed by source binarity*, 2023, A&A, in press
14. Wen, Y., **Zang, W.**, Ma, B., *Towards Measuring Microlensing Event Rate in the Galactic Center: I. Events Detection from the UKIRT Microlensing Survey Data*, 2023, ApJS, in press
15. Shin, I., Yee, J., **Zang, W.**, et al., *Systematic KMTNet Planetary Anomaly Search. IX. Complete Sample of 2016 Prime-Field Planets*, 2023, AJ, 166, 104
16. Han, C., Lee, C., **Zang, W.**, et al., *KMT-2021-BLG-2010Lb, KMT-2022-BLG-0371Lb, and KMT-2022-BLG-1013Lb: Three microlensing planets detected via partially covered signals*, A&A, 674, 90
17. Gould, A., Han, C., **Zang, W.**, et al., *Systematic KMTNet planetary anomaly search. V. Complete sample of 2018 prime-field*, 2022, A&A , 664, 13
18. Yang, H., Mao, S., **Zang, W.**, Zhang, X., *Microlensing predictions: impact of Galactic disc dynamical models*, 2021, MNRAS, 502, 5631
19. Jung, Y., Udalski, A., **Zang, W.**, et al., *KMT-2019-BLG-0842Lb: A Cold Planet below the Uranus/Sun Mass Ratio*, 2020, AJ, 160, 255
20. Jung, Y., Gould, A., **Zang, W.**, et al., *KMT-2017-BLG-0165Lb: A Super-Neptune-mass Planet Orbiting a Sun-like Host Star*, 2019, AJ, 157, 72

White Paper

1. Ge, J., Zhang H., **Zang, W.**, et al., *ET White Paper: To Find the First Earth 2.0*, arXiv:2206.06693

Conference Presentations & Seminars

Invited presentation	Roman RGES PIT Kick-Off Meeting, 10/2023

Invited presentation	UC Berkeley TAC Seminar, 03/2023
Invited presentation	Earth 2.0 Seminar, 08/2022
Invited presentation	The 6th Telescope Access Program (TAP) User Meeting, 12/2021
Invited presentation	The 5th Telescope Access Program (TAP) User Meeting, 01/2021
Invited presentation	Earth 2.0 Mission Science Discussion Meeting, 10/2020
Contributed presentation	CfA exoplanet seminar, 09/2023
Contributed presentation	Zhejiang University Special Seminar, 09/2023
Contributed presentation	OSU Exoplanet Group Meeting, 05/2023
Contributed presentation	The First workshop on time domain and lensing, 04/2023
Contributed presentation	The 7th Telescope Access Program (TAP) User Meeting, 12/2022
Contributed presentation	25th International Microlensing Conference, 09/2022
Contributed presentation	2021 Chinese Astronomical union conference 12/2021
Contributed presentation	ACAMAR: Future of Traditional Survey Science, 09/2021
Contributed presentation	2021 Chinese Planetary Science Conference, 06/2021
Contributed presentation	23rd International Microlensing Conference, 01/2019

Outreach and Service

Since 2017	Referee for AJ, ApJ, ApJS, MNRAS
Since 08/2023	Organizer for the CfA Exoplanet Pizza Lunch
Since 02/2023	Contributor for the CfA-Early Career Astronomers workshop
2021.12	Scientific organising committee and Session chair for 2021 Chinese Astronomical union conference
2021.9–2022.6	Scholarship Committee of Department of Astronomy, Tsinghua University

Teaching Experience

Teaching Assistant, The beauty of the universe, 2020 Fall and 2021 Fall

Teaching Assistant, Roaming in the intersection of physics and Astronomy, 2021 Spring