

## 研究方向

- 星系的形成与演化
- 观测宇宙学
- 强引力透镜
- 引力波

## 学历

- 2012.09 博士,  
—2017.06 北京师范大学, 北京  
导师: 朱宗宏教授
- 2015.09 研究生访问学者,  
—2017.03 加州大学, 洛杉矶分校 (UCLA)  
导师: Tommaso Treu 教授
- 2008.09 本科,  
—2012.06 湖南师范大学, 长沙

## 工作经历

- 2020.09 博士后 ([Kavli Fellow](#)),  
—至今 东京大学 Kavli IPMU (数物连携宇宙研究机构)
- 2018.09 博士后,  
—2020.08 加州大学洛杉矶分校 (UCLA), 物理与天文系
- 2017.06 博士后,  
—2018.09 武汉大学, 武汉大学物理科学与技术学院

## 学术活动 (部分)

- HST 项目 Identification of dual quasars with close separations at  $z > 1$   
项目编号 [Cycle30-GO-17143](#), 担任项目负责人 (PI)
- JWST 项目 A Complete Census of Supermassive Black Holes and Host Galaxies at  $z = 6$   
项目编号 [Cycle1-GO-1967](#), 担任项目联合负责人 ([Co-PI](#))  
负责处理高红移 ( $z \sim 6$ ) 处的类星体的观测数据
- 项目参与 [Subaru HSC science](#): 大视场星系数据处理与工具开发;  
[TDCOSMO](#) & [H0LiCOW](#): 强引力透镜时间延迟宇宙学
- 项目主导 [TDLMC](#): 强引力透镜时间延迟宇宙学精准度的透镜重构挑战
- 软件开发 [GaLight](#): 星系数据的 2D 图像自动化拟合处理工具
- 杂志审稿人 -The Astrophysical Journal;  
-Monthly Notices of the Royal Astronomical Society;  
-Astronomy & Astrophysics.

发表论文 从事科研工作至今共计公开发表 [SCI 论文 40 余篇](#)，其中包括一作文章 13 篇，自然通讯 2 篇。公开发表文章共计被引用 1,800 余次。

## 荣誉与获奖情况（部分）

- 博士后 2022 年荣获 JSPS Grant-in-Aid for Early-Career Scientists – 日本学术振兴会  
2020 年第一作者文章被选为 [AAS Nova research highlight](#) (2020/09/30) – 美国天文学会
- 研究生 2018 年北京师范大学优秀博士学位论文 (2018/12 月) – 北京师范大学  
2016 年青年天文学家学术论坛优秀报告一等奖 (2016/10/19) – 国家天文台科技处  
2015 年国家奖学金 (2015/12/31) – 中华人民共和国教育部  
2015 年国家公派奖学金 – 中国留学基金委  
2015 年度青年学者优秀论文二等奖 (2016/06/29) – 中国引力与相对论天体物理学会  
2015-16 年度学业一等奖学金 (2016/12/28) – 北京师范大学

## 专业能力

- 熟练 天文学观测数据处理，数据结构和算法，Python，MATLAB  
熟悉 Linux 系统操作，网页开发

## 科研指导

- 研究生: Shenli Tang, (2020-至今, Tokyo University): on HSC dual quasar searching and analysis  
Lilan Yang, (2018-2019, WHU): on strong lensed GW detection rate prediction  
Xianlong He, (2021-2022, WHU): on HST galaxy and strong lensing image data analysis
- 本科生: Changhao Chen, (2021-2022, USTC): on HST deep image of simulation

## 会议报告（部分）

- 2022 COSMOS2022,  
Institut d'Astrophysique de Paris, Paris, France
- 2021 SHAO Colloquium,  
Shanghai Astronomical Observatory, Shanghai, China
- 2021 WHU Colloquium,  
Wuhan University, Wuhan, China
- 2021 USTC Colloquium,  
Department of Astronomy - School of Physical Sciences, Hefei, China
- 2021 IPMU Colloquium,  
Kavli IPMU (remotely), Kashiwa, Japan
- 2019 Annual AGN-Starburst Meeting,  
National Astronomical Observatories of China, Guiyang, Guizhou
- 2019 Annual Galaxy evolution workshop,  
Kavli IPMU, Tokyo, Japan
- 2019 Lunch Seminar Talks,  
Kavli IPMU, Tokyo, Japan
- 2018 Annual Meeting of STRIDES/H0LiCOW,  
Max Planck Institute for Astrophysics, Garching, Germany (remotely)
- 2018 Lunch Seminar Talks,  
Kavli IPMU, Tokyo, Japan
- 2017 Annual meeting of the Division of Gravitation and Relativistic Astrophysics of the Chinese Physical Society,  
Southwest Jiaotong University, Chengdu, China

- 2016 Young Astronomers Academic Reports Workshop,  
NAOC, Beijing, China
- 2016 Annual Meeting of STRIDES/H0LiCOW,  
UCLA, Los Angeles, USA
- 2015 Annual Meeting of the Chinese Physical Society,  
Division of Gravitation and Relativistic Astrophysics, Hangzhou, China
- 2015 Ningbo Cosmology Workshop,  
The University of Nottingham Ningbo, China

## ■ 发表论文 (按时间顺序 [ADS link](#))

### ■ 第一作者

- 2022 “Concordance between Observations and Simulations in the Evolution of the Mass Relation between Supermassive Black Holes and Their Host Galaxies”  
[Ding, Xuheng](#); Silverman, John D.; Treu, Tommaso and et al., [2022, ApJ, 933, 132D](#)
- 2021 “Improved time-delay lens modelling and H0 inference with transient sources”  
[Ding, Xuheng](#); Liao, Kai; Birrer, Simon and et al., [2021, MNRAS, 504, 5621D](#)
- 2021 “Time delay lens modelling challenge”  
[Ding, Xuheng](#); Treu, T.; Birrer, S. and et al., [2021, MNRAS, 503, 1096D](#)
- 2021 “Testing the evolution of correlations between supermassive black holes and their host galaxies using eight strongly lensed quasars”  
[Ding, Xuheng](#); Treu, Tommaso; Birrer, Simon and et al., [2021, MNRAS, 501, 269D](#)
- 2020 “Testing the Fidelity of Simulations of Black Hole-Galaxy Coevolution at  $z \sim 1.5$  with Observations”  
[Ding, Xuheng](#); Treu, Tommaso; Silverman, John D. and et al., [2020, ApJ, 896, 159D](#)
- 2020 “Black Hole Mass Function and Its Evolution—The First Prediction for the Einstein Telescope”  
[Ding, Xuheng](#); Liao, Kai; Biesiada, Marek and et al., [2020, ApJ, 891, 76D](#)
- 2020 “The Mass Relations between Supermassive Black Holes and Their Host Galaxies at  $1 < z < 2$  HST-WFC3”  
[Ding, Xuheng](#); Silverman, John; Treu, Tommaso and et al., [2020, ApJ, 888, 37D](#)
- 2019 “Cosmological inference from standard sirens without redshift measurements”  
[Ding, Xuheng](#); Biesiada, Marek; Zheng, Xiaogang and et al., [2019, JCAP, 04, 033D](#)
- 2017 “H0LiCOW VII: cosmic evolution of the correlation between black hole mass and host galaxy luminosity”  
[Ding, Xuheng](#); Treu, Tommaso; Suyu, Sherry H. and et al., [2017, MNRAS, 472, 90D](#)
- 2017 “H0LiCOW. VI. Testing the fidelity of lensed quasar host galaxy reconstruction”  
[Ding, Xuheng](#); Liao, Kai; Treu, Tommaso and et al., [2017, MNRAS, 465, 4634D](#)
- 2015 “Strongly lensed gravitational waves from intrinsically faint double compact binaries—prediction for the Einstein Telescope”  
[Ding, Xuheng](#); Biesiada, Marek; Zhu, Zong-Hong., [2015, JCAP, 12, 006D](#)
- 2015 “Toward cosmological-model-independent calibrations for the luminosity relations of Gamma-Ray Bursts”  
[Ding, Xuheng](#); Li, Zhengxiang; Zhu, Zong-Hong., [2015, IJMPD, 2450057D](#)
- 2015 “Is There Evidence for Dark Energy Evolution?”  
[Ding, Xuheng](#); Biesiada, Marek; Cao, Shuo and et al., [2015, ApJ, 803L, 22D](#)

## 联合发表

- 2022 “Inferences on Relations between Distant Supermassive Black Holes and Their Hosts Complemented by the Galaxy Fundamental Plane”  
Silverman, John D.; Li, Junyao; [Ding, Xuheng](#), [2022ApJ, 933, 165S](#)
- 2022 “Event rate predictions of strongly lensed gravitational waves with detector networks and more realistic templates”  
Yang, Lilan; Wu, Shichao; Liao, Kai and et al., [2022, MNRAS, 509, 3772Y](#)
- 2021 “Synchronized Coevolution between Supermassive Black Holes and Galaxies over the Last Seven Billion Years as Revealed by Hyper Suprime-Cam”  
Li, Junyao; Silverman, John D.; [Ding, Xuheng](#) and et al., [2021, ApJ, 922, 142L](#)
- 2021 “Optical Spectroscopy of Dual Quasar Candidates from the Subaru HSC-SSP program”  
Tang, Shenli; Silverman, John D.; [Ding, Xuheng](#) and et al., [2021, ApJ, 922, 83T](#)
- 2021 “Hyper Suprime-Cam Subaru Strategic Program: A Mass-dependent Slope of the Galaxy Size-Mass Relation at  $z < 1$ ”  
Kawinwanichakij, Lalitwadee; Silverman, John D.; [Ding, Xuheng](#) and et al., [2021, ApJ, 921, 38K](#)
- 2021 “A Local Baseline of the Black Hole Mass Scaling Relations for Active Galaxies. IV. Correlations Between MBH and Host Galaxy , Stellar Mass, and Luminosity”  
Bennert, Vardha N.; Treu, Tommaso; [Ding, Xuheng](#) and et al., [2021, ApJ, 921, 36B](#)
- 2021 “The Sizes of Quasar Host Galaxies in the Hyper Suprime-Cam Subaru Strategic Program”  
Li, Junyao; Silverman, John D.; [Ding, Xuheng](#) and et al., [2021, ApJ, 918, 22L](#)
- 2021 “lenstronomy II: A gravitational lensing software ecosystem”  
Birrer, Simon; Shajib, Anowar; Gilman, Daniel and et al., [2021, JOSS, 6, 3283B](#)
- 2021 “Inspiring Double Compact Object Detection and Lensing Rate: Forecast for DECIGO and B-DECIGO”  
Piórkowska-Kurpas, Aleksandra; Hou, Shaoqi; Biesiada, Marek and et al., [2021, ApJ, 908, 196P](#)
- 2020 “TDCOSMO. IV. Hierarchical time-delay cosmography - joint inference of the Hubble constant and galaxy density profiles”  
Birrer, S.; Shajib, A. J.; Galan, A. and et al., [2020, A&A, 643A, 165B](#)
- 2020 “H0LiCOW - XIII. A 2.4 per cent measurement of  $H_0$  from lensed quasars: 5.3 tension between early- and late-Universe probes”  
Wong, Kenneth C.; Suyu, Sherry H.; Chen, Geoff C. -F. and et al., [2020, MNRAS, 498, 1420W](#)
- 2020 “Dual Supermassive Black Holes at Close Separation Revealed by the Hyper Suprime-Cam Subaru Strategic Program”  
Silverman, John D.; Tang, Shenli; Lee, Khee-Gan and et al., [2020, ApJ, 899, 154S](#)
- 2020 “TDCOSMO. I. An exploration of systematic uncertainties in the inference of  $H_0$  from time-delay cosmography”  
Millon, M.; Galan, A.; Courbin, F. and et al., [2020, A&A, 639A, 101M](#)
- 2020 “Probing compact dark matter with gravitational wave fringes detected by the Einstein Telescope”  
Liao, Kai; Tian, Shuxun; [Ding, Xuheng](#)., [2020, MNRAS, 495, 2002L](#)
- 2019 “A SHARP view of H0LiCOW:  $H_0$  from three time-delay gravitational lens systems with adaptive optics imaging”  
Chen, Geoff C. -F.; Fassnacht, Christopher D.; Suyu, Sherry H. and et al., [2019, MNRAS, 490, 1743C](#)

- 2019 “Where Do Quasar Hosts Lie with Respect to the Size-Mass Relation of Galaxies?”  
Silverman, John D.; Treu, Tommaso; [Ding, Xuheng](#) and et al., [2019, ApJ, 887L, 5S](#)
- 2019 “Strongly gravitationally lensed type Ia supernovae: Direct test of the Friedman-Lemaître-Robertson-Walker metric”  
Qi, Jingzhao; Cao, Shuo; Biesiada, Marek and et al., [2019, PhRvD, 100b3530Q,](#)
- 2019 “How Does the Earth’s Rotation Affect Predictions of Gravitational Wave Strong Lensing Rates?”  
Yang, Lilan; [Ding, Xuheng](#); Biesiada, Marek and et al., [2019, ApJ, 874, 139Y](#)
- 2018 “Anomalies in Time Delays of Lensed Gravitational Waves and Dark Matter Substructures”  
Liao, Kai; [Ding, Xuheng](#); Biesiada, Marek and et al., [2018, ApJ, 867, 69L](#)
- 2018 “Strongly lensed repeating fast radio bursts as precision probes of the universe”  
Li, Zheng-Xiang; Gao, He; [Ding, Xu-Heng](#) and et al., [2018, NatCo, 9, 3833L](#)
- 2018 “Curvature from Strong Gravitational Lensing: A Spatially Closed Universe or Systematics?”  
Li, Zhengxiang; [Ding, Xuheng](#); Wang, Guo-Jian and et al., [2018, ApJ, 854, 146L](#)
- 2017 “Precision cosmology from future lensed gravitational wave and electromagnetic signals”  
Liao, Kai; Fan, Xi-Long; [Ding, Xuheng](#) and et al., [2017, NatCo, 8, 1148L](#)
- 2017 “H0LiCOW - I. H0 Lenses in COSMOGRAIL’s Wellspring: program overview”  
Suyu, S. H.; Bonvin, V.; Courbin, F. and et al., [2017, MNRAS, 468, 2590S](#)
- 2016 “What Are the  $\Omega_m(z_1, z_2)$  and  $\Omega_m(z_1, z_2)$  Diagnostics Telling us in Light of  $H(z)$  Data?”  
Zheng, Xiaogang; [Ding, Xuheng](#); Biesiada, Marek and et al., [2016, ApJ, 825, 17Z](#)
- 2015 “Unbiased constraints on the clumpiness of the Universe from standard candles”  
Li, Zhengxiang; [Ding, Xuheng](#); Zhu, Zong-Hong., [2015, PhRvD, 91h3010L,](#)
- 2014 “Strong gravitational lensing of gravitational waves from double compact binaries—perspectives for the Einstein Telescope”  
Biesiada, Marek; [Ding, Xuheng](#); Piórkowska, Aleksandra and et al., [2014, JCAP, 10, 080B](#)