

Shun-Sheng Li

PhD candidate

<https://lshuns.github.io/>

Leiden Observatory

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RESEARCH INTERESTS

Gravitational lensing measurements and applications; Dark matter and its influence on galaxy groups/clusters; Cosmological models and dark energy constraints; Gravitational waves for cosmological study

RESEARCH EXPERIENCE

Research Assistant	2019 – present
Leiden Observatory , Leiden, the Netherlands	
Research Assistant	2017 – 2019
National Astronomical Observatory of China , Beijing, China	

EDUCATION


PhD in Astrophysics	2019 – 2023 (expected)
Leiden University , Leiden, the Netherlands	
– Thesis: TBD	
– Advisors: Prof. Koen Kuijken & Prof. Henk Hoekstra	
MSc in Astrophysics	2016 – 2019
University of Chinese Academy of Sciences , Beijing, China	
– Thesis: <i>Gravitational Lensing of Gravitational Waves</i>	
– Advisor: Prof. Shude Mao	
BSc in Astronomy	2012 – 2016
Nanjing University , Nanjing, China	

PROFESSIONAL EXPERIENCE

COLLABORATION

- [Kilo-Degree Survey](#) 2019–present
KiDS-Legacy calibration team, galaxies and halos working group
- [Euclid Consortium](#) 2020–present
Flagship 2.0 validation team, weak lensing science working group

PUBLIC CODE DEVELOPMENT

-  [MultiBand_ImSim](#)
A multi-band image simulation pipeline for generating multi-band images and creating joint redshift-shear mock catalogues.

TEACHING EXPERIENCE

TEACHING ASSISTANT

- Large-Scale Structure and Galaxy Formation 2022
Master's course, Leiden University
- Gravitational Lensing 2020
Master's course, Leiden University

(CO-)SUPERVISION

- Margherita Grespan (2020), Shiyang Zhang (2022)
MSc students, Leiden University

SCHOLARSHIPS AND AWARDS

- National Scholarship for Graduate Students of China 2018
- People's Scholarship 2014, 2015

PUBLICATION STATISTICS

7 total (6 published and 1 submitted), 4 first author and 1 second author.

Total citations: 194, h-index: 5, according to [adsabs](#) recorded on October 15, 2022.

PRESENTATIONS

8 total (3 invited). A complete list is available at <https://lshuns.github.io/talks/>

INVITED TALKS

3. Multi-band image simulations to unite the shear and redshift calibrations
Intriguing inconsistencies in the growth of structure over cosmic time | Sesto, Italy
2022
2. Gravitational Lensing of Gravitational Waves
Leiden-GRAPPA GW cosmology meeting | Leiden, the Netherlands 2019
1. Gravitational Lensing of Gravitational Waves
NAOC galaxy formation lunch talk | Beijing, China 2018

PUBLIC OUTREACH

- Popular science article for *the Mr. Science* 2020
When gravitational lensing meets gravitational waves (in Chinese)

PUBLICATION LIST

FIRST-AUTHOR PUBLICATIONS

4. KiDS-Legacy calibration: Unifying shear and redshift calibration with the SKiLLS multi-band image simulations
S.-S. Li, K. Kuijken, H. Hoekstra, et al., 2022, submitted to A&A ([adsabs](#)).
3. KiDS+VIKING-450: An internal-consistency test for cosmic shear tomography with a colour-based split of source galaxies
S.-S. Li, K. Kuijken, H. Hoekstra, et al., 2021, A&A, 646A, 175L ([adsabs](#)).
2. OGLE-2017-BLG-1186: First Application of Asteroseismology and Gaussian Processes to Microlensing
S.-S. Li, W. Zang, A. Udalski, et al., 2019, MNRAS, 488, 3308 ([adsabs](#)).
1. Gravitational Lensing of Gravitational Waves: A Statistical Perspective
S.-S. Li, S. Mao, Y. Zhao, et al., 2018, MNRAS, 476, 2220 ([adsabs](#)).

SECOND-AUTHOR PUBLICATIONS

1. Detecting Lensing-Induced Diffraction in Astrophysical Gravitational Waves
L. Dai, **S.-S. Li**, B. Zackay, et al., 2018, Phys. Rev. D, 98, 104029 ([adsabs](#)).

OTHER CO-AUTHORED PUBLICATIONS

2. Spitzer + VLTI-GRAVITY Measure the Lens Mass of a Nearby Microlensing Event
W. Zang, et al. (incl. **S.-S. Li**), 2020, ApJ, 897, 180Z ([adsabs](#)).
1. Spitzer Microlensing Parallax Reveals Two Isolated Stars in the Galactic Bulge
W. Zang, et al. (incl. **S.-S. Li**), 2020, ApJ, 891, 3Z ([adsabs](#)).