Anowar J. Shajib

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RESEARCH INTERESTS

EDUCATION

Gravitational Lensing, Observational Cosmology

University of California, Los Angeles, USA

Ph.D. Candidate, Astronomy, March 2017 (expected graduation date: June 2020)

• Dissertation Topic: "Shining light on the dark energy with time-delay cosmography"

• Advisor: Prof. Tommaso Treu

M.S., Astronomy, June 2016

• Advisor: Prof. Edward L. Wright

The University of Tokyo, Japan

B.S., Physics, March 2014

Honors and Awards Graduate Student Travel Stipend, $MIAPP,\,2018,\,{\in}\,500$

Graduate Student Travel Grant, UCLA, 2017, \$2000

Astronomy Division Fellowship, University of California, Los Angeles, 2014-2015

MEXT¹ Scholarship, 2009-2014

PUBLICATIONS

First Author Publications

- 3. Shajib, A. J., et al. Is every strong lens model unhappy in its own way? Uniform modelling of a sample of 13 quadruply+ imaged quasars. MNRAS, 483, 5649-5671, 2019.
- 2. Shajib, A. J., Treu, T., and Agnello, A. Improving time-delay cosmography with spatially resolved kinematics. MNRAS, 473, 210-226, 2018.
- 1. Shajib, A. J. and Wright, E. L. Measurement of the integrated Sachs-Wolfe effect using the AllWISE data release. ApJ, 827:116, 2016.

Contributing Author Publications

- 4. Birrer, S., et al. H0LiCOW IX. Cosmographic analysis of the doubly imaged quasar SDSS 1206+4332 and a new measurement of the Hubble constant. MNRAS, stz200, 2019.
- 3. Chen, G. C.-F., et al. Constraining the microlensing effect on time delays with new time-delay prediction model in H_0 measurements. MNRAS, sty2350, 2018.
- 2. Ding, X., Treu, T., **Shajib, A. J.**, et al. Time Delay Lens Modeling Challenge: I. Experimental Design. arXiv:1801.01506, 2018.
- 1. Williams, P. R., et al. Discovery of three strongly lensed quasars in the Sloan Digital Sky Survey. MNRAS: Letters, sly043, 2018.

INVITED TALKS

1. MPA Lensing Group Seminar, Munich, Germany, June 2018.

¹Ministry of Education, Culture, Sports, Science and Technology, Government of Japan

Contributed Talks

- 4. Keck Science Meeting, Caltech, USA, September 2018.
- 3. Extragalactic distance scale in the GAIA era, MIAPP workshop, Munich, Germany, June 2018.
- Shedding Light on the Dark Universe with Extremely Large Telescopes, UCLA, USA, April 2018.
- 1. Strong Lensing by Galaxies and Clusters, Aosta, Italy, June 2017.

ACADEMIC EXPERIENCE

University of California, Los Angeles, USA

Graduate Student

October 2014 - present

Includes current Ph.D. research, Ph.D. and Masters level coursework and research.

Guest Lecturer

- Physics 127 General Relativity (Spring 2015)
- Astro 81 Astronomy I: Stars and Nebulae (Winter 2016)

Teaching Assistant

- Astronomy 3 Nature of Universe (Fall 2014)
- Physics 1C Electrodynamics, Optics and Special Relativity (Winter 2015)
- Physics 127 General Relativity (Spring 2015)
- Physics 6C Physics for Life Sciences Majors: Light, Fluids, Thermodynamics, Modern Physics (Fall 2015)
- $\bullet\,$ Astronomy 81 Astrophysics I: Stars and Nebulae (Winter 2016)
- Astronomy 140 Stellar Systems and Cosmology (Spring 2016)
- Physics 12 Physics of Sustainable Energy (Winter 2017)

European Southern Observatory, Munich, Germany

 $Visiting\ Graduate\ Student$

July 2018

Collaborative research with Dr. Adriano Agnello.

Workshops

- 3. TMT Early Career Initiative Workshop, Los Angeles, December 2018.
- 2. Extragalactic distance scale in the GAIA era, MIAPP, Germany, June-July 2018.
- Mary Lea & C. Donald Shane Observational Astronomy Workshop, UCO/Lick Observatory, October 2014.

Approved Observing Proposals (CoI)

- 4. Hubble Space Telescope GO-15652 (2018). PI: Treu. H_0 , the stellar initial mass function, and other dark matters from a large sample of quadruply imaged quasars (2018).
- 3. 2-m Himalayan Chandra Telescope (2018). PI: Courbin. Photometric monitoring of the quadruply lensed quasar PSOJ0147+4630.
- 2. MUSE NFM Science Verification (2018). PI: Zanella. From cosmology to star-forming regions: two compelling cases for MUSE NFM.
- 1. Keck U053(2017A), U032(2017B), U011(2018A), U011(2018B), U029(2019A). PI: Treu. Dark energy with gravitational time-delay: OSIRIS spectroscopy of lensing galaxies.

Professional Service

- Referee for MNRAS, AAS
- Graduate admission committee member, UCLA

Observing Experience

OSIRIS, Keck I, 9.5 nights, NIRC2, Keck II, 3 nights.

Data Analysis Experience Hubble Space Telescope (WFC3), W. M. Keck Observatory (OSIRIS, NIRC2), Very Large Telescope (MUSE), Wide-field Infrared Survey Explorer, Wilkinson Microwave Anisotropy Probe, Planck, Sloan

Digital Sky Survey.

Outreach Lecturer, Astronomy Live! summer workshop for high school students, 2018.

Astronomy Live!, visited K-12 schools to perform various demos as part of the UCLA Astronomy

outreach program.

Exploring Your Universe, performed various demos in UCLA's annual science festival, 2014-17.

Star show, UCLA Planetarium, 2014, 2015.

Public talk, Title: The Story of You. UCLA Planetarium, 2014.

Computer Skills Programming Languages: Python, C, C++, PHP, SQL, JavaScript.

Astronomy software: Lenstronomy, IRAF, PyRAF, SExtractor, DS9.

Software/Framework: TensorFlow, Flask.

Positions of Responsibility Captain and Coach, The University of Tokyo Cricket Club, 2012-13

College prefect, Sylhet Cadet College, 2006-07