Curriculum Vitae — Yiping Shu

(as of April 2019)

Employment

- **Postdoctoral Scholar** — *University of Cambridge* — Since 2018
  Mentor: Wyn Evans
- **Associate Professor** — *PMO* — Since 2017
- **Postdoctoral Scholar** — *NAOC* — 2015-2017
  Mentor: Shude Mao
- **Postdoctoral Scholar** — *University of Utah* — 2014-2015
  Mentor: Adam Bolton

Education

- **Ph. D. in Physics** — *University of Utah* — 2014
- **B.S. in Physics** — *Univ. of Sci. & Tech. of China (USTC)* — 2008

Research Interests

- Gravitational lensing • Galaxy formation and evolution • Dark Matter • Cosmology
- Machine learning • Bayesian statistics • Spectra analysis • Stellar dynamics

Awards & Honors

- Royal Society - K. C. Wong International Fellowship — 2018-2020
- Young Scientists Fund, *NSFC* — 2017-2019
- Chinese Postdoc International Communication Program (*NAOC*) — 2016
- Excellent Graduate (*USTC*) — 2008

Research Experiences

- **Projects**
  Co-PI - "An Efficient Search for Galaxy-scale, Strongly-lensed, Wide-separation Supernovae" 2018-2019
  PI - "Dissecting A Strongly-lensed, Dynamically Hot Galaxy at z=1.2" 2018
  PI - "Multipurpose Magellan IMACS IFU Observations of A Galaxy pair-Lyman-alpha Emitter Strong Lens System" 2015
  Co-I - "Lensed Supernovae at Low Redshift" 2018
  Co-I - "Quantifying Cold Dark Matter Substructure with a Qualitatively New Gravitational Lens Sample" 2015
  Co-I - "A new sample of BOSS-selected, gravitationally lensed Lyman-alpha emitting galaxies" 2015

- **Observations**
  Two nights (long-slit spectroscopy with OSIRIS) on Gran Telescopio Canarias — Apr. 2017
  One night (IFU spectroscopy with IMACS) on Magellan Baade Telescope — Feb. 2016

- **Service**
  Co-supervised Ph.D. Students: Rui Li (YNAO), Lin Wang (NAOC) — 2016-2019
  Referee for MNRAS — Since 2015

- **Research Assistant** *University of Utah* 2010-2014
  Advisor: Adam Bolton
  Worked on large galaxy surveys (SDSS, BOSS) and strong lensing surveys (SLACS, S4TM)

- **Research Assistant** *University of Utah* 2009-2010
  Advisor: Frank van den Bosch
  Worked on numerical simulations of disk heating effect due to subhalos

Selected Meetings & Talks (Past 2 Years)

- Invited Talk — Institute of Astronomy, Cambridge, UK — Feb. 2018
- Contributed Talk — 2017 Gravitational Lensing Workshop, Kunming, China — Dec. 2017
- Contributed Talk — 2017 KIAA-PKU Astrophysics Forum, Beijing, China — Nov. 2017
- Contributed Talk — CAS General Assembly, Xinjiang, China — Aug. 2017
- Invited Talk — Instituto de Astrofsica de Canarias, Spain — Apr. 2017
- Contributed Talk — 2016 Sino-Germany Workshop, Guangzhou, China — Dec. 2016
- Invited Talk — National Astronomical Observatory of Japan, Japan — Oct. 2016
- Contributed Talk — Conference on Gravitational Lensing, Leiden, Netherlands — Jul. 2016

Teaching Experiences

- **Lab Teaching Assistant** *University of Utah* Spring 2009
  General Physics Lab - PHYS 2225 Evaluation Score: **5.45** (Department Ave. 5.01)

- **Lab Teaching Assistant** *University of Utah* Spring 2009
  General Physics Lab - PHYS 2025 Evaluation Score: **5.45** (Department Ave. 5.01)

- **Lab Teaching Assistant** *University of Utah* Fall 2008
  General Physics Lab - PHYS 2215 Evaluation Score: **5.71** (Department Ave. 5.01)

- **Lab Teaching Assistant** *University of Utah* Fall 2008
  General Physics Lab - PHYS 2015 Evaluation Score: **5.22** (Department Ave. 5.01)

Professional Skills

- **Programming Languages:** IDL, Python, Fortran, C, and Supermongo
- **Data Analysis:** Machine learning, Bayesian statistics, MultiNest

Selected Journal Articles

11 first/corresponding-authored, *21* co-authored, *6700+* citations

13. Li, R., **Shu, Y.**, Feng, Jianlin, et al., 2019, MNRAS, 482, 313
Using deep Residual Networks to search for galaxy-Lyα emitter lens candidates based on spectroscopic selection

12. **Shu, Y.**, Marques-Chaves, Rui, Evans, N. W., et al., 2018, MNRAS Letter, 481, 136
SDSS J0909+4449: A large-separation strongly lensed quasar at $z \sim 2.8$ with three images

11. Li, R., **Shu, Y.**, Wang, J., 2018, MNRAS, 480, 431
Strong-lensing Measurement of the Mass-density Profile out to 3 Effective Radii for $z \sim 0.5$ Early-type Galaxies

10. **Shu, Y.**, Bolton, A. S., Mao, Shude, et al., 2018, ApJ, 864, 91
Prediction of Supernova Rates in Known Galaxy-galaxy Strong-lens Systems

9. Li, R., Wang, J., **Shu, Y.**, et al., 2018, ApJ, 855, 64
The Discrepancy between Einstein Mass and Dynamical Mass for SIS and Power-law Mass Models

8. **Shu, Y.**, Brownstein, J. R., Bolton, A. S., et al., 2017, ApJ, 851, 48
The Sloan Lens ACS Survey. XIII. Discovery of 40 New Galaxy-scale Strong Lenses

7. Wang, L., **Shu, Y.**, Li, R., et al., 2017, MNRAS, 468, 3757
SDSS J1640+1932: a spectacular galaxy-quasar strong lens system

6. **Shu, Y.**, Bolton, A. S., Mao, Shude, et al., 2016c, ApJ, 833, 264
The BOSS Emission-Line Lens Survey. IV. : Smooth Lens Models for the BELLS GALLERY Sample

5. **Shu, Y.**, Bolton, A. S., Kochanek, C. S., et al., 2016b, ApJ, 824, 86
The BOSS Emission-Line Lens Survey. III. : Strong Lensing of Lyα Emitters by Individual Galaxies

4. **Shu, Y.**, Bolton, A. S., Moustakas, L. A., et al., 2016a, ApJ, 820, 43
Kiloparsec Mass/Light Offsets in the Galaxy Pair-Lyα Emitter Lens System SDSS J1011+0143

3. Montero-Dorta, A. D., **Shu, Y.**, Bolton, A. S., et al., 2016, MNRAS, 456, 3265
A Steep Slope and Small Scatter for the High-Mass End of the L-σ Relation at $z \sim 0.55$

2. **Shu, Y.**, Bolton, A. S., Brownstein, J. R., et al., 2015, ApJ, 803, 71
The Sloan Lens ACS Survey. XII. Extending Strong Lensing to Lower Masses

1. **Shu, Y.**, Bolton, A. S., Schlegel, D. J., et al., 2012, AJ, 143, 90
Evolution of the Velocity-dispersion Function of Luminous Red Galaxies: A Hierarchical Bayesian Measurement