

# Shu-Xu Yi

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## RESEARCH INTERESTS

- Pulsars/pulsar binaries,
- Pulsar timing,
- Gravitational waves

## EDUCATION

**The University of Chinese Academy of Sciences**, China, PhD in Astrophysics.  
Thesis: "Applications of pulsar timing"  
Advisor: Zhang, Shuang-Nan

2010/08-2016/08

**Tsinghua University**, China, Bachelor of Science.  
Major: Math and Physics

2006/08-2010/08

## APPOINTMENTS

**The University of Hong Kong**, Postdoctoral fellow; work with Prof. KS Cheng on pulsar high energy emission modeling

Since 2016/10

**The Institute of High Energy Physics**, Chinese Academy of Sciences, Research assistant

2012/06-2016/08

**Peking University**, visiting scholar; worked with Prof. KJ Lee on pulsar timing

2015/12-2016/02

**The University of Manchester**, visiting

2012/10-2013/10

scholar; worked with Prof. Stappers with  
pulsar timing

## HONORS & REWARDS

**Crab prize**, RMB 5000 Yuan, Future Pulsar Symposium 6, Wuhan  
2017/06/28-30

**Highlight talks**, RMB 3000 Yuan in total, Annual Meeting of Beijing Astronomical  
Society in 2011, 2012, 2015

## OUTREACH

**Lectures on astronomy for middle school students**, 10 hours in total, 57th middle  
school, Beijing, 2016

**Contributing editor of Journal Global  
Science**, (Chinese edition of Scientific American ) 2015

## REFERENCES

**Prof. Dr. Zhang, Shuang-Nan** (Ph.D advisor)  
Institute of High Energy Physics, Chinese Academy of Sciences, China  
Email: [zhangsn@ihep.ac.cn](mailto:zhangsn@ihep.ac.cn)

**Prof. Dr. Cheng, Kwong-Sang** (Postdoc supervisor)  
The University of Hong Kong, China  
Email: [hrspsc@hku.hk](mailto:hrspsc@hku.hk)

**Prof. Dr. Wu, Kinwah**  
University College London  
Email: [Kinwah.wu@ucl.ac.uk](mailto:Kinwah.wu@ucl.ac.uk)

## LIST OF PUBLICATIONS

### *Published or Accepted for publication by peer reviewed Journals*

1. **Shu-Xu Yi**, K. S. Cheng, Ronald E. Taam; *The growth of stellar mass black hole binaries trapped in an accretion disk of active galactic nuclei*. Accepted by ApJL 2018  
<https://arxiv.org/abs/1805.07026>
1. **Shu-Xu Yi**, K. S. Cheng, *On the timing behavior of PSR B1259-63 under the propeller torque from a transient accretion disc*. MNRAS, 476, 766 (2018),  
<http://adsabs.harvard.edu/abs/2018MNRAS.476..766Y>
2. **Shu-Xu Yi**, K. S. Cheng; *Probing the properties of the pulsar wind via studying the dispersive effects in the pulses from the pulsar companion in a double neutron-star binary system*, MNRAS, 472, 4007 (2017), <http://adsabs.harvard.edu/abs/2017MNRAS.472.4007Y>
3. **Shu-Xu Yi**, K. S. Cheng; *Modeling the GeV emission of HESS J0632+057*, MNRAS, 471, 4228 (2017), <http://adsabs.harvard.edu/abs/2017MNRAS.471.4228Y>
4. **Shu-Xu Yi**, K. S. Cheng; *A new approach to the GeV flare of PSR B1259-63/LS2883*, ApJ, 844, 114 (2017), <http://adsabs.harvard.edu/abs/2017ApJ...844..114Y>
5. **Shu-Xu Yi**; *On gravitational wave-Cherenkov radiation from photons when passing through diffused dark matters*, Modern Physics Letters A, Volume 32, Issue 9, 2017  
<http://adsabs.harvard.edu/abs/2017MPLA...3250059Y>
6. **Shu-Xu Yi**, Shuang-Nan Zhang; *Detecting super-Nyquist-frequency gravitational waves using a pulsar timing array*, Science China Physics, Mechanics & Astronomy, Volume 59, Issue 8, 2016. <http://adsabs.harvard.edu/abs/2016SCPMA..59h..95Y>
7. Xu-Dong Gao, Shuang-Nan Zhang, **Shu-Xu Yi**, Yi Xie, Jian-Ning Fu; *Understanding the residual patterns of timing solutions of radio pulsars with a model of magnetic field oscillation*, MNRAS, 459, 402 (2016) <http://adsabs.harvard.edu/abs/2016MNRAS.459..402G>
8. **Shu-Xu Yi**, Shuang-Nan Zhang; *The evolution of the magnetic inclination angle as an explanation of the long term red timing-noise of pulsars*, MNRAS, 454, 3674 (2015)  
<http://adsabs.harvard.edu/abs/2015MNRAS.454.3674Y>
9. Yu Rong, **Shu-Xu Yi**, Shuang-Nan Zhang, *Radial alignment of elliptical galaxies by the tidal force of a cluster of galaxies*, MNRAS, 451, 2536 (2015)  
<http://adsabs.harvard.edu/abs/2015MNRAS.451.2536R>

10. Shan-shan Weng, Shuang-Nan Zhang, **Shu-Xu Yi**, Yu Rong, Xu-Dong Gao; X-ray softening during the 2008 outburst of XTE J1810-189, MNRAS,450,2915(2015) <http://adsabs.harvard.edu/abs/2015MNRAS.450.2915W>

11. **Shu-Xu Yi**, Benjamin Stappers, Sotiris Sanidas, et al.; Limits on the strength of individual gravitational wave sources using high-cadence observations of PSR B1937+21, MNRAS,445,1245(2014) <http://adsabs.harvard.edu/abs/2014MNRAS.445.1245Y>

*Papers submitted to peer reviewed journals:*

1. **Shu-Xu Yi**, K.S. Cheng, *The growth of stellar mass black hole binaries trapped in an accretion disk of active galactic nuclei*. Submitted to PRL

*Other Publications:*

1. Shuang-Nan Zhang, Yuan Liu, **Shu-Xu Yi**, Zigao Dai, Chao-guang Huang, *Do we expect to detect electromagnetic radiation from merging stellar mass black binaries like GW150914? No* <https://arxiv.org/abs/1604.02537>

2. Shuang-Nan Zhang, **Shu-Xu Yi**, *On a Common Misunderstanding of the Birkhoff Theorem and Light Deflection Calculation: Generalized Shapiro Delay and its Possible Laboratory Test*, International Journal of Modern Physics: Conference Series, Volume 12, pp. 419-430 (2012). <http://adsabs.harvard.edu/abs/2012IJMPS..12..419Z>