

# Shu-Xu Yi

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## RESEARCH INTERESTS

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

## 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**

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**Tsinghua University**, China, Bachelor of Science.

Major: Math and Physics

**2006/08-2010/08**

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## APPOINTMENTS

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

**Since 2016/10**

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

**2012/06-2016/08**

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

**2015/12-2016/02**

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**The University of Manchester**, visiting scholar; worked with Prof. Stappers with pulsar timing

**2012/10-2013/10**

## 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: [hrspksc@hku.hk](mailto:hrspksc@hku.hk)

**Prof. Dr. Wu, Kinwah**

University College London

Email: [Kinwah.wu@ucl.ac.uk](mailto:Kinwah.wu@ucl.ac.uk)

**Dr. Li Jian**

Institute of Space Science (IEEC-CSIC), Barcelona, Spain

Email: [jian@ieec.uab.es](mailto:jian@ieec.uab.es)

## LIST OF PUBLICATIONS

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

1. **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*, accepted for publication in *MNRAS*, **2017**, <http://adsabs.harvard.edu/abs/2017MNRAS.472.4007Y>
2. **Shu-Xu Yi**, K. S. Cheng; *Modeling the GeV emission of HESS J0632+057*, *MNRAS*, Volume 471, Issue 4, p.4228-4233, **2017**  
<http://adsabs.harvard.edu/abs/2017MNRAS.471.4228Y>
3. **Shu-Xu Yi**, K. S. Cheng; *A new approach to the GeV flare of PSR B1259-63/LS2883*, *ApJ*, Volume 844, Issue 2, article id. 114, **2017**  
<http://adsabs.harvard.edu/abs/2017ApJ...844..114Y>
4. **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>
5. **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>
6. 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*, Volume 459, Issue 1, p.402-418, **2016**  
<http://adsabs.harvard.edu/abs/2016MNRAS.459..402G>
7. **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*, Volume 454, Issue 4, p.3674-3678, **2015**  
<http://adsabs.harvard.edu/abs/2015MNRAS.454.3674Y>
8. Yu Rong, **Shu-Xu Yi**, Shuang-Nan Zhang, *Radial alignment of elliptical galaxies by the tidal force of a cluster of galaxies*, *MNRAS*, Volume 451, Issue 3, p.2536-2543, **2015**  
<http://adsabs.harvard.edu/abs/2015MNRAS.451.2536R>
9. 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*, Volume 450, Issue 3, p.2915-2921, **2015** <http://adsabs.harvard.edu/abs/2015MNRAS.450.2915W>
10. **Shu-Xu Yi**, Benjamin Stappers, Sotiris Sanidas, Cees Bassa, Gemma Janssen, Andrew Lyne, Micheal Kramer, Shuang-Nan Zhang; *Limits on the strength of individual gravitational*

*wave sources using high-cadence observations of PSR B1937+21, MNRAS, Volume 445, Issue 2, p.1245-1252, 2014* <http://adsabs.harvard.edu/abs/2014MNRAS.445.1245Y>

**Papers submitted to peer reviewed journals:**

1. **Shu-Xu Yi, K.S. Cheng**, *On the timing behavior of PSR B1259-63 under the propeller torque from a transient accretion disc. Submitted to MNRAS*

**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>