Rui Luo

Curriculum Vitae

CSIRO Astronomy and Space Science
Corner Vimiera & Pembroke Roads,
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Education

2013 - 2019	**Ph.D., Astrophysics**, *Department of Astronomy, School of Physics*, Peking University, Beijing, China.
Thesis:	Measurement of the luminosity function of Fast Radio Bursts
Supervisor:	Prof. Kejia Lee (KIAA-PKU)
2009 - 2013	**B.Sc., Applied Physics**, *School of Physics*, Huazhong University of Science and Technology, Wuhan, China.

Employment

2019 - present	**Postdoctoral Fellow, Radio Astronomy**, *Astronomy and Space Science*, Commonwealth Scientific and Industrial Research Organisation, Marsfield, Sydney, Australia.

Research Interests

Transients:	Fast Radio Bursts (FRBs), Pulsars
Cosmology:	Intergalactic medium, Cosmic magnetic field, Circum-galactic medium
Statistics:	Bayesian Inference, MCMC
ML:	Deep Neural Network

Awards

2013 - 2018	Second Academic Scholarship, Peking University
2016	Kwang-Hua Scholarship, Peking University
2016	Award for Scientific Research, Peking University
2015	Second Prize of Chen Huxiong Scholarship, Peking University
2014	Merit Graduate Student, Peking University
2013	Annual Scholarship of National Astronomical Observatories, Chinese Academy of Sciences

Publications

First-author and second-author papers:

5 **Luo, R.**, Lee, K. J., Wang, W. Y., Lorimer, D. R., Men, Y. P., & Zhang, B., *On the true FRB luminosity function*, 2019, MNRAS, to be submitted

4 Men, Y. P., **Luo, R.**, Chen, M. Z., Hao, L. F., Lee K. J., Li, J., Li Z. X., Liu, Z. Y., Pei, X., Wen, Z. G., Wu, J. J., Xu, Y. H., Xu, R. X., Yuan, J. P., & Zhang, C. F., *Piggyback searching for fast radio bursts using Nanshan 26m and Kunming 40m radio telescopes – I. Observing and data analysis systems, discovery of a mysterious peryton*, 2019, MNRAS, accepted, arXiv:1907.13056

3 **Luo, R.**, Lee, K. J., Lorimer, D. R., & Zhang, B., *On the normalised FRB luminosity function*, 2018, MNRAS, 481, 2320

2 Wang, W. Y., **Luo R.**, Yue, H., Chen, X. L., Lee, K. J., & Xu, R. X., *FRB 121102: A Starquake-induced Repeater?*, 2018, ApJ, 852, 140

1 Yang, Y.-P., **Luo, R.**, Li, Z., & Zhang, B., *Large Host-galaxy Dispersion Measure of Fast Radio Bursts*, 2017, ApJ, 839, L25

Contributed papers:

3 Men, Y. P., Aggarwal, K, Li, Y., Palaniswamy, D., Burke-Spolaor, S., Lee, K. J., **Luo, R.**, Demorest, P., Tendulkar, S., Agarwal, D., Young, O., & Zhang, B., *Non-detection of fast radio bursts from six gamma-rayburst remnants with a possible magnetar engine*, 2019, MNRAS, submitted

2 Wang, W. Y., Lu, J. G., Zhang, S. B., Chen, X. L., **Luo, R.**, & Xu, R. X., *Pulsar giant pulse: coherent instability near light cylinder*, 2019, SCPMA, 62(7), 979511

1 Yi, S.-X., Cheng, K. S., & **Luo, R.**, *Clumpy jets from black hole-massive star binaries as engines of Fast Radio Bursts*, 2019, MNRAS, 483, 4197

Conferences & Talks

2019 FAST/Future Pulsar Symposium 8, Xi'an, China, Jun. 26-28, 2019

Contributed talk: *Measurement of the luminosity function of Fast Radio Bursts*

2019 Group Meeting of Cosmology Group at NAOC, Beijing, China, Mar. 27, 2019

Invited talk: Measurements on the FRB luminosity function

2018 KIAA Graduate Dinner Talk, Beijing, China, Dec. 18, 2018

Invited talk: *An Overview on Fast Radio Bursts and FRB luminosity function*

2018 FAST/Future Pulsar Symposium 7, Guangzhou, China, Jul. 4-6, 2018

2018 NAOC Graduate Student Seminar, Beijing, China, Apr. 23, 2018

Invited talk: *A Review of Fast Radio Bursts and FRB luminosity function*

2017	Radio Astronomy Forum 2017, Pingtang, China, Sep. 24-27, 2017
	Poster: *Simulating DM of host galaxies to derive FRB luminosity function*
2017	Pulsar Timing Array in China, Beijing, China, May 30-31, 2017
	Contributed as LOC member
2017	FAST/Future Pulsar Symposium 6, Wuhan, China, Jun. 28-30, 2017
	Contributed talk: *Simulating DM of host galaxies to derive FRB luminosity function*
2016	Chinese Astronomical Society 2016 Annual Meeting, Wuhan, China, Nov. 1-3, 2016
	Contributed talk: *Simulating the dispersion measure of host galaxies*
2016	Jing-Guang-Xia Astrophysics Meeting, Xiamen, China, July 21-23, 2016
	Contributed talk: *Simulating the dispersion measure of host galaxies*
2016	QTT Colloquium Series 2016, Zunyi, China, July 3-4, 2016
	Contributed talk: *Simulating the dispersion measure of FRB host galaxies*
2016	PKU-XAO Bilateral Meeting, Urumqi, China, Jun. 10-13, 2015
	Contributed talk: *Simulating the dispersion measure of FRB host galaxies*
2015	Chinese Astronomical Society 2015 Annual Meeting, Beijing, China, Oct. 19-21, 2015
	Contributed talk: *Consideration of Research on FRBs*
2015	International Pulsar Timing Array 2015 Meeting, Parkes&Leura, Australia, July 19-31, 2015
2015	QTT Colloquium Series 2015, Ming'antu, China, July 2-3, 2015
	Contributed talk: *Consideration of Research on FRBs*
2015	KIAA-SHAO Bilateral Workshop, Beijing, China, May 18-19, 2015
	Contributed talk: *Consideration of FRB searching*

Observing Experience

Jul. 2019	At Five-hundred-meter Aperture Spherical radio Telescope
	Approved Proposal: Monitoring the repeating FRB candidates
Aug. 2017	At Kunming 40-m radio telescope
	Contributions: installing FRB backend and configuring FRB searching software
Apr. 2016	At Five-hundred-meter Aperture Spherical radio Telescope
	Contributions: configuring ROACH2 and monitoring frequency spectrum
Aug. 2015	At Miyun 50-m radio telescope
	Contributions: installing ROACH2 and observing pulsars.
Oct. 2014	At Kunming 40-m radio telescope

Contributions: assisting calibration for two polarization channels of backend and observing pulsars.

Teaching Experience

2017   Teaching Assistant of GENERAL PHYSICS for non-physics Schools, Peking University

2015   Teaching Assistant of ATOMIC PHYSICS, School of Physics, Peking University

Technical Skills

Programming   PYTHON (Proficient), C, C++, UNIX

Softwares   MATLAB, MATHEMATICA, QT

Writing   LaTeX, MARKDOWN

Web Design   WIKI, GIT, HTML

Language

English   *Professional working proficiency*

Chinese   *Native or bilingual proficiency*

Japanese   *Basic words and phrases only*