

Name:Yuen RAI

Professional:

Researcher;
Masters Supervisor



Education:

2014/05, Ph.D. in Astrophysics, the University of Sydney, Australia
2010/05, B.Sc. (First Honour) in Advanced Physics, the University of Sydney, Australia

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Research Interests:

Radio observations and theoretical (analytical and numerical) studies in pulsar astrophysics.

- Theoretical: structure of pulsar magnetosphere; plasma processes for radio emission; electrodynamics and the effects in super-strong magnetic field; radio emission variability as revealed by single pulses and the averaged pulse profiles.
- Observational: Averaged pulse profiles and diversities in radio single pulse emission; monitoring radio frequency interference (RFI) for improving on the sensitivity and quality of pulsar data.
- Computational: pulsar emission geometry; structure of the magnetic field in pulsar magnetospheres; numerical analysis and simulations.

Selected Publications:

(* Corresponding author)

1. **R. Yuen***, 2024, Simulating radio-off fractions in rotating radio transients, A&A, 683: A108
2. **R. Yuen***, 2024, The Relationships between Emission Geometry and Jitter Noise in Millisecond Pulsars, ApJ, 966(1), 34
3. **R. Yuen***, 2024, Characteristics of Emission Non-nulling Pulsars Through Simulation, RAA, 24(4), 045008
4. H. M. Tedila, **R. Yuen***, N. Wang*, D. Li, Z. G. Wen et al., 2024, Investigation of

Profile Shifting and Subpulse Movement in PSR J0344-0901 with FAST, ApJ, 965(2), 144

5. H. M. Tedila, **R. Yuen***, N. Wang*, J. P. Yuan, Z. G. Wen et al., and FAST Collaboration, 2022, Emission Variation of a Long-period Pulsar Discovered by FAST, ApJ, 929, 2, 171
6. Z. Y. Tu, **R. Yuen***, Z. G. Wen, N. Wang*, W. M. Yan et al., 2022, The low emission mode in PSR B0329+54, MNRAS, 512, 1906–1915
7. **R. Yuen***, 2019, Changes in spin-down rate and intermittent pulsars, MNRAS, 484(1): 1359-1365
8. **R. Yuen***, 2019, Variations in pulsar subpulse drift rate, MNRAS, 486(2): 2011-2019
9. **R. Yuen***, D. B. Melrose, 2017, A model for abrupt changes in pulsar pulse profile, MNRAS, 469, 2, 2049–2058
10. **R. Yuen***, D. B. Melrose, M. A. Samsuddin, Z. Y. Tu and X. H. Han, 2016, Variations of P2 in subpulse drifting pulsars, MNRAS, 459, 603–609