Pavan A. Uttarkar

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Education

2022 – 2024 **Ph.D., Swinburne University of Technology (SUT)** on fast radio bursts (FRBs)
Thesis title: *Probing the progenitor environments of fast radio bursts.*

2015 – 2019 **Bachelor of Engineering, Siddaganga Institute of Technology (SIT)** in Electronics and Instrumentation.
Thesis title: *Design and implementation of low-frequency observational setup.*

Employment History

2019-2022 **Visiting student program (VSP):**

- Design and implementation of low-frequency observational setup.
- Software correlator for sky watch network array (SWAN) demonstration system.

2018 **IASc-INSA-NASI Summer Research Fellow 2018:** Radio imaging using Sky watch network array (SWAN) demonstration system, Raman Research Institute (RRI), Bengaluru, India.

2017 **IASc-INSA-NASI Summer Research Fellow 2017:** Pulsar timing with GMRT, National Centre for Radio Astrophysics (NCRA), Pune, India.

Research Publications

Journal Articles

1. *Shannon, R. M., K. W. Bannister, A. Bera, S. Bhandari, C. K. Day, A. T. Deller, T. Dial, D. Dobie, R. D. Ekers, W. -f. Fong, M. Glowacki, A. C. Gordon, K. Gourdji, A. Jaini, C. W. James, P. Kumar, E. K. Mahony, L. Marnoch, A. R. Muller, J. X. Prochaska, H. Qiu, S. D. Ryder, E. M. Sadler, D. R. Scott, N. Tejos, P. A. Uttarkar, and Y. Wang. "The Commensal Real-time ASKAP Fast Transient incoherent-sum survey". *arXiv e-prints*, Aug. 2024, arXiv:2408.02083. *arXiv*, arxiv.org/abs/2408.02083, https://doi.org/10.48550/arXiv.2408.02083.

2. Uttarkar, Pavan, Ryan M. Shannon, Marcus E. Lower, Pravir Kumar, Danny C. Price, A. T. Deller, and K. Gourdji. "Towards solving the origin of circular polarisation in FRB 20180301A". *arXiv e-prints*, May 2024, arXiv:2405.11515. *arXiv*, arxiv.org/abs/2405.11515, https://doi.org/10.48550/arXiv.2405.11515.

3. Uttarkar, Pavan A., R. M. Shannon, K. Gourdji, A. T. Deller, C. K. Day, and S. Bhandari. "Searching for the spectral depolarization of ASKAP one-off FRB sources"., vol. 527, no. 2, Jan. 2024, pp. 4285–96. https://doi.org/10.1093/mnras/stad3437.

4. *Kumar, Pravir, Rui Luo, Danny C. Price, Ryan M. Shannon, Adam T. Deller, Shivani Bhandari, Yi Feng, Chris Flynn, Jinchen Jiang, Pavan A. Uttarkar, Shuangqiang Wang, and Songbo Zhang. "Spectropolarimetric variability in the repeating fast radio burst source FRB 20180301A". *arXiv e-prints*, Apr. 2023, arXiv:2304.01763. *arXiv*, arxiv.org/abs/2304.01763, https://doi.org/10.48550/arXiv.2304.01763.

* co-authored papers.

Conference talks and workshops

Contributed talk FRB 2023 (online):	**Probing progenitor environments of FRBs using polarimetric properties.**
Radio School 2023:	**Australia National Telescope Facility Radio School 2023, ATCA, Narrabri**
Astronomy Winter School (online):	**The 2nd NCTS/UCAT/NTHU International Astronomy Winter School**
Orange pulsar meeting 2022:	**Searching for the spectral depolarization of ASKAP one-off FRB sources**
Contributed talk IAUGA 2022 (online):	**Spectral depolarisation of one-off ASKAP FRBs.**
NRAO Summer School 2022 (online):	**18th NRAO Synthesis Imaging Summer School**

Skills

Coding (proficient)	Python, LaTeX, FORTRAN
Coding (intermediate)	C, C++
Coding (basic)	VHDL, CUDA
Misc.	CASA, Miriad, psrchive, tempo2
Languages	English, Kannada, Marathi, Hindi, and Sanskrith

References

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Hawthorn, VIC, Australia 3122

Prof. Adam Deller
Centre for Astrophysics and Supercomputing,
Swinburne University of Technology,
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Dr. Kelly Gourdji
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