Curriculum vitae

Positions held

- **Manly Astrophysics** — Manly, NSW, Australia
  Research Fellow — *May 2021−present*
- **Gravitational Wave Data Centre** — Hawthorn, VIC, Australia
  GW Data Science Senior Project Support — *November 2019−May 2021*
- **Swinburne University of Technology** — Hawthorn, VIC, Australia
  Laureate Fellowship Postdoctoral Research Fellow — *July 2016−November 2019*
- **Bielefeld University** — Bielefeld, Germany
  Humbold Research Fellow @ Faculty of Physics — *Sep. 2014− June 2016*
- **Max Planck Society** — Bonn, Germany
  Postdoctoral Researcher @ MPI for Radio Astronomy — *May 2013− August 2014*
- **Swinburne University of Technology** — Melbourne, VIC, Australia
  Research Assistant @ CAS — *Nov. 2012− Feb. 2013*
- **Swinburne University of Technology** — Melbourne, VIC, Australia
  PhD @ Centre for Astrophysics and Supercomputing — *Feb. 2009 − Nov. 2012*
- **Commonwealth Scientific and Industrial Research Organisation** — Sydney, NSW, Australia
  PhD @ CSIRO Astronomy and Space Sciences — *June 2009 − Nov. 2012*
- **International Max Planck Research School** — Garching near Munich, Germany
  Max Planck Institute for Astrophysics — *Sep. 2007 − Dec. 2008*
- **University of Warsaw** — Warsaw, Poland
  MSc. @ Faculty of Physics — *Sep. 2002 − Jul. 2007*

Invited and solicited presentations

- **Update on J1509+5531 and eclipses of J2051-0827** — Bonn, Germany
  Scintillometry 2019 — *Sep. 2019*
- **PSR J1509+5531: update on the wide angle refractive ESE** — Shanghai, China
  Global Radio Scintillometry Astrophysics 2018 — *Oct. 2018*
- **Australian FRB searches: ASKAP, Molonglo, and Parkes** — Montreal, Canada
  Workshop on Fast Radio Bursts — *June 2017*
- **Properties and formation of eclipsing binary pulsars** — La Laguna, Spain
  EWASS (solicited) — *June 2015*
- **Pulsar observations with LOFAR** — Orléans, France
  Pulsars and their environments — *May 2015*
- **Pulsars** — Bamberg, Germany
  The Variable Sky (AG 2014) — *September 2014*
- **The Basics of Pulsar Timing for Gravitational-wave Detection** — Seoul, Republic of Korea
  Gravitational Waves: New Frontier — *January 2013*

Selected related work experience

- **Leadership and service roles** — multiple
  PPTA Steering Committee member; ATUC member — *2016 – 2019*
- **Backend and observing system development** — Effelsberg, NRW, Germany
  LOFAR international stations; UTMOST — *May 2013 – present*
- **Writing succesful proposals as PI and Co-I** — multiple
  Thousands of hours on Parkes, GBT, ATCA, LOFAR, VLT — *Mar. 2009 – present*
- **Software development** — C++, C, Java, python
  PSRCHIVE, TEMPO2, PSRDADA, DSPSR — *2002 – present*

Awards

- **Laureate Fellowship Postdoctoral Research Fellow** — *July. 2016 – Nov. 2019*
- **Humboldt Research Fellowship** — *Sep. 2014 – June 2016*
- **Chancellor Research Scholarship** — *Mar. 2009 – Nov. 2012*
- **ATNF Graduate Student Travel Top-up** — *Apr. 2011 – June 2011*
- **Focus Scholarship from Foundation for Polish Science** — *2008*
- **Merit-based scientific scholarship for students** — *2004/05 and 2006/07*

Refereed Publications

I have authored and co-authred 102 refereed publications with over 10,000 citations and Hirsch index of 47. I have also contributed to 34 unrefereed publications such as white letters, book chapters, Astronomer's Telegrams and Research Notes.

[1] Wu, Z., et al. Pulsar scintillation studies with LOFAR. I. The census. *A&A*, 663:A116, 2022.

[2] Dunn, L., et al. Systematic upper limits on the size of missing pulsar glitches in the first UTMOST open data release. *MNRAS*, 512(1):1469, 2022.

[3] Antoniadis, J., et al. The International Pulsar Timing Array second data release: Search for an isotropic gravitational wave background. *MNRAS*, 510(4):4873, 2022.

[4] Kramer, M., et al. The relativistic binary programme on MeerKAT: science objectives and first results. *MNRAS*, 504(2):2094, 2021.

[5] Aggarwal, K., et al. Multiwavelength Follow-up of FRB180309. *ApJ*, 913(2):78, 2021.

[6] Goncharov, B., et al. Identifying and mitigating noise sources in precision pulsar timing data sets. *MNRAS*, 502(1):478, 2021.

[7] Parthasarathy, A., et al. Measurements of pulse jitter and single-pulse variability in millisecond pulsars using MeerKAT. *MNRAS*, 502(1):407, 2021.

[8] Tiburzi, C., et al. The impact of solar wind variability on pulsar timing. *A&A*, 647:A84, 2021.

[9] Kumar, P., et al. Extremely band-limited repetition from a fast radio burst source. *MNRAS*, 500(2):2525, 2021.

[10] Reardon, D. J., et al. Precision Orbital Dynamics from Interstellar Scintillation Arcs for PSR J0437-4715. *ApJ*, 904(2):104, 2020.

[11] Donner, J. Y., et al. Dispersion measure variability for 36 millisecond pulsars at 150 MHz with LOFAR. *A&A*, 644:A153, 2020.
[12] Bailes, M., et al. The MeerKAT telescope as a pulsar facility: System verification and early science results from MeerTime. *Publ. Astron. Soc. Aust.*, 37:e028, 2020.
[13] Kerr, M., et al. The Parkes Pulsar Timing Array project: second data release. *Publ. Astron. Soc. Aust.*, 37:e020, 2020.
[14] James, C. W., et al. Which bright fast radio bursts repeat? *MNRAS*, 495(2):2416, 2020.
[15] Macquart, J. P., et al. A census of baryons in the Universe from localized fast radio bursts. *Nature*, 581(7809):391, 2020.
[16] Parthasarathy, A., et al. Timing of young radio pulsars - II. Braking indices and their interpretation. *MNRAS*, 494(2):2012, 2020.
[17] Lower, M. E., et al. The UTMOST pulsar timing programme - II. Timing noise across the pulsar population. *MNRAS*, 494(1):228, 2020.
[18] James, C. W., et al. Measurement of the Rate Distribution of the Population of Repeating Fast Radio Bursts: Implications for Progenitor Models. *ApJ Lett*, 895(1):L22, 2020.
[19] Hobbs, G., et al. An ultra-wide bandwidth (704 to 4 032 MHz) receiver for the Parkes radio telescope. *Publ. Astron. Soc. Aust.*, 37:e012, 2020.
[20] Thrane, E., et al. Ultrarelativistic astrophysics using multimessenger observations of double neutron stars with LISA and the SKA. *MNRAS*, 493(4):5408, 2020.
[21] Venkatraman Krishnan, V., et al. The UTMOST survey for magnetars, intermittent pulsars, RRATs, and FRBs - I. System description and overview. *MNRAS*, 492(4):4752, 2020.
[22] Cieślar, M., et al. Markov Chain Monte Carlo population synthesis of single radio pulsars in the Galaxy. *MNRAS*, 492(3):4043, 2020.
[23] Hobbs, G., et al. A pulsar-based time-scale from the International Pulsar Timing Array. *MNRAS*, 491(4):5951, 2020.
[24] Venkatraman Krishnan, V., et al. Lense-Thirring frame dragging induced by a fast-rotating white dwarf in a binary pulsar system. *Science*, 367(6477):577, 2020.
[25] Perera, B. B. P., et al. The International Pulsar Timing Array: second data release. *MNRAS*, 490(4):4666, 2019.
[26] Kumar, P., et al. Faint Repetitions from a Bright Fast Radio Burst Source. *ApJ Lett*, 887(2):L30, 2019.
[27] Polzin, E. J., et al. Long-term variability of a black widow's eclipses - A decade of PSR J2051-0827. *MNRAS*, 490(1):889, 2019.
[28] Agarwal, D., et al. A fast radio burst in the direction of the Virgo Cluster. *MNRAS*, 490(1):1, 2019.
[29] Parthasarathy, A., et al. Timing of young radio pulsars - I. Timing noise, periodic modulation, and proper motion. *MNRAS*, 489(3):3810, 2019.
[30] Farah, W., et al. Five new real-time detections of fast radio bursts with UTMOST. *MNRAS*, 488(3):2989, 2019.
[31] Osłowski, S., et al. Commensal discovery of four fast radio bursts during Parkes Pulsar Timing Array observations. *MNRAS*, 488(1):868, 2019.
[32] Bannister, K. W., et al. A single fast radio burst localized to a massive galaxy at cosmological distance. *Science*, 365(6453):565, 2019.
[33] Tiburzi, C., et al. On the usefulness of existing solar wind models for pulsar timing corrections. *MNRAS*, 487(1):394, 2019.

[34] Jankowski, F., et al. The UTMOST pulsar timing programme I: Overview and first results. *MNRAS*, 484(3):3691, 2019.
[35] Gotthelf, E. V., et al. The 2018 X-Ray and Radio Outburst of Magnetar XTE J1810-197. *ApJ Lett*, 874(2):L25, 2019.
[36] Donner, J. Y., et al. First detection of frequency-dependent, time-variable dispersion measures. *A&A*, 624:A22, 2019.
[37] Porayko, N. K., et al. Testing the accuracy of the ionospheric Faraday rotation corrections through LOFAR observations of bright northern pulsars. *MNRAS*, 483(3):4100, 2019.
[38] Venkatraman Krishnan, V., et al. Relativistic Spin Precession in the Binary PSR J1141-6545. *ApJ Lett*, 873(2):L15, 2019.
[39] James, C. W., et al. The performance and calibration of the CRAFT fly's eye fast radio burst survey. *Publ. Astron. Soc. Aust.*, 36:e009, 2019.
[40] Zhu, W. W., et al. Tests of gravitational symmetries with pulsar binary J1713+0747. *MNRAS*, 482(3):3249, 2019.
[41] Caballero, R. N., et al. Studying the Solar system with the International Pulsar Timing Array. *MNRAS*, 481(4):5501, 2018.
[42] Meyers, B. W., et al. Hunting for Radio Emission from the Intermittent Pulsar J1107-5907 at Low Frequencies. *ApJ*, 869(2):134, 2018.
[43] Porayko, N. K., et al. Parkes Pulsar Timing Array constraints on ultralight scalar-field dark matter. *Phys. Rev. D*, 98(10):102002, 2018.
[44] Shannon, R. M., et al. The dispersion-brightness relation for fast radio bursts from a wide-field survey. *Nature*, 562(7727):386, 2018.
[45] Zhu, X., et al. Inferring the population properties of binary neutron stars with gravitational-wave measurements of spin. *Phys. Rev. D*, 98(4):043002, 2018.
[46] Farah, W., et al. FRB microstructure revealed by the real-time detection of FRB170827. *MNRAS*, 478(1):1209, 2018.
[47] Perera, B. B. P., et al. Improving timing sensitivity in the microhertz frequency regime: limits from PSR J1713+0747 on gravitational waves produced by supermassive black hole binaries. *MNRAS*, 478(1):218, 2018.
[48] Shaifullah, G., et al. Multifrequency behaviour of the anomalous events of PSR J0922+0638. *MNRAS*, 477(1):L25, 2018.
[49] Białkowski, S., et al. Mode switching characteristics of PSR B0329+54 at 150 MHz. *ApSS*, 363(6):110, 2018.
[50] Michilli, D., et al. Low-frequency pulse profile variation in PSR B2217+47: evidence for echoes from the interstellar medium. *MNRAS*, 476(2):2704, 2018.
[51] Andreoni, I., et al. Follow Up of GW170817 and Its Electromagnetic Counterpart by Australian-Led Observing Programmes. *Publ. Astron. Soc. Aust.*, 34:e069, 2017.
[52] Graikou, E., et al. Limits on the mass, velocity and orbit of PSR J1933-6211. *MNRAS*, 471(4):4579, 2017.
[53] Bailes, M., et al. The UTMOST: A Hybrid Digital Signal Processor Transforms the Molonglo Observatory Synthesis Telescope. *Publ. Astron. Soc. Aust.*, 34:e045, 2017.
[54] Abbott, B. P., et al. Multi-messenger Observations of a Binary Neutron Star Merger. *ApJ Lett*, 848(2):L12, 2017.
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[57] Bannister, K. W., et al. The Detection of an Extremely Bright Fast Radio Burst in a Phased Array Feed Survey. *ApJ Lett*, 841(1):L12, 2017.
[58] Lentati, L., et al. Wide-band profile domain pulsar timing analysis. *MNRAS*, 466(3):3706, 2017.
[59] Mereghetti, S., et al. A Deep Campaign to Characterize the Synchronous Radio/X-Ray Mode Switching of PSR B0943+10. *ApJ*, 831(1):21, 2016.
[60] Shaifullah, G., et al. 21 year timing of the black-widow pulsar J2051-0827. *MNRAS*, 462(1):1029, 2016.
[61] McKee, J. W., et al. A glitch in the millisecond pulsar J0613-0200. *MNRAS*, 461(3):2809, 2016.
[62] Shannon, R. M., et al. The Disturbance of a Millisecond Pulsar Magnetosphere. *ApJ Lett*, 828(1):L1, 2016.
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[66] Desvignes, G., et al. High-precision timing of 42 millisecond pulsars with the European Pulsar Timing Array. *MNRAS*, 458(3):3341, 2016.
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[68] Verbiest, J. P. W., et al. The International Pulsar Timing Array: First data release. *MNRAS*, 458(2):1267, 2016.
[69] Caballero, R. N., et al. The noise properties of 42 millisecond pulsars from the European Pulsar Timing Array and their impact on gravitational-wave searches. *MNRAS*, 457(4):4421, 2016.
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[71] Pilia, M., et al. Wide-band, low-frequency pulse profiles of 100 radio pulsars with LOFAR. *A&A*, 586:A92, 2016.
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[77] Shannon, R. M., et al. Gravitational waves from binary supermassive black holes missing in pulsar observations. *Science*, 349(6255):1522, 2015.
[78] Karastergiou, A., et al. Limits on fast radio bursts at 145 MHz with ARTEMIS, a real-time software backend. *MNRAS*, 452(2):1254, 2015.
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[93] van Straten, W., et al. Pulsar Data Analysis with PSRCHIVE. *Astronomical Research and Technology*, 9(3):237, 2012.

[94] Osłowski, S., et al. High signal-to-noise ratio observations and the ultimate limits of precision pulsar timing. *MNRAS*, 418(2):1258, 2011.

[95] Yan, W. M., et al. Rotation measure variations for 20 millisecond pulsars. *ApSS*, 335(2):485, 2011.

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[97] Yardley, D. R. B., et al. On detection of the stochastic gravitational-wave background using the Parkes pulsar timing array. *MNRAS*, 414(2):1777, 2011.

[98] Osłowski, S., et al. Population synthesis of double neutron stars. *MNRAS*, 413(1):461, 2011.

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[100] Hobbs, G., et al. The International Pulsar Timing Array project: using pulsars as a gravitational wave detector. *Classical and Quantum Gravity*, 27(8):084013, 2010.

[101] Hobbs, G., et al. The PULSE@Parkes Project: a New Observing Technique for Long-Term Pulsar Monitoring. *Publ. Astron. Soc. Aust.*, 26(4):468, 2009.

[102] Osłowski, S., et al. Gravitational lensing as a probe of compact object populations in the Galaxy. *A&A*, 478(2):429, 2008.