

## Rene P. Breton

### PERSONAL INFORMATION

Date of birth	1 November 1980	Nationality	Canadian / British
Website	www.renebreton.org	ORCID	0000-0001-8522-4983
Twitter	@BretonRene		

### WORK EXPERIENCE

2018 — Head of Research, Department of Physics and Astronomy, The University of Manchester, UK  
2020 — Professor, Physics & Astronomy, The University of Manchester, UK  
2017 — 2020 Reader, Physics & Astronomy, The University of Manchester, UK  
2014 — 2017 Lecturer, Physics & Astronomy, The University of Manchester, UK  
2014 — 2016 Marie Curie Fellow, Physics & Astronomy, The University of Manchester, UK  
2013 — 2014 Lecturer, Physics & Astronomy, University of Southampton, UK  
2012 — 2013 Postdoctoral Research Fellow, Physics & Astronomy, University of Southampton, UK  
2008 — 2011 Postdoctoral Research Fellow, Astronomy, University of Toronto, Canada

### EDUCATION

2003 — 2009 PhD, Physics, McGill University, Canada, Supervisor: Vicky Kaspi  
2000 — 2003 BSc (Hons), Physics, Université Laval, Canada

### FUNDING ID

2018 — 2020 STFC Newton Fund: *STFC UK-Thailand Capacity Building* [£550k, co-I; Manchester “PI”]  
2018 — 2020 STFC GCRF Foundation call grant: *Parthenium in Pakistan* [£630k, PI]  
2018 — 2020 STFC GCRF Foundation call grant: *DARA Global Network* [£412k, co-I]  
2017 — 2023 ERC Starter Grant: *Spiders* [€2M, PI]  
2017 — 2020 STFC Consolidated Grant (co-I on funded case #2.5) [£444k, 3yr PDRA, 0.75 FTE staff]  
2017 — 2020 STFC Newton Fund (Invitation Only): *UK-Africa Data Science* [£1.60M, co-I]  
2017 — 2021 STFC Urgency Grant Open Call: *DARA2* [£2.86M, co-I]  
2017 — 2019 Host: Newton International Fellowship [Fellow: Mark Kennedy]  
2017 — 2019 STFC Newton Fund: *Southeast Asia Small Scale Research Grant* [£31.5k, PI]  
2017 — 2018 STFC Newton Fund: *STFC UK-Thailand Capacity Building* [£74k, co-I]  
2017 Royal Astronomical Society Summer Studentship [£1.2k, PI]  
2016 — 2017 STFC Small Public Engagement Awards, STFC [£10k, co-I]  
2015 Royal Astronomical Society Summer Studentship [£1.2k, PI]  
2014 — 2016 Marie Curie International Incoming Fellowship, European Commission [€222k, PI]  
2014 Annual Adventures in Research Grant, University of Southampton [£5.8k, PI]  
2013 Summer studentship, University of Southampton [£2k, PI]

### HONOURS & AWARDS

2011 CASCA, CASCA Annual Meeting, Best Student/Postdoc Presentation Award  
2008 NRC-CNRC / URSI, XXIX URSI General Assembly, Young Scientist Award  
2006 Centre de Recherche en Astrophysique du Quebec, Annual Meeting, Best Student Presentation Award  
2003 McGill University, Graduate Admission Fellowship

### POST-GRADUATE RESEARCH SUPERVISION

2020 — MScR, Pengyue Sun, Title TBD  
2020 — MScR, Fujiang Yu, Title TBD  
2021 — PhD, Tinn Thongmeearkom, Title TBD  
2020 — PhD, Adipol Phosrisom, Title TBD  
2020 — PhD, Oliver Dodge, Title TBD  
2020 — 2021 MPhil, Tinn Thongmeearkom, “Searching for pulsars with MeerKAT”  
2017 — 2021 PhD, James Stringer, “Characterisation of ‘Spider’ pulsar binary properties”  
2015 — 2020 PhD, Thomas Scragg, “Development of use of next generation pulsar timing systems” (co-supervised)

- 2018 — 2020 MScR, Eoin O'Kelly, "Searching for Radio Pulses from the Redback Pulsar Candidate 3FGL J0212.1+5320"
- 2015 — 2019 PhD, Elliott Polzin, "A radio-frequency study of eclipsing pulsar binaries"
- 2014 — 2019 PhD, Charles Walker, "Localising fast transients"
- 2017 — 2018 MScR, Dirk Scholte, "Long-term flux monitoring of pulsars with LOFAR"
- 2017 — 2018 MScR, Susmita Sett, "Search for pulsars in supernova remnants"
- 2016 — 2017 MScR, Maria Moutzouri, "Flux density and spectral variability of pulsars"

#### TEACHING ACTIVITIES

- 2022 — Tutor, Year 2 UG, The University of Manchester
- 2017 — Introduction to Data Science, Year 1/2 UG, The University of Manchester
- 2016 — Tutor, Year 1 UG, The University of Manchester
- 2015 — 2018 Tutor, study abroad, Year 2 UG, The University of Manchester
- 2014 — 2017 Tutor, Year 2 UG, The University of Manchester
- 2013 — 2014 Advanced High-level Programming, PG, University of Southampton
- 2012 — 2014 Stellar Structure and Evolution, Year 3 UG, University of Southampton
- 2013 — 2014 Tutor, Year 1 UG, University of Southampton
- 2005 — 2008 Head teaching assistant, Year 1 UG, Physics laboratories, McGill University

#### INSTITUTIONAL RESPONSIBILITIES

- 2018 — 2021 REF 2021, UOA9 Lead (Physics and Astronomy), The University of Manchester
- 2016 — 2018 Organiser, Schuster Physics Colloquium Series, The University of Manchester
- 2015 — 2018 Coordinator, Peer Assisted Study Sessions in Physics, The University of Manchester
- 2015 — 2018 Organiser, JBCA Astrophysics Colloquium Series, The University of Manchester
- 2012 — 2014 Organiser, Astrophysics journal club, University of Southampton
- 2012 — 2014 Organiser, Astrophysics colloquium series, University of Southampton
- 2010 — 2011 Organiser, Astrophysics journal club, University of Toronto
- 2006 — 2008 Centre de Recherche en Astrophysique du Quebec, Science Board member

#### COMMISSIONS OF TRUST

- 2019 *DARA Global Network*: "Data Science and Radio Astrophysics Workshop", SOC Chair
- 2017 50 Years of Pulsars Conference, LOC member
- 2015 LOFAR Multifrequency Snapshot Sky Survey (MSSS) Workshop, SOC member
- 2015 — 2016 ESO Observing Programmes Committee, Panel D (co-chair Panel D2, 3 terms)
- 2012 — Gemini Canadian Time Allocation Committee (reviewer for conflict of interest proposals)
- 2014 GMRT Time Allocation Committee (selected proposals)
- 2009 CASCA 2009 Annual Meeting, LOC & SOC member
- Referee Nature, ApJ, ApJL, MNRAS, A&A, Proc. of IEEE, Astronomy and Computing, STFC

#### MEMBERSHIP OF SCIENTIFIC SOCIETIES

- 2015 — Royal Astronomical Society (RAS)
- 2012 — 2016 Canadian Astronomical Society (CASCA)
- 2009 — International Astronomical Union (IAU)

#### MAJOR COLLABORATIONS

- 2018 — GOTO
- 2017 — BlackGEM
- 2016 — MeerKAT TRAPUM (Pulsar and Transient Working Group), Fermi Working Group Lead
- 2013 — LOFAR Pulsar Working Group (PWG)
- 2012 — 2015 LOFAR Multifrequency Snapshot Sky Survey (MSSS)
- 2012 — 2015 LOFAR Transient Key Science Project (TKP)

#### KEY RECENT PAPERS

1. Polzin et al., *Long-term variability of a black widow's eclipses - A decade of PSR J2051-0827*, MNRAS, 2019, 490:889-908
2. Nieder et al., *Detection and Timing of Gamma-Ray Pulsations from the 707 Hz Pulsar J0952-0607*, ApJ, 2019, 883:42
3. Kennedy et al., *Kepler K2 observations of the transitional millisecond pulsar PSR J1023+0038*, MNRAS, 2018, 477:1120-1132

4. Bassa et al., LOFAR Discovery of the Fastest-spinning Millisecond Pulsar in the Galactic Field, *ApJL*, 2017, 846:L20
5. Tauris et al., *Formation of Double Neutron Star Systems*, 2017, *ApJ*, 846:170
6. Hernandez Santisteban et al., *An irradiated brown-dwarf companion to an accreting white dwarf*, *Nature*, 2016, 533:366–368
7. Broderick et al., *Low-radio-frequency eclipses of the redback pulsar J2215+5135 observed in the image plane with LOFAR*, *MNRAS*, 2016, 459:2681–2689
8. Heald et al., *The LOFAR Multi-frequency Snapshot Sky Survey (MSSS). I. Survey description and first results*, *A&A*, 582:A123