

# Shamibrata Chatterjee

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## Research Interests:

- The Radio Transient Sky; Fast Radio Bursts; Compact Objects: Neutron Stars.
- Precision Astrometry: Neutron Star Proper Motions and Parallaxes.
- Pulsar Timing Arrays and Nanohertz Gravitational Waves.

## Education:

- 2003 Ph.D. (Astronomy), Cornell University.
- 2000 M.S. (Astronomy), Cornell University.
- 1996 B.Tech. (Electrical Engineering), Indian Institute of Technology, Madras.

## Professional Experience:

- 2015— Senior Research Associate  
Cornell Center for Astrophysics and Planetary Science.
- 2009—2014 Research Associate  
Department of Astronomy and CRSR, Cornell University.
- 2008—2009 Research Scientist and Queen Elizabeth II Fellow  
CSIRO Australia Telescope National Facility.
- 2006—2008 University Postdoctoral Research Fellow  
School of Physics, The University of Sydney.
- 2003—2006 Jansky Fellow  
Harvard-Smithsonian Center for Astrophysics, Cambridge, MA and  
National Radio Astronomy Observatory, Socorro, NM.
- 1999—2003 Graduate Research Assistant  
Department of Astronomy, Cornell University, Ithaca, NY.

## Selected Professional Activities:

- Co-chair, VLA Sky Survey Science Group, 2015—
- Scientific Advisory Council, Next-Generation VLA, 2016—
- NRAO Users Committee, 2013—2017.
- NASA peer review, *Swift* Cycle 12, *Fermi* Cycle 8, *Chandra X-ray Observatory* Cycles 6, 14.
- NSF external reviewer, NRAO-ALMA Program Plan Review, 2012.
- NRAO proposal review, VLA, VLBA, GBT, 2006—2008.
- Guest Editor, “Young Neutron Stars and Supernova Remnants”, *AdvSpRes* 35, 6; 2005.
- Peer reviewer for *Nature*, *Astrophysical Journal*, *Astrophysical Journal Letters*, *Monthly Notices of the Royal Astronomical Society*, *Astronomy & Astrophysics*.

## Teaching Experience:

- 2018 Astro 1199, “Are We Alone? Search for Life in the Universe”; Cornell University.
- 2017, 2018 Astro 2201, “History of the Universe”; Cornell University.
- 2014—2018 Astro 2299, “Search for Life in the Universe”; Cornell University.
- 2008 Physics 1500, “Introduction to Astronomy”; The University of Sydney.
- 2006—2007 Physics 1001 and 1003, “Physics 1”; The University of Sydney.

## Shamibrata Chatterjee: Selected High-Impact Publications

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### Current H-Index: 42

(At least 42 refereed publications with 42 or more citations through 2018.)

1. Stovall K., Freire, P. C. C., **Chatterjee, S.**, et al. (35 authors), “PALFA Discovery of a Highly Relativistic Double Neutron Star Binary”, *ApJ*, **854**, L22, 2018.
2. Michilli, D., Seymour, A., Hessels, J. W. T., Spitler, L. G., Gajjar, V., Archibald, A. M., Bower, G. C., **Chatterjee, S.**, Cordes, J. M., et al. (34 authors), “An extreme magneto-ionic environment associated with the fast radio burst source FRB 121102”, *Nature*, **553**, 182, 2018.
3. Tendulkar, S. P., Bassa, C. G., Cordes, J. M., Bower, G. C., Law, C. J., **Chatterjee, S.**, et al. (24 authors), “The Host Galaxy and Redshift of the Repeating Fast Radio Burst FRB 121102”, *ApJL*, **834**, L7, 2017. ⇒ *The first FRB host redshift; 171 cites.*
4. **Chatterjee, S.**, Law, C. J., Wharton, R. S., et al. (25 authors), “A Direct Localization of a Fast Radio Burst and its Host”, *Nature*, **541**, 58, 2017. ⇒ *The first FRB localization; 189 cites.*
5. Spitler, L. G., Scholz, P., Hessels, J. W. T., Bogdanov, S., Brazier, A., Camilo, F., **Chatterjee, S.**, Cordes, J. M., et al. (24 authors), “A Repeating Fast Radio Burst”, *Nature*, **531**, 202, 2016. ⇒ *At least some FRBs repeat; 254 cites.*
6. Ransom, S. M. et al. (21 authors, including **Chatterjee, S.**), “A Millisecond Pulsar in a Stellar Triple System” *Nature*, **505**, 520, 2014. ⇒ *The discovery of a NS–WD–WD testbed for general relativity; 123 cites.*
7. Knispel, B. et al. (41 authors, including **Chatterjee, S.**), “Pulsar Discovery by Global Volunteer Computing”, *Science*, **329**, 1305, 2010. ⇒ *The first discovery from the Einstein@Home distributed volunteer computing project; 25 cites.*
8. **Chatterjee, S.**, Brisken, W. F., Vlemmings, W. H. T., Goss, W. M., Lazio, T. J. W., Cordes, J. M., Thorsett, S. E., Fomalont, E. B., Lyne, A. G., & Kramer, M., “Precision Astrometry with the VLBA: Parallaxes and Proper Motions for 14 Pulsars”, *ApJ*, **698**, 250–265, 2009. ⇒ *Results from a large astrometry program with the Very Long Baseline Array; 100 cites.*
9. Gaensler, B. M., Madsen, G. J., **Chatterjee, S.**, & Mao, S. A. “The Vertical Structure of Warm Ionised Gas in the Milky Way”, *PASA*, **25**, 184, 2008. ⇒ *Exploiting new parallaxes to estimate the Galactic scale height; 188 cites.*
10. Champion, D. J. et al. (31 authors, including **Chatterjee, S.**), “An eccentric binary millisecond pulsar in the Galactic Plane”, *Science*, **320**, 1309, 2008. ⇒ *A very unusual system discovered by the PALFA survey at Arecibo; 133 cites.*
11. **Chatterjee, S.**, Vlemmings, W. H. T., Brisken, W. F., Lazio, T. J. W., Cordes, J. M., Goss, W. M., Thorsett, S. E., Fomalont, E. B., Lyne, A. G., & Kramer, M., “Getting its Kicks: A VLBA Parallax for the Hyperfast Pulsar B1508+55”, *ApJL*, **630**, L61, 2005. ⇒ *A neutron star velocity in excess of 1000 km/sec challenges theoretical models; 112 cites.*
12. **Chatterjee, S.** & Cordes, J. M., “Smashing the Guitar: An Evolving Neutron Star Bow Shock”, *ApJL*, **600**, L51, 2004. ⇒ *First detection of bow shock nebula evolution using the Hubble Space Telescope; 43 cites.*