

Dr. Ryan S. Lynch

Curriculum Vitae

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Education

Ph.D., Astronomy	University of Virginia	Aug. 2011
M.S., Astronomy	University of Virginia	May 2008
B.S., Astronomy & Astrophysics with Honors	Pennsylvania State University	May 2006
B.S., Physics	Pennsylvania State University	May 2006

Employment and Research Appointments

Scientist	Green Bank Observatory	March 2021–present
Associate Scientist	Green Bank Observatory	March 2018–March 2021
Assistant Scientist	Green Bank Observatory	Oct. 2016–March 2018
Assistant Scientist	National Radio Astronomy Observatory	Jan. 2015–Oct. 2016
Postdoctoral Fellow	West Virginia University	Sept. 2014–Jan. 2015
Postdoctoral Scholar	McGill University	Sept. 2011–Aug. 2014
Graduate Research Assistant	University of Virginia	Sept. 2006–Aug. 2011
Undergraduate Research Assistant	Pennsylvania State University	Sept. 2002–May 2006

Honors and Awards

International Partnership Award for Young Scientists	Chinese Academy of Sciences	2023
Observatory Leadership Cohort Inaugural Class	Associated Universities Inc.	2019
Star Award	Green Bank Observatory	Fall 2016
Research Associate Fellowship	National Research Council	Dec. 2014

Douglas G. and Regina C. Evans Award for Research Achievement	Pennsylvania State University	May 2006
Physics Honor Society	Society of Physics Students	Sept. 2004–May 2006
Golden Key Honor Society	Pennsylvania State University	Oct. 2004–May 2006
Society of Collegiate Scholars	Pennsylvania State University	Sept. 2005–May 2006

Publications

- All Papers: h-index: 61 | m-index: 2.7 | Research Impact Quotient (RIQ): 166
- Lead & Significant Contribution Papers: h-index: 29 | m-index: 1.3 | RIQ: 132
- Total Research Impact (TORI): 13.5

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First Author

- **Lynch, R. S.**, Smith, E. T., and Harrison, M., "Radio Frequency Interference Excision Using Cyclostationary Signal Processing", 2022, Proceedings of the RFI2022 Workshop
- **Lynch, R. S.**, and 39 colleagues, 2018, "The Green Bank North Celestial Cap Pulsar Survey. III. 45 New Pulsar Timing Solutions", *The Astrophysical Journal*, 859, 93
- **Lynch, R. S.**, Archibald, R. F., Kaspi, V. M., and Scholz, P., 2015, "Green Bank Telescope and Swift X-Ray Telescope Observations of the Galactic Center Radio Magnetar SGR J1745-2900", *The Astrophysical Journal*, 806, 266
- **Lynch, R. S.**, and 19 colleagues, 2013, "The Green Bank Telescope 350 MHz Drift-scan Survey II: Data Analysis and the Timing of 10 New Pulsars, Including a Relativistic Binary", *The Astrophysical Journal*, 763, 81
- **Lynch, R. S.**, Lorimer, D. R., Ransom, S. M., and Boyles, J., 2012, "A Population of Non-recycled Pulsars Originating in Globular Clusters", *The Astrophysical Journal*, 756, 78
- **Lynch, R. S.**, Freire, P. C. C., Ransom, S. M., and Jacoby, B. A., 2012, "The Timing of Nine Globular Cluster Pulsars", *The Astrophysical Journal*, 745, 109
- **Lynch, R. S.**, Ransom, S. M., Freire, P. C. C., and Stairs, I. H., 2011, "Six New Recycled Globular Cluster Pulsars Discovered with the Green Bank Telescope", *The Astrophysical Journal*, 734, 89

- **Lynch, R. S.** and Ransom, S. M., 2011, "A New Pulsar in Green Bank Telescope Searches of 10 Globular Clusters", *The Astrophysical Journal*, 730, L11
- **Lynch, R. S.** and Charlton, J. C., 2007, "Physical Properties of Weak Mg II Absorbers at $z \sim 2$ ", *The Astrophysical Journal*, 666, 64
- **Lynch, R. S.**, Charlton, J. C., and Kim, T.-S., 2006, "A Survey of Weak Mg II Absorbers at Redshift $\langle z \rangle = 1.78$ ", *The Astrophysical Journal*, 640, 81

Contributing Author

Contributing Author Refereed Publications

- Agazie, G., and 115 colleagues, 2026, "Erratum: "The NANOGrav 15 yr Data Set: Constraints on Supermassive Black Hole Binaries from the Gravitational-wave Background" (2023, ApJL, 952, L37)", *The Astrophysical Journal Letters*, 1006, L67
- Jacobson-Bell, B., and 63 colleagues, 2026, "The NANOGrav 15 yr and 20 yr Datasets: Timing Events and Pulse Shape Changes", *The Astrophysical Journal*, 1005, 58
- Matt, C., and 111 colleagues, 2026, "Gravitational-wave Measurement of the M_{BH} - M_{bulge} Intrinsic Scatter at High Redshift", *The Astrophysical Journal*, 1006, 63
- Larsen, B., and 55 colleagues, 2026, "The NANOGrav 15 yr Dataset: Customized Chromatic Noise Models", *The Astrophysical Journal*, 1005, 29
- Agazie, G., and 110 colleagues, 2026, "The NANOGrav 15 yr Data Set: Piecewise Power-law Reconstruction of the Gravitational-wave Background", *The Astrophysical Journal Letters*, 1004, L40
- Lam, M. T., and 49 colleagues, 2026, "The NANOGrav 15 yr Dataset: A Case Study for Simplified Dispersion Measure Modeling for PSR J1455–3330 and the Impact on Gravitational Wave Sensitivity", *The Astrophysical Journal*, 1004, 118
- Agazie, G. Y., and 52 colleagues, 2026, "CHIME-o-Grav: Wideband Timing of Four Millisecond Pulsars from the NANOGrav 15 yr Dataset", *The Astrophysical Journal*, 1002, 2
- Hazboun, J. S., and 66 colleagues, 2026, "The NANOGrav 12.5 yr Dataset: Chromatic Noise Characterization and Mitigation with Time-domain Kernels", *The Astrophysical Journal*, 1003, 34
- Zhang, J., and 15 colleagues, 2026, "Discovery of a millisecond pulsar with a CO white dwarf companion", *Science China Physics, Mechanics, and Astronomy*, 69, 279511

- Lewis, E. F., and 25 colleagues, 2026, "Multi-method Timing of Transient Radio Pulsars with the GBT350 and GBNCC Surveys", *The Astrophysical Journal*, 1001, 153
- Chen, Y., and 110 colleagues, 2026, "Inference on inner galaxy structure via gravitational waves from supermassive binaries", *Nature Astronomy*, 10, 554
- Taylor, J. D., and 52 colleagues, 2026, "Searching for Exotrojans in Pulsar Systems", *The Astrophysical Journal*, 1000, 82
- Sosa Fiscella, S. V., and 49 colleagues, 2026, "The NANOGrav 15 yr Dataset: Improved Timing Precision with Very Long Baseline Interferometry Astrometric Priors", *The Astrophysical Journal*, 999, 156
- Matt, C., and 106 colleagues, 2026, "Inferring M_{BH} - M_{bulge} Evolution from the Gravitational-wave Background", *The Astrophysical Journal*, 997, 188
- Chen, Y., and 110 colleagues, 2026, "Inference on inner galaxy structure via gravitational waves from supermassive binaries", *Nature Astronomy*,
- Agarwal, N., and 121 colleagues, 2026, "The NANOGrav 15 yr Dataset: Targeted Searches for Supermassive Black Hole Binaries", *The Astrophysical Journal*, 998, L11
- Corcoran, K. A., Ransom, S. M., Rosenthal, A. C., DeCesar, M. E., Freire, P. C. C., Hessels, J. W. T., Lynch, R. S., Padmanabh, P. V., and Stairs, I. H., 2026, "A Novel Technique for Long-term Timing of Redback Millisecond Pulsars", *The Astrophysical Journal*, 998, 161
- Dey, L., and 51 colleagues, 2026, "The NANOGrav 15 yr Dataset: Search for Gravitational Scattering of Pulsars by Free-floating Objects in Interstellar Space", *The Astrophysical Journal*, 997, 116
- Zhang, L., and 10 colleagues, 2025, "Sensitive constraints on coherent radio emission from five isolated white dwarfs", *Science China Physics, Mechanics, and Astronomy*, 68, 129513
- Turner, J. E., Dolch, T., Demorest, P. B., Lynch, R. S., Stinebring, D. R., Jessup, C., Jones, N., and Scheithauer, C., 2025, "Pulsar Cyclic Spectroscopy in the Partial-deconvolution Regime: Benefits and Limitations", *The Astrophysical Journal*, 989, 228
- Agazie, G., and 104 colleagues, 2025, "The NANOGrav 15 yr Data Set: Search for Gravitational-wave Memory", *The Astrophysical Journal*, 987, 5
- Lewis, E. F., Blumer, H., Lynch, R. S., and McLaughlin, M. A., 2025, "Multifrequency Radio Observations of the Magnetar Swift J1818.0–1607", *The Astrophysical Journal*, 988, 92

- Geiger, A., and 35 colleagues, 2025, "The NANOGrav 12.5 yr Data Set: Probing Interstellar Turbulence and Precision Pulsar Timing with PSR J1903+0327", *The Astrophysical Journal*, 986, 191
- Fiore, W., and 48 colleagues, 2025, "Pulse Profile Variability of PSR J1022+1001 in NANOGrav Data", *The Astrophysical Journal*, 984, 139
- Agazie, G., and 106 colleagues, 2025, "The NANOGrav 15 yr Data Set: Harmonic Analysis of the Pulsar Angular Correlations", *The Astrophysical Journal*, 985, 99
- Donlon, T., and 55 colleagues, 2025, "The Anomalous Acceleration of PSR J2043+1711: Long-period Orbital Companion or Stellar Flyby?", *The Astrophysical Journal*, 983, 62
- Rosenthal, A. C., and 14 colleagues, 2025, "A 34 yr Timing Solution of the Redback Millisecond Pulsar Terzan 5A", *The Astrophysical Journal*, 982, 170
- Saffer, A., and 10 colleagues, 2025, "A Lower Mass Estimate for PSR J0348+0432 Based on CHIME/Pulsar Precision Timing", *The Astrophysical Journal*, 983, L20
- Agazie, G., and 103 colleagues, 2025, "The NANOGrav 15 yr dataset: Posterior predictive checks for gravitational-wave detection with pulsar timing arrays", *Physical Review D*, 111, 042011
- Agazie, G., and 104 colleagues, 2025, "The NANOGrav 15 Yr Data Set: Removing Pulsars One by One from the Pulsar Timing Array", *The Astrophysical Journal*, 978, 168
- Agazie, G., and 104 colleagues, 2025, "The NANOGrav 15 yr Data Set: Running of the Spectral Index", *The Astrophysical Journal*, 978, L29
- Agazie, G., and 99 colleagues, 2025, "The NANOGrav 15 yr Data Set: Looking for Signs of Discreteness in the Gravitational-wave Background", *The Astrophysical Journal*, 978, 31
- Dey, L., and 34 colleagues, 2024, "Exploring Pulsar Timing Precision: A Comparative Study of Polarization Calibration Methods for NANOGrav Data from the Green Bank Telescope", *The Astrophysical Journal*, 977, 114
- Feng, Y., and 27 colleagues, 2024, "An Extremely Active Repeating Fast Radio Burst Source in a Likely Nonmagneto-ionic Environment", *The Astrophysical Journal*, 974, 296
- Larsen, B., and 63 colleagues, 2024, "The NANOGrav 15 yr Data Set: Chromatic Gaussian Process Noise Models for Six Pulsars", *The Astrophysical Journal*, 972, 49
- McEwen, A. E., and 43 colleagues, 2024, "The Green Bank 820 MHz Pulsar Survey. I. Survey Overview and Initial Results", *The Astrophysical Journal*, 969, 118

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- Sosa Fiscella, S. V., and 30 colleagues, 2024, "The NANOGrav 12.5-Year Data Set: Dispersion Measure Misestimations with Varying Bandwidths", *The Astrophysical Journal*, 966, 95
- Johnson, A. D., and 97 colleagues, 2024, "NANOGrav 15-year gravitational-wave background methods", *Physical Review D*, 109, 103012
- Agazie, G., and 199 colleagues, 2024, "Comparing Recent Pulsar Timing Array Results on the Nanohertz Stochastic Gravitational-wave Background", *The Astrophysical Journal*, 966, 105
- Jennings, R. J., and 43 colleagues, 2024, "An Unusual Pulse Shape Change Event in PSR J1713+0747 Observed with the Green Bank Telescope and CHIME", *The Astrophysical Journal*, 964, 179
- Agazie, G., and 90 colleagues, 2024, "The NANOGrav 12.5 yr Data Set: Search for Gravitational Wave Memory", *The Astrophysical Journal*, 963, 61
- Agazie, G., and 88 colleagues, 2024, "The NANOGrav 12.5 yr Data Set: A Computationally Efficient Eccentric Binary Search Pipeline and Constraints on an Eccentric Supermassive Binary Candidate in 3C 66B", *The Astrophysical Journal*, 963, 144
- Agazie, G., and 99 colleagues, 2024, "The NANOGrav 15 yr Data Set: Search for Transverse Polarization Modes in the Gravitational-wave Background", *The Astrophysical Journal*, 964, L14
- McEwen, A. E., and 30 colleagues, 2024, "The Green Bank North Celestial Cap Survey. IX. Timing Follow-up for 128 Pulsars", *The Astrophysical Journal*, 962, 167
- Bécsy, B., and 95 colleagues including **Lynch, R. S.**, 2023, "How to Detect an Astrophysical Nanohertz Gravitational-Wave Background", *The Astrophysical Journal*, 959, 9
- The International Pulsar Timing Array Collaboration, and 244 colleagues including **Lynch, R. S.**, 2023, "Comparing recent PTA results on the nanohertz stochastic gravitational wave background", *arXiv e-prints*, arXiv:2309.00693
- Agazie, G., and 114 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Constraints on Supermassive Black Hole Binaries from the Gravitational-wave Background", *The Astrophysical Journal*, 952, L37

- Margot, J.-L., and 74 colleagues including **Lynch, R. S.**, 2023, "A Search for Technosignatures Around 11,680 Stars with the Green Bank Telescope at 1.15-1.73 GHz", *The Astrophysical Journal*, 166, 206
- Afzal, A., and 123 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Search for Signals from New Physics", *The Astrophysical Journal*, 951, L11
- Arzoumanian, Z., and 78 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 12.5 yr Data Set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries", *The Astrophysical Journal*, 951, L28
- Agazie, G., and 98 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries", *The Astrophysical Journal*, 951, L50
- Agazie, G., and 114 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Evidence for a Gravitational-wave Background", *The Astrophysical Journal*, 951, L8
- Agazie, G., and 100 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Observations and Timing of 68 Millisecond Pulsars", *The Astrophysical Journal*, 951, L9
- Agazie, G., and 91 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Detector Characterization and Noise Budget", *The Astrophysical Journal*, 951, L10
- Agazie, G., and 92 colleagues including **Lynch, R. S.**, 2023, "The NANOGrav 15 yr Data Set: Search for Anisotropy in the Gravitational-Wave Background", *The Astrophysical Journal*, 956, L3
- Falxa, M., and 127 colleagues including **Lynch, R. S.**, 2023, "Searching for continuous Gravitational Waves in the second data release of the International Pulsar Timing Array", *Monthly Notices of the Royal Astronomical Society*, 521, 5077
- Fiore, W., and 28 colleagues including **Lynch, R. S.**, 2023, "The Green Bank North Celestial Cap Survey. VIII. 21 New Pulsar Timing Solutions", *arXiv e-prints*, arXiv:2305.13624
- Anna-Thomas, R., and 29 colleagues including **Lynch, R. S.**, 2023, "Magnetic field reversal in the turbulent environment around a repeating fast radio burst", *Science*, 380, 599
- Swiggum, J. K., and 24 colleagues including **Lynch, R. S.**, 2023, "The Green Bank North Celestial Cap Survey. VII. 12 New Pulsar Timing Solutions", *The Astrophysical Journal*, 944, 154
- Turner, J. E., Stinebring, D. R., McLaughlin, M. A., Archibald, A. M., Dolch, T., and Lynch, R. S., 2023, "Scattering Delay Mitigation in High-accuracy Pulsar Timing: Cyclic Spectroscopy Techniques", *The Astrophysical Journal*, 944, 191

- Smith, E., **Lynch, R. S.**, and Pisano, D. J., "Simulating Spectral Kurtosis Mitigation Against Realistic RFI Signals", 2022, Proceedings of the RFI2022 Workshop
- Manoharan, P. K., and 10 colleagues including **Lynch, R. S.**, 2022, "Probing the Plasma Tail of Interstellar Comet 2I/Borisov", *The Planetary Science Journal*, 3, 266
- Martsen, A. R., Ransom, S. M., DeCesar, M. E., Freire, P. C. C., Hessels, J. W. T., Ho, A. Y. Q., Lynch, R. S., Stairs, I. H., and Wang, Y., 2022, "Radio Pulse Profiles and Polarization of the Terzan 5 Pulsars", *The Astrophysical Journal*, 941, 22
- Smith, E., Lynch, R. S., and Pisano, D. J., 2022, "Simulating Spectral Kurtosis Mitigation against Realistic Radio Frequency Interference Signals", *The Astronomical Journal*, 164, 123
- Hazboun, J. S., and 31 colleagues including **Lynch, R. S.**, 2022, "Bayesian Solar Wind Modeling with Pulsar Timing Arrays", *The Astrophysical Journal*, 929, 39
- Antoniadis, J., and 125 colleagues including **Lynch, R. S.**, 2022, "The International Pulsar Timing Array second data release: Search for an isotropic gravitational wave background", *Monthly Notices of the Royal Astronomical Society*, 510, 4873
- Feng, Y., and 25 colleagues including **Lynch, R. S.**, 2022, "Frequency-dependent polarization of repeating fast radio bursts—implications for their origin", *Science*, 375, 1266
- Douglas, A., and 20 colleagues including **Lynch, R. S.**, 2022, "Two New Black Widow Millisecond Pulsars in M28", *The Astrophysical Journal*, 927, 126
- Wahl, H. M., and 30 colleagues including **Lynch, R. S.**, 2022, "The NANOGrav 12.5 yr Data Set: Polarimetry and Faraday Rotation Measures from Observations of Millisecond Pulsars with the Green Bank Telescope", *The Astrophysical Journal*, 926, 168
- Parent, E., and 33 colleagues including **Lynch, R. S.**, 2022, "Study of 72 Pulsars Discovered in the PALFA Survey: Timing Analysis, Glitch Activity, Emission Variability, and a Pulsar in an Eccentric Binary", *The Astrophysical Journal*, 924, 135
- Arzoumanian, Z., and 71 colleagues including **Lynch, R. S.**, 2021, "The NANOGrav 12.5-year Data Set: Search for Non-Einsteinian Polarization Modes in the Gravitational-wave Background", *The Astrophysical Journal*, 923, L22
- Arzoumanian, Z., and 65 colleagues including **Lynch, R. S.**, 2021, "Searching for Gravitational Waves from Cosmological Phase Transitions with the NANOGrav 12.5-Year Dataset", *Physical Review Letters*, 127, 251302
- Agazie, G. Y., and 29 colleagues including **Lynch, R. S.**, 2021, "The Green Bank Northern Celestial Cap Pulsar Survey. VI. Discovery and Timing of PSR J1759+5036: A Double Neutron Star Binary Pulsar", *The Astrophysical Journal*, 922, 35

- Turner, J. E., and 35 colleagues including **Lynch, R. S.**, 2021, "The NANOGrav 12.5 Year Data Set: Monitoring Interstellar Scattering Delays", *The Astrophysical Journal*, 917, 10
- Dolch, T., and 10 colleagues including **Lynch, R. S.**, 2021, "Deconvolving Pulsar Signals with Cyclic Spectroscopy: A Systematic Evaluation", *The Astrophysical Journal*, 913, 98
- Arzoumanian, Z., and 56 colleagues including **Lynch, R. S.**, 2021, "The NANOGrav 11 yr Data Set: Limits on Supermassive Black Hole Binaries in Galaxies within 500 Mpc", *The Astrophysical Journal*, 914, 121
- Pol, N. S., and 52 colleagues including **Lynch, R. S.**, 2021, "Astrophysics Milestones for Pulsar Timing Array Gravitational-wave Detection", *The Astrophysical Journal*, 911, L34
- Palliyaguru, N. T., Agarwal, D., Golpayegani, G., Lynch, R., Lorimer, D. R., Nguyen, B., Corsi, A., and Burke-Spolaor, S., 2021, "A targeted search for repeating fast radio bursts associated with gamma-ray bursts", *Monthly Notices of the Royal Astronomical Society*, 501, 541
- Margot, J.-L., and 39 colleagues including **Lynch, R. S.**, 2021, "A Search for Technosignatures around 31 Sun-like Stars with the Green Bank Telescope at 1.15-1.73 GHz", *The Astronomical Journal*, 161, 55
- Alam, M. F., and 70 colleagues including **Lynch, R. S.**, 2021, "The NANOGrav 12.5 yr Data Set: Observations and Narrowband Timing of 47 Millisecond Pulsars", *The Astrophysical Journal Supplement Series*, 252, 4
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- Arzoumanian, Z., and 61 colleagues including **Lynch, R. S.**, 2020, "The NANOGrav 12.5 yr Data Set: Search for an Isotropic Stochastic Gravitational-wave Background", *The Astrophysical Journal*, 905, L34
- Parent, E., and 28 colleagues including **Lynch, R. S.**, 2020, "First Discovery of a Fast Radio Burst at 350 MHz by the GBNCC Survey", *The Astrophysical Journal*, 904, 92
- Arzoumanian, Z., and 59 colleagues including **Lynch, R. S.**, 2020, "Multimessenger Gravitational-wave Searches with Pulsar Timing Arrays: Application to 3C 66B Using the NANOGrav 11-year Data Set", *The Astrophysical Journal*, 900, 102

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- Swiggum, J. K., and 18 colleagues including **Lynch, R. S.**, 2020, "Erratum: "A Multiwavelength Study of Nearby Millisecond Pulsar PSR J1400-1431: Improved Astrometry and an Optical Detection of Its Cool White Dwarf Companion" (2017, ApJ, 847, 25)", *The Astrophysical Journal*, 895, 150
- McEwen, A. E., and 25 colleagues including **Lynch, R. S.**, 2020, "The Green Bank North Celestial Cap Pulsar Survey. V. Pulsar Census and Survey Sensitivity", *The Astrophysical Journal*, 892, 76
- Vallisneri, M., and 63 colleagues including **Lynch, R. S.**, 2020, "Modeling the Uncertainties of Solar System Ephemerides for Robust Gravitational-wave Searches with Pulsar-timing Arrays", *The Astrophysical Journal*, 893, 112
- Behrens, E. A., and 29 colleagues including **Lynch, R. S.**, 2020, "The NANOGrav 11 yr Data Set: Constraints on Planetary Masses Around 45 Millisecond Pulsars", *The Astrophysical Journal*, 893, L8
- Hobbs, G., and 58 colleagues including **Lynch, R. S.**, 2020, "A pulsar-based time-scale from the International Pulsar Timing Array", *Monthly Notices of the Royal Astronomical Society*, 491, 5951
- Hazboun, J. S., and 62 colleagues including **Lynch, R. S.**, 2020, "The NANOGrav 11 yr Data Set: Evolution of Gravitational-wave Background Statistics", *The Astrophysical Journal*, 890, 108
- Blumer, H., and 11 colleagues including **Lynch, R. S.**, 2020, "The pulsar search collaboratory: Current status and future prospects", *American Journal of Physics*, 88, 31
- Aggarwal, K., and 60 colleagues including **Lynch, R. S.**, 2020, "The NANOGrav 11 yr Data Set: Limits on Gravitational Wave Memory", *The Astrophysical Journal*, 889, 38
- Cromartie, H. T., and 26 colleagues including **Lynch, R. S.**, 2020, "Relativistic Shapiro delay measurements of an extremely massive millisecond pulsar", *Nature Astronomy*, 4, 72
- Madison, D. R., and 13 colleagues including **Lynch, R. S.**, 2019, "A Deep Targeted Search for Fast Radio Bursts from the Sites of Low-redshift Short Gamma-Ray Bursts", *The Astrophysical Journal*, 887, 252
- Zhu, W. W., and 17 colleagues including **Lynch, R. S.**, 2019, "Mass Measurements for Two Binary Pulsars Discovered in the PALFA Survey", *The Astrophysical Journal*, 881, 165

- Aggarwal, K., and 63 colleagues including **Lynch, R. S.**, 2019, "The NANOGrav 11 yr Data Set: Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries", *The Astrophysical Journal*, 880, 116
- Hessels, J. W. T., and 25 colleagues including **Lynch, R. S.**, 2019, "FRB 121102 Bursts Show Complex Time-Frequency Structure", *The Astrophysical Journal*, 876, L23
- Deneva, J. S., and 47 colleagues including **Lynch, R. S.**, 2019, "High-precision X-Ray Timing of Three Millisecond Pulsars with NICER: Stability Estimates and Comparison with Radio", *The Astrophysical Journal*, 874, 160
- Aloisi, R. J., and 42 colleagues including **Lynch, R. S.**, 2019, "The Green Bank North Celestial Cap Pulsar Survey. IV. Four New Timing Solutions", *The Astrophysical Journal*, 875, 19
- Pinchuk, P., and 18 colleagues including **Lynch, R. S.**, 2019, "A Search for Technosignatures from TRAPPIST-1, LHS 1140, and 10 Planetary Systems in the Kepler Field with the Green Bank Telescope at 1.15-1.73 GHz", *The Astronomical Journal*, 157, 122
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- Lam, M. T., and 27 colleagues including **Lynch, R. S.**, 2019, "The NANOGrav 12.5 yr Data Set: The Frequency Dependence of Pulse Jitter in Precision Millisecond Pulsars", *The Astrophysical Journal*, 872, 193
- Madison, D. R., and 30 colleagues including **Lynch, R. S.**, 2019, "The NANOGrav 11 yr Data Set: Solar Wind Sounding through Pulsar Timing", *The Astrophysical Journal*, 872, 150
- Stovall, K., and 32 colleagues including **Lynch, R. S.**, 2019, "PSR J2234+0611: A New Laboratory for Stellar Evolution", *The Astrophysical Journal*, 870, 74
- Caballero, R. N., and 79 colleagues including **Lynch, R. S.**, 2018, "Studying the Solar system with the International Pulsar Timing Array", *Monthly Notices of the Royal Astronomical Society*, 481, 5501
- Brook, P. R., and 32 colleagues including **Lynch, R. S.**, 2018, "The NANOGrav 11-year Data Set: Pulse Profile Variability", *The Astrophysical Journal*, 868, 122
- Gajjar, V., and 30 colleagues including **Lynch, R. S.**, 2018, "Highest Frequency Detection of FRB 121102 at 4-8 GHz Using the Breakthrough Listen Digital Backend at the Green Bank Telescope", *The Astrophysical Journal*, 863, 2

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Non-refereed Publications

- Corcoran, K. A., Ransom, S. M., and Lynch, R. S., 2023, "No MSP Counterparts Detected in GBT Searches of Spider Candidates 4FGL J0935.3+0901, 4FGL J1627.7+3219, and 4FGL J2212.4+0708", *Research Notes of the American Astronomical Society*, 7, 41
- Nimmo, K., Gajjar, V., Hessels, J. W. T., Law, C. J., **Lynch, R. S.**, Seymour, A. D., and Spitler, L. G., 2020, "No Radio Bursts Detected from FIRST J141918.9+394036 in Green Bank Telescope Observations", *Research Notes of the American Astronomical Society*, 4, 50

- Stairs, I., and 31 colleagues including **Lynch, R. S.**, 2019, "Pulsar Timing Arrays: Gravitational Waves from Supermassive Black Holes and More", *Canadian Long Range Plan for Astronomy and Astrophysics White Papers*, 2020, 16
- Fonseca, E., and 13 colleagues including **Lynch, R. S.**, 2019, "Fundamental Physics with Pulsars", *Canadian Long Range Plan for Astronomy and Astrophysics White Papers*, 2020, 23
- Roshi, A., and 44 colleagues including **Lynch, R. S.**, 2019, "Arecibo Observatory in the Next Decade", *Bulletin of the American Astronomical Society*, 51, 244
- Ransom, S., and 14 colleagues including **Lynch, R. S.**, 2019, "The NANOGrav Program for Gravitational Waves and Fundamental Physics", *Bulletin of the American Astronomical Society*, 51, 195
- **Lynch, R. S.**, and 14 colleagues including **Lynch, R. S.**, 2019, "Advanced Capabilities for the Green Bank Telescope", *Bulletin of the American Astronomical Society*, 51, 151
- Hallinan, G., and 24 colleagues including **Lynch, R. S.**, 2019, "The DSA-2000 — A Radio Survey Camera", *Bulletin of the American Astronomical Society*, 51, 255
- Dolch, T., and 26 colleagues including **Lynch, R. S.**, 2019, "NANOGrav Education and Outreach: Growing a Diverse and Inclusive Collaboration for Low-Frequency Gravitational Wave Astronomy", *Bulletin of the American Astronomical Society*, 51, 254
- **Lynch, R. S.**, Brook, P., Chatterjee, S., Dolch, T., Kramer, M., Lam, M. T., Lewandowska, N., McLaughlin, M., Pol, N., and Stairs, I., 2019, "The Virtues of Time and Cadence for Pulsars and Fast Transients", *Bulletin of the American Astronomical Society*, 51, 461
- Rankin, J., Cordes, J., Demorest, P., Harding, A., Lewandowska, N., Lorimer, D., McLaughlin, M., **Lynch, R. S.**, Olszanski, T., and Ransom, S., 2019, "A Plasma-Physical Understanding of Pulsar Radio Emission Physics", *Bulletin of the American Astronomical Society*, 51, 565
- **Lynch, R. S.**, 2018, "The Green Bank North Celestial Cap Pulsar Survey: Status and Future", *Pulsar Astrophysics the Next Fifty Years*, 337, 13
- Archibald, A. M., Gusinskaia, N. V., Hessels, J. W. T., Lorimer, D. R., **Lynch, R. S.**, Ransom, S. M., and Stairs, I. H., 2018, "Testing the Universality of Free Fall with the Triple System J0337+1715", *Pulsar Astrophysics the Next Fifty Years*, 337, 138
- Price, D. C., and 15 colleagues including **Lynch, R. S.**, 2018, "No Bursts Detected from FRB121102 in Two 5 hr Observing Campaigns with the Robert C. Byrd Green Bank Telescope", *Research Notes of the American Astronomical Society*, 2, 30

- Gusinskaia, N. V., Archibald, A. M., Hessels, J. W. T., Lorimer, D. R., Ransom, S. M., Stairs, I. H., and **Lynch, R. S.**, 2017, "Conquering systematics in the timing of the pulsar triple system J0337+1715: Towards a unique and robust test of the strong equivalence principle", *Journal of Physics Conference Series*, 932, 012003
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- **Lynch, R. S.**, 2015, "Pulsar Timing Arrays", *Journal of Physics Conference Series*, 610, 012017
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- **Lynch, R. S.** and Bank North Celestial Cap Survey Collaborations, 2013, "The hunt for new pulsars with the Green Bank Telescope", *Neutron Stars and Pulsars: Challenges and Opportunities after 80 years*, 291, 41
- Boyles, J., and 15 colleagues including **Lynch, R. S.**, 2011, "New Discoveries from the GBT 350-MHz Drift-Scan Survey", *Radio Pulsars: An Astrophysical Key to Unlock the Secrets of the Universe*, 1357, 32
- **Lynch, R. S.**, Boyles, J. R., Lorimer, D. R., Mnatsakanov, R., Turk, P. J., and Ransom, S. M., 2011, "Non-Recycled Pulsars in Globular Clusters", *Radio Pulsars: An Astrophysical Key to Unlock the Secrets of the Universe*, 1357, 199
- Jenet, F., and 23 colleagues including **Lynch, R. S.**, 2009, "The North American Nanohertz Observatory for Gravitational Waves", *arXiv e-prints*, arXiv:0909.1058
- Demorest, P., and 28 colleagues including **Lynch, R. S.**, 2009, "Gravitational Wave Astronomy Using Pulsars: Massive Black Hole Mergers & the Early Universe", *astro2010: The Astronomy and Astrophysics Decadal Survey*, 2010, 64
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Professional Affiliations

American Astronomical Society	2005–present
International Astronomical Union	2018–present
American Association for the Advancement of Science	2018–present
The North American Nanohertz Observatory for Gravitational Waves	2012–present
The International Pulsar Timing Array	2012–present

Leadership Roles

GBO Telescope Support Group Lead & Line Manager	Aug. 2026–present
Project Scientist: GBT Ultra-wideband Cyclic Spectroscopy Backend	Oct. 2020–2026
Supervisor for GBO Scientific Data Analysts	Aug. 2022–2024
Lead Organizer: AAS Splinter Session–The Advanced Green Bank Telescope: Planning for the Next Decade	Jan. 2020
Lead Organizer: GBO Internal Staff Workshop	Fall 2019
Principal Investigator: NSF ATI Award: New Wide-band Digital Technology and Interference Excision for Radio Astronomy	Oct. 2019–present
Supervisor for GBO Postdoctoral Research Associates	2019–2024
Lead Organizer: AAS Special Session–Frontiers of Pulsar Astrophysics	Jan. 2019
Project Scientist: GBT Ultra-wideband Receiver	Oct. 2016–present
Site Coordinator: GBO/NRAO Summer Student Program	Jan. 2016–2020
Coordinator: GBT Observer Training Workshops	May 2015–2020
Project Scientist: VEGAS Pulsar Modes	Jan. 2015–2018

Scientific Community Service

- National Radio Astronomy Observatory Thesis Award Committee
- Former Member of American Astronomical Society Light Pollution, Radio Interference, and Space Debris Committee
- Former Contributor to International Telecommunications Union Working Party 7D
- Former National Radio Astronomy Observatory Jansky Lecture Committee
- Former National Radio Astronomy Observatory Science and Technology Council member

- Scientific referee for *Nature Astronomy*, *The Astrophysical Journal*, *Monthly Notices of the Royal Astronomical Society*, and *The Astronomical Journal*
- Panel review member for the U.S. National Science Foundation
- Scientific proposal reviewer for the Canadian Natural Sciences and Engineering Research Council
- Scientific proposal reviewer for the Giant Meter Wave Radio Telescope
- Former International Pulsar Timing Array diversity committee member

Software Skills

- Over 20 years of experience using Python for scientific computing
 - Expert in Numpy, Scipy, Astropy, & Matplotlib
- Expert in L^AT_EX
- Proficient in Bash scripting and Linux operating systems
- Experienced in C, C++, HTML, & CSS
- Familiar with Claude Code

Professional Certifications

Certified Scrum Product Owner	Winnow Management	2024
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Scientific Lectures

<i>Nighttime Science Opportunities with FASR</i>	Jan. 2023
FASR Collaboration Meeting	Newark, NJ (Virtual)
<i>A Cyclic Spectroscopy Observing System for the GBT</i>	June 2023
GBO Community Update	Green Bank Observatory, WV (Virtual)
<i>RFI Excision Using Cyclostationary Signal Processing</i>	Oct. 2022
GBO Science Symposium	Green Bank Observatory, WV (Virtual)
<i>RFI Excision Using Cyclostationary Signal Processing</i>	Feb. 2022
RFI2022	Virtual Conference
<i>Recent Results from the NANOGrav Physics Frontiers Center</i>	Nov. 2020
GBO Community Update	Green Bank Observatory, WV (Virtual)
<i>Receivers, Backends, and Archives, Oh My! Lots of News from GBO</i>	Oct. 2020
NANOGrav Collaboration Meeting	Virtual
<i>Cyclostationary Signal Processing in Astronomy</i>	July 2020

Invited Talk	Berkeley SETI Research Center, CA (Virtual)
<i>Pulsar Astronomy at GBO</i>	April 2020
GBO Community Update	Green Bank Observatory, WV (Virtual)
<i>GBT Ultra-wideband Receiver Update</i>	March 2020
NANOGrav Collaboration Meeting	Orlando, FL
<i>Pulsars: Unlocking Nature's Extremes</i>	July 2019
Invited Talk	FAST Observatory, China
<i>The ngVLA as a Precision Pulsar Timing Instrument for NANOGrav</i>	June 2019
Radio/Millimeter Astrophysical Frontiers in the Next Decade	Charlottesville, VA
<i>GBT Ultra-wideband Receiver Update</i>	March 2019
NANOGrav Collaboration Meeting	Bothell, WA
<i>New Wide-band Technologies for Studying Pulsars with Arecibo</i>	Feb. 2019
Arecibo Future's Meeting	San Juan, PR
<i>New Wide-band Technologies for Studying Pulsars with the GBT</i>	Jan. 2019
233 rd Meeting of the American Astronomical Society	Seattle, WA
<i>Ultra-wideband Receiver Update</i>	Oct. 2018
NANOGrav Collaboration Meeting	Green Bank Observatory, WV
<i>Design Considerations for a Pulsar Timing Array Telescope</i>	Nov. 2017
NANOGrav Collaboration Meeting	Easton, PA
<i>Fundamental Physics Over 37 Orders of Magnitude</i>	Oct. 2017
Green Bank Observatory Futures Meeting	Green Bank Observatory, WV
<i>The GBNCC Pulsar Survey: Status and Future</i>	Sept. 2017
Pulsars: The Next 50 Years	Jodrell Bank Observatory, UK
<i>Developments in Pulsar Astronomy</i>	Jul. 2017
U.S.-China Workshop (Invited Speaker)	Charlottesville, VA
<i>Data and Computational Challenges in Pulsar Searches</i>	Feb. 2017
GBO/WVU/Google Symposium	Pittsburgh, PA
<i>(Re)Introducing the Green Bank Observatory</i>	Oct. 2016
NANOGrav Collaboration Meeting	Urbana-Champaign, IL
<i>Pulsar and Transient Science Futures at the GBT</i>	Aug. 2016
Radio Futures Meeting II	Baltimore, MD
<i>NANOGrav: Unlocking the Low Frequency Gravitational Wave Universe</i>	June 2016
Invited Physics Colloquium	Hampton University

<i>VEGAS: The Next Generation Pulsar Backend for the GBT</i>	July 2015
International Pulsar Timing Array Meeting	Katoomba, Australia
<i>The Hunt for New Pulsars and Opening New Frontiers in Astrophysics</i>	July 2014
Physics Colloquium	Naval Research Lab
<i>Pulsar Timing Arrays</i>	May 2014
Invited Physics talk	LISA Symposium X
<i>How the Hunt for New Pulsars Can Open Frontiers in Astrophysics and Our Backyards</i>	April 2014
Invited Physics Colloquium	University of Vermont
<i>NANOGrav MSPs from the GBNCC and PALFA Surveys</i>	Oct. 2013
NANOGrav Fall Science Meeting	Franklin and Marshall College
<i>New MSPs from the PALFA Survey</i>	Jan. 2013
Physical Applications of Millisecond Pulsars	Aspen Center for Physics
<i>The Hunt for New Pulsars with the Green Bank Telescope</i>	Aug. 2012
Invited talk, International Astronomical Union Symposium No. 291	Beijing, China
<i>The Green Bank North Celestial Cap Pulsar Survey</i>	June 2012
International Pulsar Timing Array Science Meeting	Kiama, Australia
<i>The Green Bank North Celestial Cap Pulsar Survey</i>	May 2012
Center for Research in Astrophysics of Quebec Annual Meeting	Quebec City, Quebec
<i>New MSPs Discovered in Large Area Surveys</i>	May 2012
NANOGrav Science Seminar	West Virginia University
<i>An Update on Recent GBT Pulsar Searches</i>	May 2012
Green Bank Science Lunch	Green Bank Observatory
<i>The Hunt for New and Interesting Pulsars with the Green Bank Telescope</i>	Aug. 2011
Dissertation Defense	University of Virginia
<i>The Globular Cluster Pulsar Population</i>	March 2011
The Fab Five Fest Pulsar Conference	Arecibo Observatory
<i>Measuring the Mass of a Globular Cluster MSP</i>	Jan. 2011
Graduate Symposium	University of Virginia
<i>The Study of Globular Cluster Pulsars Using the Green Bank Telescope</i>	Jan. 2011
215 th Meeting of the American Astronomy Society	Washington, D.C.
<i>Recent Results from Pulsar Searches in Globular Clusters</i>	Dec. 2010
Special Seminar	McGill University

New Pulsars Discovered with the GBT
Graduate Symposium

Jan. 2010
University of Virginia

Searching Globular Clusters for New Pulsars
Graduate Symposium

Jan. 2009
University of Virginia

Conference Abstracts

- Turner, J., Dolch, T., Demorest, P., and Lynch, R., 2026, "Exploring The Benefits and Feasibility of Cyclic Spectroscopy in Different Deconvolution Regimes", *American Astronomical Society Meeting Abstracts*, 58, 219.01
- Ransom, S., Lynch, R., White, S., and Simon, B., 2026, "An Ultrawideband Receiver for the Green Bank Telescope", *American Astronomical Society Meeting Abstracts*, 58, 416.06
- Marganian, P., Lynch, R., Hise, T., Jennings, R., Turner, J., Brandt, J., Sizemore, D., Baudler, W., and Morin, K., 2025, "New instrumentation for Cyclic Spectroscopy at the Robert C. Byrd Green Bank Telescope (GBT)", *American Astronomical Society Meeting Abstracts #245*, 245, 145.02
- Smith, E., Chen, K., and Lynch, R., 2025, "Comparing RFI Mitigation Methods for Real-Time Implementation on the Green Bank Telescope", *American Astronomical Society Meeting Abstracts #245*, 245, 145.08
- Wolszczan, A., Lynch, R., and Roshi, A., 2024, "A Search for White Dwarf Planets by Detecting the Unipolar Star-Planet Interaction", *32nd General Assembly International Union (IAUGA 2024)*, 426
- Schmiedeke, A., and 25 colleagues, 2024, "The Green Bank Telescope: An Overview & Look to the Future", *American Astronomical Society Meeting Abstracts #243*, 243, 262.01
- Smith, E., Lynch, R., and Pisano, D., 2024, "Spectral Kurtosis Mitigation of Radio Frequency Interference in Green Bank Telescope Data", *American Astronomical Society Meeting Abstracts #243*, 243, 346.06
- White, S., Watts, G., Bulatek, A., Simon, R., Lynch, R., Harris, M., Nelson, J., Jenson, L., and Ransom, S., 2023, "An Ultra-wideband Feed Horn for the Green Bank Telescope", *2023 International Conference on Electromagnetics in Advanced Applications (ICEAA)*, 89
- Smith, E., Lynch, R., and Pisano, D., 2023, "Impact of Radio Frequency Interference and Real-Time Spectral Kurtosis Mitigation", *American Astronomical Society Meeting Abstracts*, 55, 417.03D

- Margot, J.-L., Li, M., Pinchuk, P., Lynch, R., UCLA SETI Class 2020, UCLA SETI Class 2021, and UCLA SETI Class 2022, 2023, "A search for technosignatures around nearly 10,000 stars with the Green Bank Telescope at 1.15-1.73 GHz", *American Astronomical Society Meeting Abstracts*, 55, 440.02
- O’Neil, K., and 14 colleagues, 2023, "The GBT: An Overview & Look to the Future", *American Astronomical Society Meeting Abstracts*, 55, 101.01
- Lynch, R., and 10 colleagues, 2023, "The Green Bank Telescope 0.7-4 GHz Ultra-wideband Receiver", *American Astronomical Society Meeting Abstracts*, 55, 101.04
- Corcoran, K., Ransom, S., DeCesar, M., Kaur, A., Falcone, A., and Lynch, R., 2023, "Cosmic Arachnology: Ongoing Studies of Redback and Black Widow Pulsars", *American Astronomical Society Meeting Abstracts*, 55, 304.04
- Lynch, R., Smith, E., and Harrison, M., 2023, "Radio Frequency Interference Mitigation using Cyclostationary Signal Processing", *American Astronomical Society Meeting Abstracts*, 55, 365.04
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- O'Neil, K. L., and 14 colleagues including **Lynch, R. S.**, 2019, "The 100m Green Bank Telescope", *American Astronomical Society Meeting Abstracts #234*, 234, 103.05
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- Aloisi, R., and 29 colleagues including **Lynch, R. S.**, 2019, "Clocking Stars with Radio Telescopes: Timing Four Pulsars from the GBNCC Survey", *American Astronomical Society Meeting Abstracts #233*, 233, 153.07
- Swiggum, J., and 15 colleagues including **Lynch, R. S.**, 2019, "New PTA-Caliber Millisecond Pulsars from the GBNCC Survey", *American Astronomical Society Meeting Abstracts #233*, 233, 149.20
- O'Neil, K., and 13 colleagues including **Lynch, R. S.**, 2019, "Tracing Star Formation and Galaxy Evolution with Multi-Pixel Cameras on the GBT", *American Astronomical Society Meeting Abstracts #233*, 233, 260.05
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- Lewandowska, N. and **Lynch, R. S.**, 2017, "High Time Resolution Studies with the GBT", *American Astronomical Society Meeting Abstracts #229*, 229, 242.14
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- Carlberg, J. K., and 21 colleagues including **Lynch, R. S.**, 2011, "Dark Skies, Bright Kids: Year 2", *American Astronomical Society Meeting Abstracts #217*, 217, 158.05
- **Lynch, R. S.**, 2011, "A Study of Globular Cluster Pulsars Using the Green Bank Telescope", *American Astronomical Society Meeting Abstracts #217*, 217, 215.03
- Ries, P., and 14 colleagues including **Lynch, R. S.**, 2010, "'Dark Skies, Bright Kids' - First Year Of Outreach In Rural Virginia", *AAS/Division for Planetary Sciences Meeting Abstracts #42*, 42, 37.08
- Zasowski, G., and 15 colleagues including **Lynch, R. S.**, 2010, "'Dark Skies, Bright Kids' – Astronomy Education and Outreach in Rural Virginia", *American Astronomical Society Meeting Abstracts #215*, 215, 445.01
- Boyles, J., and 12 colleagues including **Lynch, R. S.**, 2010, "Timing Derived Properties Of The First Discoveries From The GBT 350-MHz Pulsar Survey", *American Astronomical Society Meeting Abstracts #215*, 215, 453.10
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- Ganguly, R., and 10 colleagues including **Lynch, R. S.**, 2006, "Intrinsic Absorption in the HST Archive II: Partial Covering and Associated O VI Systems", *American Astronomical Society Meeting Abstracts*, 209, 72.10
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Research and Teaching Grants

Windows on the Universe: Multi-messenger Astronomy Proposal Author ¹	National Science Foundation	2020–present US\$1,303,149
Astronomical Technology and Instrumentation Principal Investigator	National Science Foundation	2019–present US\$745,194
GBT Student Support Program Primary investigator	National Radio Astronomy Observatory	2008–2009 US\$27,400
Graduate Summer Student Program	National Radio Astronomy Observatory	2007 US\$6,200
Teaching Assistantship	University of Virginia Dept. of Astronomy	2006–2008 US\$18,500/yr for two years

Committee Experience

<i>Chair</i> , Scientific Organizing Committee	NANOGrav Collaboration Meeting	April 2025
Scientific Organizing Committee	Science at Low Frequencies VIII	Dec. 2021
Organizing Committee	NANOGrav Student Workshop	March 2019
<i>Chair</i> , Local Organizing Committee	NANOGrav Fall Meeting	Oct. 2018
<i>Chair</i> , Scientific Organizing Committee	NANOGrav Spring Meeting	March 2018
Organizing Committee	Green Bank Observatory Futures Meeting	Oct. 2017
<i>Chair</i> , Organizing Committee	Breakthrough Listen Community Workshop	Oct. 2016
Scientific Organizing Committee	NANOGrav Fall Meeting	Oct. 2014
<i>Chair</i> , Organizing Committee	IPTA Student Workshop	June 2014
Scientific Organizing Committee	NANOGrav Spring Meeting	Feb. 2014
Graduate Admissions Committee	University of Virginia	Dec. 2008–April 2010

Accepted Observing Proposals

Principal Investigator

- “Continuing a Pilot GBT Pulsar Survey of the Galactic Plane”, Green Bank Telescope, GBT24B-373
- “Continuing a Pilot GBT Pulsar Survey of the Galactic Plane”, Green Bank Telescope, GBT24A-396
- “A Pilot GBT Pulsar Survey of the Galactic Plane”, Green Bank Telescope, GBT23A-295
- “Exploring the High Frequency Properties of FRB121102”, Green Bank Telescope, GBT18B-278
- “Characterizing the Orbit of a GBNCC Millisecond Pulsar”, Green Bank Telescope, GBT18A-490
- “Monitoring the Extreme Rotation Measure of FRB121102”, Green Bank Telescope, GBT18A-460
- “Does FRB180301 Repeat?”, Green Bank Telescope, GBT18A-463
- “Multi-frequency GBT Observations of the Repeating Fast Radio Burst FRB 121102”, Green Bank Telescope, GBT17A-319
- “Continuing the 820 MHz GBT Pulsar Survey of Cygnus and the North Galactic Plane”, Green Bank Telescope, GBT17A-320
- “Radio Observations of the New Candidate Magnetar SGR 0755-2933”, Green Bank Telescope, GBT16A-470
- “A Coordinated Campaign to Study the Repeating FRB 121102”, Green Bank Telescope, 16A-464
- “An 820 MHz GBT Pulsar Survey of the Cygnus Region and North Galactic Plane”, Green Bank Telescope, GBT16A-349
- “Characterizing the Nature of the Unique Repeating Fast Radio Burst FRB 121102”, Green Bank Telescope, GBT15B-377
- “Measuring Shapiro Delay in PSR J1938+6604”, Green Bank Telescope, GBT14B-261
- “Continued LOFAR Timing of Discoveries from the GBNCC Pulsar Survey”, LOFAR, LC2_007
- “Target of Opportunity Observations of SGR J1745-29 Following a Radio Burst”, Green Bank Telescope, GBT14A-540
- “Long Term Radio Monitoring of the Magnetar SGR J1745-29”, Green Bank Telescope, GBT14A-388
- “Long-term GBT Timing Campaign of the New Radio Magnetar SGR J1745-2900”, Green Bank Telescope, GBT13A-520
- “Long Term Timing of PSR J0348+0432: A Unique and Powerful Gravitational Laboratory”, Arecibo Observatory, P2786
- “Completing a GBT Timing Campaign of 11 Pulsars Discovered in the PALFA Survey”, Green Bank Telescope, GBT13A-424

- “Continued LOFAR Gridding/Timing of Discoveries from the GBNCC Pulsar Survey”, LOFAR, LC1_035
- “Timing 11 Radio-emitting Neutron Stars Discovered by the PALFA Survey”, Green Bank Telescope, GBT12B-331
- “AE Aquarii: A Pulsar-like White Dwarf?”, Green Bank Telescope, GBT12B-291
- “Deep Searches for Radio Emission from Magnetars”, Green Bank Telescope, GBT12B-265
- “Multi-frequency Follow-up and Positional Improvements for Four New MSPs”, Green Bank Telescope, GBT12A-473
- “Long Term Timing of PSR J0348+0432: An Exquisite Laboratory for Testing Extreme Physics”, Arecibo Observatory, P2650
- “Measuring Shapiro Delay in the Globular Cluster Millisecond Pulsar NGC 6544B”, Green Bank Telescope, GBT11B-044
- “Searching for Pulsars in Ten Globular Clusters Using GUPPI2”, Green Bank Telescope, GBT11A-029
- “Measuring Shapiro Delay in a Globular Cluster Millisecond Pulsar”, Green Bank Telescope, GBT10C-067
- “Long-term Monitoring of Key Drift Scan Pulsars”, Green Bank Telescope, GBT10B-018
- “Exploring the MSP Content of NGC5986”, Green Bank Telescope, GBT10B-017
- “Follow Up of ‘Class B’ Pulsar Candidates from the GBT 350 MHz Drift Scan Survey”, Green Bank Telescope, GBT09C-043
- “Exploring the Benefits of Timing Six New MSPs at L-Band”, Green Bank Telescope, GBT09B-059
- “Searching For New Pulsars in Eight Low Metallicity Globular Clusters”, Green Bank Telescope, GBT09B-045
- “Timing the New GBT 350 MHz Drift Scan Pulsars”, Green Bank Telescope, GBT09B-031
- “Searching for Variability in PSR J0348+04”, Green Bank Telescope, GBT09A-095
- “Follow-Up of a New Mildly Recycled Pulsar”, Arecibo Observatory, P2461
- “Searching for New Pulsars in Six Globular Clusters”, Green Bank Telescope, GBT09A-075
- “Timing of Newly Discovered MSPs in the Globular Cluster NGC6517”, Green Bank Telescope, GBT08C-049
- “Timing the New Pulsars in M22”, Green Bank Telescope, GBT08B-050
- “A Search for New Pulsars in the Globular Cluster Liller 1”, Green Bank Telescope, GBT08B-031
- “Timing of Newly Discovered MSPs in the Globular Cluster NGC6517”, Green Bank Telescope, GBT08A-052

Co-Investigator

- PI: Turner, J., “Cyclic Spectroscopy of Scattered NANOGrav Pulsars: Pilot for CS Observations”, Green Bank Telescope, GBT25B-264
- PI: Zhang, J., “Monitoring the DM and RM decadal evolution of the repeating FRB 20121102A”,

Green Bank Telescope, GBT25A-462

- PI: Li, M., “A search for technosignatures around sun-like stars”, Green Bank Telescope, GBT25A-305
- PI: Liu, M., “Exploring Magnetic Field in Molecular Clouds with Pulsars”, Green Bank Telescope, GBT25A-123
- PI: Dai, S., “Verifying the binary hypothesis of a repeating fast radio burst”, Green Bank Telescope, GBT25A-073
- PI: Zhang, L., “Constrain the orbital parameters for a Millisecond Pulsar J1810-0622 with GBT”, Green Bank Telescope, GBT24B-505
- PI: Zhang, L., “Characterizing of the first radio pulsar associated with the oldest open cluster”, Green Bank Telescope, GBT24B-462
- PI: Gusinskaia, N., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT24B-435
- PI: Feng, Y., “Monitoring the active repeater FRB 20230607A”, Green Bank Telescope, GBT24B-114
- PI: Kumar, P., “ Probing the dynamic environment of FRB20180301A”, Green Bank Telescope, GBT24B-066
- PI: Turner, J., “Cyclic Spectroscopy of Three Pulsars with Considerable Pulse Broadening”, Green Bank Telescope, GBT24B-039
- PI: Feng, Y., “Polarization and spectrum study of FRB 20240209A”, Green Bank Telescope, GBT24A-484
- PI: Zhang, L., “Constrain the orbital parameters for a Millisecond Pulsar J1810-0622 with GBT”, Green Bank Telescope, GBT24A-465
- PI: Liu, M., “Exploring Magnetic Field in Molecular Clouds with Pulsars”, Green Bank Telescope, GBT24A-440
- PI: Hessels, J., “Going low with a high-activity repeating FRB source”, Green Bank Telescope, GBT24A-428
- PI: Sengar, R., “The GBT 820MHz & GBNCC Survey: Pulsar Timing & Candidates Confirmation”, Green Bank Telescope, GBT24A-405
- PI: Cromartie, T., “A GBT Search for Gaia-Selected Binary Pulsars”, Green Bank Telescope, GBT24A-400
- PI: Ransom, S., “Long Term Timing of 76 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT24A-375
- PI: Dai, S., “Monitoring the active repeater FRB 20190520B”, Green Bank Telescope, GBT24A-055
- PI: Liu, M., “Exploring Magnetic Fields in Molecular Clouds with Pulsars”, Green Bank Telescope, GBT23B-288
- PI: Margot, J.-L., “A search for technosignatures around newly discovered exoplanets”, Green Bank Telescope, GBT23B-287
- PI: Gusinskaia, N., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT23B-240

- PI: Ransom, S., “Long Term Timing of 69 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT23B-225
- PI: Kumar, P., “Probing the dynamic environment of FRB20180301A”, Green Bank Telescope, GBT23B-198
- PI: Dai, S., “Monitoring the active repeater FRB 20190520B”, Green Bank Telescope, GBT23B-103
- PI: Fang, J., “A follow-up pulsation search on a Galactic rare narrow-banded source”, Green Bank Telescope, GBT23A-420
- PI: Zhou, D., “Following up two new FRBs discovered from the CRAFTS drift-scan survey”, Green Bank Telescope, GBT23A-419
- PI: Fonseca, E., “Followup Timing of Low-declination GBNCC Pulsars”, Green Bank Telescope, GBT23A-356
- PI: McEwen, A., “The GBT 820MHz Survey: Confirmation of New Pulsar Candidates”, Green Bank Telescope, GBT23A-332
- PI: Lewandowska, N., “A study of potentially new single pulses in the Crab pulsar”, Green Bank Telescope, GBT23A-322
- PI: Archibald, A., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT23A-307
- PI: Pisano, D., “SPC: Mapping the GBT Beam using Pulsars”, Green Bank Telescope, GBT22B-353
- PI: Wolszczan, A., “A search for pulsed emission from the fastest rotating white dwarf WD J2211+1136”, Green Bank Telescope, GBT22B-336
- PI: Zhang, Y., “Search the periodicity of the repeating FRB 20200120E in an M81 globular cluster”, Green Bank Telescope, GBT22B-320
- PI: Zhang, L., “Searching for radio pulsations of a strangely light neutron star”, Green Bank Telescope, GBT22B-315
- PI: Feng, Y., “Polarization study of FRB20121102A”, Green Bank Telescope, GBT22B-312
- PI: Feng, Y., “Polarization and spectrum study of FRB20220912A”, Green Bank Telescope, GBT22B-308
- PI: Zhang, Y., “Search the periodicity of the repeating FRB 20200120E in an M81 globular cluster”, Green Bank Telescope, GBT22B-298
- PI: Feng, Y., “Polarization study of FRB20121102A”, Green Bank Telescope, GBT22B-290
- PI: Zhang, Y., “Search the periodicity of the repeating FRB 20200120E in an M81 globular cluster”, Green Bank Telescope, GBT22B-285
- PI: Ransom, S., “Long Term Timing of 65 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT22B-256
- PI: Seymour, A., “Continued Drift scan for Gas in Galaxies and the Milky Way, Pulsars, & FRBs”, Green Bank Telescope, GBT22B-234
- Fonesca, E., “Followup Timing of Low-declination GBNCC Pulsars”, Green Bank Telescope, GBT22B-215
- PI: Margot, J.-L., “A search for technosignatures around newly discovered exoplanets”,

Green Bank Telescope, GBT22B-209

- PI: Wolszczan, A., “A search for planets around white dwarfs”, Green Bank Telescope, GBT22B-200
- PI: Dai, S., “Monitoring the active repeater FRB 20190520B”, Green Bank Telescope, GBT22B-030
- PI: Feng, Y., “Polarization study of FRB20220529”, Green Bank Telescope, GBT22A-506
- PI: Feng, Y., “Search the periodicity of the repeating FRB 20200120E in an M81 globular cluster”, Green Bank Telescope, GBT22A-502
- PI: Dai, S., “Search the periodicity of rotation measure of the active repeater FRB 20190520B”, Green Bank Telescope, GBT22A-494
- PI: Corcoran, K., “Verifying the Black Widow Nature of the Shortest Period Candidate to Date”, Green Bank Telescope, GBT22A-486
- PI: Li, D., “Polarization study of a potential nearby repeating fast radio burst”, Green Bank Telescope, GBT22A-484
- PI: Li, D., “Polarization study of FRB20121102A”, Green Bank Telescope, GBT22A-483
- PI: DeCesar, M., “Initial Phase Connection for Seven Pulsars in Terzan 1”, Green Bank Telescope, GBT22A-455
- PI: Li, D., “Polarization study of FRB20190417A”, Green Bank Telescope, GBT22A-445
- PI: Sridharan, T., “Path to Precision Astrochemistry with Magnetars II - mm-wave Observations”, Green Bank Telescope, GBT22A-366
- PI: Archibald, A., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT22A-358
- PI: Corcoran, K., “Radio Searches for Four Candidate Spider Binaries”, Green Bank Telescope, GBT22A-355
- PI: Margo, J.-L., “A search for technosignatures around newly discovered exoplanets”, Green Bank Telescope, GBT22A-219
- PI: Richards, D., “Frequency correlation of synchrotron emission from the Crab Nebula and Quasars”, Green Bank Telescope, GBT22A-205
- PI: Wang, Z., “Deciphering a Highly Polarized, Radio Transient Toward the Galactic Plane”, Green Bank Telescope, GBT22A-192
- PI: Dai, S., “Monitoring the active repeater FRB 190520”, Green Bank Telescope, GBT22A-139
- PI: McEwen, A., “Follow-up of New Double Neutron Star Candidate from the Cygnus 820 MHz Survey”, GBT22A-053
- PI: Demorest, P., “The North American Nanohertz Observatory for Gravitational Waves”, Green Bank Telescope, GBT21B-996
- PI: Li, D., “Polarization study of FRB20201124A”, Green Bank Telescope, GBT21B-377
- PI: Minchin, R., “Continued Drift scan for Gas in Galaxies and the Milky Way, Pulsars, & FRBs”, Green Bank Telescope, GBT21B-332
- PI: Ransom, S., “Long Term Timing of 64 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT21B-277

- PI: Parent, E., “Completion of the GBT All-Sky 350-MHz Pulsar Survey (GBNCC)”, Green Bank Telescope, GBT21B-261
- PI: Fonseca, E., “Followup Timing of Low-declination GBNCC Pulsars”, Green Bank Telescope, GBT21B-259
- PI: Wolszczan, A., “A Multiband Mini-survey for Exo-auroral Radio Emission from Ultra-cool Dwarfs”, Green Bank Telescope, GBT21B-237
- PI: Sobey, C., “Studying pulsars discovered in the ‘TULIPP’ targeted survey using LOFAR”, Green Bank Telescope, GBT21B-107
- PI: Demorest, P., “The North American Nanohertz Observatory for Gravitational Waves”, Green Bank Telescope, GBT21A-997
- PI: Li, D., “Polarization study of FRB20201124A”, Green Bank Telescope, GBT21A-416
- PI: McEwen, A., “A New Double Neutron Star from the GBT 820-MHz Pulsar Pilot Survey?”, Green Bank Telescope, GBT21A-405
- PI: DeCesar, M., “Stopgap Timing of Arecibo MSPs with the Green Bank Telescope”, Green Bank Telescope, GBT21A-399
- PI: Parent, E., “Completion of the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, GBT21A-367
- PI: Minchin, R., “A Drift Scan Survey for Gas in Galaxies, the Milky Way, Pulsars, and FRBs”, Green Bank Telescope, GBT21A-352
- PI: Ransom, S., “Long Term Timing of 62 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT21A-344
- PI: Suresh, A., “A Pilot Search for Galactic Transients from VLASS-identified Candidate Sources”, Green Bank Telescope, GBT21A-332
- PI: Archibald, A., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT21A-216
- PI: Blumer, H., “Multifrequency observations of the new radio magnetar Swift J1818.0-1607”, Green Bank Telescope, GBT20B-426
- PI: Gajjar, V., “High-frequency followup of the first periodically active FRB with the GBT”, Green Bank Telescope, GBT20B-394
- PI: Swiggum, J., “Completion of the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, GBT20B-362
- PI: Ransom, S., “Long Term Timing of 60 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT20B-333
- PI: Archibald, A., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT20B-332
- PI: Demorest, P., “The North American Nanohertz Observatory for Gravitational Waves”, Green Bank Telescope, GBT20B-307
- PI: McLaughlin, M., “A Cyclic Spectroscopy Pilot Program: Baseband Observations of Three MSPs”, Green Bank Telescope, GBT20A-588
- PI: Manoharan, P., “Investigating the Plasma Tail Turbulence of Comet ATLAS (C/2019 Y4)”, Green Bank Telescope, GBT20A-549

- PI: Zhou, P., “Searching for pulses from a pulsar candidate in supernova remnant G7.7-3.7”, Green Bank Telescope, GBT20A-406
- PI: DeCesar, M., “Optimizing Pulsar Timing Array Sensitivity to Single Gravitational Wave Sources”, Green Bank Telescope, GBT20A-388
- PI: Margot, J.-L., “A search for technosignatures around Sun-like stars near the plane of the Galaxy”, Green Bank Telescope, GBT20A-375
- PI: Fonseca, E., “Timing of GBNCC Pulsars in Relativistic, Intermediate-Mass Binary Systems”, Green Bank Telescope, GBT20A-350
- PI: DeCesar, M., “A Continued Search for Pulsed Emission from Candidate MSPs in Globular Clusters”, Green Bank Telescope, GBT20A-309
- PI: Smith, E., “Extra Test Data for Radio Frequency Interference Mitigation”, Green Bank Telescope, GBT19B-335
- PI: McLaughlin, M., “A long observation of a unusual binary pulsar”, Green Bank Telescope, GBT19B-327
- PI: Manoharan, P., “Studying the Ion Tail of Comet 2I/Borisov via radio scintillation”, Green Bank Telescope, GBT19B-321
- PI: McLaughlin, M., “Timing Observations of GBNCC Discovered Pulsars”, Green Bank Telescope, GBT19B-320
- PI: Manoharan, P., “Scintillation through the Ion Tail and Coma of the Interstellar Comet 2I/Borisov”, Green Bank Telescope, GBT19B-314
- PI: Wolszczan, A., “A search for planets around white dwarfs”, Green Bank Telescope, GBT19B-309
- PI: McLaughlin, M., “High Cadence Observations of GBNCC Discovered Pulsars”, Green Bank Telescope, GBT19B-306
- PI: Miklave, N., “Low frequency observations to confirm four GALFACTS pulsars & FRB candidates”, Green Bank Telescope, GBT19B-305
- PI: Miklave, N., “Confirming three pulsars and an FRB candidates from GALFACTS survey”, Green Bank Telescope, GBT19B-282
- PI: Ransom, S., “Long Term Timing of 59 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT19B-264
- PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT19B-263
- PI: Seymour, A., “Exploring the Burst Structures of FRB121102 at High Frequencies”, Green Bank Telescope, GBT19B-228
- PI: Smith, E., “Test Data for Radio Frequency Interference Mitigation”, Green Bank Telescope, GBT19A-479
- PI: Bonsall, A., “Drift Scan Survey for Pulsars, FRBs, Radio Transients, and Gas in Galaxies”, Green Bank Telescope, GBT19A-474
- PI: Bonsall, A., “Drift Scan Survey for Pulsars, FRBs, Radio Transients, and Gas in Galaxies”, Green Bank Telescope, GBT19A-374
- PI: DeCesar, M., “A Continued Search for Pulsed Emission from Candidate MSPs in Glob-

- ular Clusters”, Green Bank Telescope, GBT19A-235
- PI: Hessels, J., “Searching for fast radio bursts from FIRST J141918.9+394036”, Green Bank Telescope, GBT18B-347
 - PI: Fonseca, E., “Timing Measurements of Two GBNCC Pulsars in Relativistic Binary Systems”, Green Bank Telescope, GBT18B-280
 - PI: Ransom, S., “Long Term Timing of 58 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT18B-072
 - PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT18B-071
 - PI: Demorest, P., “The North American Nanohertz Observatory for Gravitational Waves”, Green Bank Telescope, GBT18B-226
 - PI: Bonsall, A., “Drift Scan Survey for Pulsars, Fast Radio Bursts, and other Radio Transients”, Green Bank Telescope, GBT18A-478
 - PI: Spitler, L., “Monitoring of FRB 121102 with the GBT, Effelsberg, and Gran Telescopio Canarias”, Green Bank Telescope, GBT18A-473
 - PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT17B-255
 - PI: Palliyaguru, N., “A search for magnetar signatures in a gravitational wave event”, Green Bank Telescope, GBT17B-411
 - PI: Stovall, K., “Continuing the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, GBT17B-325
 - PI: Swiggum, J., “18 GBNCC Discoveries: Probing the Recycled Pulsar Population”, Green Bank Telescope, 17B-285
 - PI: Ransom, S., “Long Term Timing of 58 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT17A-256
 - PI: Price, D., “Simultaneous optical and radio observations of FRB121102”, Green Bank Telescope, 17B-432
 - PI: Lewandowska, N., “Statistical Study of Giant Pulse Emitting Pulsars”, Arecibo Observatory, P3184
 - PI: Spitler, L., “Simultaneous Monitoring of the Repeating FRB with the GBT and INTEGRAL”, Green Bank Telescope, GBT17B-387
 - PI: Stovall, K., “Continuing the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, 17A-381
 - PI: Ransom, S., “Long Term Timing of 56 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT17A-305
 - PI: Scholz, P., “Simultaneous GBT and XMM-Newton Observations of FRB 121102 in its Active State”, Green Bank Telescope, GBT16B-391
 - PI: Prestage, R., “A Drift Scan Survey for Pulsars, Fast Radio Bursts and other Radio Transients”, Green Bank Telescope, 16A-469
 - PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT16B-303

- PI: Ransom, S., “Long Term Timing of 56 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT16B-301
- PI: DeCesar, M., “Initial and Continued Monitoring of 38 Pulsars from the GB 350MHz All-Sky Survey”, Green Bank Telescope, 16A-343
- PI: Scholz, P., “Simultaneous GBT and Chandra Observations of FRB121102”, Green Bank Telescope, 15B-379
- PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT15B-265
- PI: Ransom, S., “Long Term Timing of 56 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT15B-238
- PI: Demorest, P., “The North American Nanohertz Observatory for Gravitational Waves”, Green Bank Telescope, 15B-160
- PI: Deller, A., “VLBA distances for two Double Neutron Star systems”, Very Long Baseline Array, 15A-433
- PI: Ransom, S., “Long Term Timing of 56 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT14B-218
- PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT14B-311
- PI: Ransom, S., “Continuing the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, GBT14A-507
- PI: Kaspi, V., “Continuing the PALFA Galactic Plane Survey”, Arecibo Observatory, P2030
- PI: Rosen, R., “Timing of 36 Pulsars Discovered by the Green Bank Telescope”, Green Bank Telescope, GBT13B-290
- PI: Ransom, S., “Continued Timing of a Millisecond Pulsar in a Stellar Triple System”, Green Bank Telescope, GBT13B-281
- PI: Kaspi, V., “Continuing the PALFA Galactic Plane Survey”, Arecibo Observatory, P2030
- PI: Stovall, K., “Timing 56 Pulsars Discovered by the Green Bank Telescope”, Green Bank Telescope, GBT13A-458
- PI: Ransom, S., “Continuing the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Telescope, GBT13A-445
- PI: Ransom, S., “Long Term Timing of 55 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT13A-438
- PI: Kaspi, V., “Continuing the PALFA Galactic Plane Survey”, Arecibo Observatory, P2030
- PI: Ransom, S., “Timing a Millisecond Pulsar in a Triple System”, Green Bank Telescope, GBT12B-309
- PI: Stairs, I., “Timing A Millisecond Pulsar in a Triple System”, Arecibo Observatory, P2724
- PI: Kaspi, V., “Follow-up of New GBT Drift-scan RRAT Discoveries”, Green Bank Telescope, GBT12A-433
- PI: Ransom, S., “Long Term Timing of 54 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT12A-391
- PI: Ransom, S., “Continuing the GBT All-Sky 350-MHz Pulsar Survey”, Green Bank Tele-

scope, GBT12A-388

- PI: Stairs, I., “A Short-Period Pulsar Triple System”, Green Bank Telescope, GBT11B-246
- PI: Stovall, K., “Timing Followups of GBNCC and GBT 350MHz Drift Scan Pulsars”, Green Bank Telescope, GBT11B-070
- PI: Freire, P. C., “Timing PSR J0348+0432: A fantastic, new gravitational laboratory”, Arecibo Observatory, P2640
- PI: Ransom, S. M., “Long Term Timing of 55 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT10C-049
- PI: McLaughlin, M. A., “Observations of J2007+27, a 25-ms pulsar found through distributed computing”, Green Bank Telescope, GBT10B-049
- PI: Ransom, S. M., “Long Term Timing of 55 Recycled Pulsars in Bulge Globular Clusters”, Green Bank Telescope, GBT09C-058
- PI: Ransom, S. M., “A 350-MHz Pulsar Survey of the Northern Celestial Cap”, Green Bank Telescope, GBT09C-057
- PI: Sivakoff, G. R., “Binary Formation in the Sparse Galactic Globular Cluster NGC 3021”, Chandra X-ray Observatory/Green Bank Telescope/Hubble Space Telescope, Cycle 11 Proposal 11300893
- PI: Boyles, J., “Timing new pulsars from the GBT 350-MHz drift-scan survey”, Green Bank Telescope, GBT09A-073
- PI: Freire, P. C., “Timing the pulsars in M62, NGC 6544 and NGC 6624”, Green Bank Telescope, GBT09A-003
- PI: Freire, P. C., “Searching for Millisecond pulsars in Globular Clusters at 327 MHz”, Arecibo Observatory, P2363

Education and Public Outreach Experience

Lead Organizer	Radio Astronomy Internships	2020-2022
○ As part of an NSF-funded research grant, we organized a two-week internship program for undergraduate STEM majors ○ Students analyzed Green Bank Telescope data to measure the efficacy of radio frequency interference mitigation techniques		
Mentor	First2 Network	Summer 2020
○ Co-organized a 2-week internship for first-generation college students ○ Gave six lectures on radio astronomy, radio frequency interference, and signal processing ○ Mentored students on a project to classify radio frequency interference on the basis of cyclostationary statistics		
Volunteer Speaker	Skype with a Scientist	Spring 2019–present

- Scientific Consultant *Anomalies* Film Project Fall 2017

- Volunteer Judge Pocahontas County Science Fair 2015–2019

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|---------------------|---------------------|-----------|
| Content-area Expert | BBC/Science Channel | Fall 2016 |
|---------------------|---------------------|-----------|

- Student Programs Coordinator GBO/NRAO-GB Sept. 2015–2020

- Pulsar Astronomy Fellows Program West Virginia University Sept. 2014–2015

- NANOGrav & IPTA Sept. 2012–present

- AstroMcGill McGill University Sept. 2011–Aug. 2014

- Co-founder and co-chair of an astronomy outreach group currently consisting of over a dozen members (postdoctoral scholars, and graduate and undergraduate students)
- Took initiative to start several activities, including elementary school *Science Days*, a podcast series, monthly public lectures and observing nights, undergraduate labs, a public outreach Facebook page, high school lectures, and several special outreach events

- *Science Days* consist of hands-on astronomy-themed activities designed to teach core science concepts to elementary and middle school students
- Developing connections with other science and astronomy outreach groups at McGill University and in the greater Montreal area

The Pulsar Search Collaboratory National Radio Astronomy Observatory July 2008–present

- The PSC involves high school students and teachers in real astronomical research by looking for new pulsars in data collected by the Green Bank Telescope
- Founding member
- Helping to run summer workshops for students and teachers, visiting high schools to recruit students and support existing teams, giving on-line lectures on pulsar astronomy
- Wrote two manuals that serve as the primary reference for students and teachers

Dark Skies, Bright Kids University of Virginia July 2009–July 2011

- The goal of DSBK is to develop a passion for science in students at rural, under-served elementary schools by engaging them in fun, hands-on astronomy-themed activities
- Founding member
- Helped develop over a dozen educational activities with accompanying lesson plans
- Ran planetarium shows using StarryNight® Small Dome and a portable planetarium

CLUSTER University of Virginia Sept. 2009–May 2011

- CLUSTER loans small telescopes to middle and high school teachers so that they can use them in their curriculum and hold star parties
- Founding member
- Trained teachers to use the telescopes, developed lesson plans and supporting materials

May-term Institute National Radio Astronomy Observatory May 2010

- The NRAO May-term institute is a two week summer school in science and engineering for undergraduates, specifically focusing on minorities and under-represented groups
- Mentoring students as they complete research projects and learn about radio astronomy science and instrumentation

West Virginia Governor's School National Radio Astronomy Observatory July 2009

- Mentored high school students completing a hands-on radio astronomy observational project

- I have given numerous print and televised interviews about ongoing science at the Green Bank Observatory
- Helped to run many open houses at the Green Bank Observatory, McGill University, the UVA McCormick and Fan Mountain Observatories, and in the Penn State Astronomy Department

Academic Advisory Experience

Thesis Committee Memner West Virginia University 2022

- Thesis committee member and co-mentor for a WVU PhD Candidate working on radio frequency interference mitigation techniques

Undergraduate summer student Green Bank Observatory
supervisor

- Mentored nine students doing summer research at the Green Bank Observatory
- Eight students were part of the PING program, which seeks to increase participation of underrepresented minority students in STEM
- Eight students have presented their results at American Astronomy Society Meetings
- Six students were accepted to graduate school

High school summer student McGill University July 2013
supervisor

- Supervised two high school summer students working with Prof. Victoria Kaspi
- The students searched for pulsars in data from the GBNCC pulsar survey, followed-up on promising candidate pulsars, and helped with data logistics

Undergraduate summer student McGill University June 2013–Aug. 2013
co-supervisor

- Co-supervised (along with Prof. Victoria Kaspi) an undergraduate student from McGill University
- The student worked on computing projects for the GBNCC pulsar survey, including optimization of single pulse search code and high performance computing

Graduate summer student McGill University May 2012–Aug. 2012
co-supervisor

- Co-supervised (along with Prof. Victoria Kaspi) a graduate student from West Virginia University while on a summer exchange at McGill University

- The student worked on projects relating to the PALFA pulsar survey, including pulsar timing

High school summer student
supervisor

McGill University

July 2012

- Supervised two high school summer students working with Prof. Victoria Kaspi
- The students were instructed in basic topics in astronomy and searched for pulsars in data from the GBNCC pulsar survey
- The students discovered 21 new pulsars, including three millisecond pulsars, almost doubling the number of pulsars found in the survey at that time

Teaching Experience

Co-instructor

McGill University

Jan. 2012–May 2012

- Taught a graduate seminar on high energy astrophysics with one professor and two other postdoctoral scholars
- Independently prepared lectures and homework assignments for selected classes and topics

Academic Tutor

University of Virginia

Oct. 2009–May 2011

- Led small group and individual tutoring sessions for introductory undergraduate courses in astronomy and physics

Teaching Assistant

University of Virginia

Sept. 2006–May 2008

- Ran nightly astronomy labs and review sessions for a variety of introductory and intermediate level undergraduate courses in astronomy
- Head TA (Fall 2007)

Course Instructor

University of Virginia

July 2007

- Sole instructor for *Introduction to Stars and Galaxies*
- Independently developed and administered lesson plans, lectures, and exams for a class of 21 students
- Used collaborative and interactive teaching techniques, including group discussions, hands-on demonstrations, and a real-time student response system (iClickers)
- Attendee of three teaching workshops at American Astronomical Society conferences held by the Center for Astronomy Education
- Frequent substitute lecturer for undergraduate astronomy courses at all levels

Public Lectures

<i>Pulsars: Unlocking Nature's Extremes</i> NRAO/GBO Summer Student Program	June 2023 Green Bank Observatory
<i>Pulsars, Gravitational Waves, and the Secretes of the Invisible Universe</i> StarQuest	June 2023 Green Bank Observatory
<i>Are Astronomers Seeing a Signal from Giant Black Holes?</i> Facebook AMA	Jan. 2022 Virtual Talk
<i>Pulsars: Unlocking Nature's Extremes</i> Space Public Outreach Team	Oct. 2021 Virtual Talk
<i>Science and Discovery in the Quiet Zone</i> Astronomy on Tap	Aug. 2021 Virtual Talk
<i>Pulsars: Unlocking Nature's Extremes</i> Pulsar Search Collaboratory	Oct. 2021 Virtual Talk
<i>Pulsars: Unlocking Nature's Extremes</i> NRAO/GBO Summer Student Program	May 2020 Virtual Talk
<i>Pulsars: Unlocking Nature's Extremes</i> Pulsar Search Collaboratory	Feb. 2020 Virtual Talk
<i>Pulsars: Unlocking Nature's Extremes</i> Pulsar Search Collaboratory	Oct. 2020 Green Bank Observatory
<i>Pulsars: Unlocking Nature's Extremes</i> Chautauqua Summer Course	May 2019 Green Bank Observatory
<i>The Wild World of Pulsars</i> GBO Open House	Sept. 2018 Green Bank Observatory
<i>Pulsars: Unlocking Nature's Extremes</i> Chautauqua Summer Course	May 2018 Green Bank Observatory
<i>Pulsars: Unlocking Nature's Extremes</i> Chautauqua Summer Course	May 2017 Green Bank Observatory
<i>NANOGrav: Opening a New Frontier in Astronomy</i> Chautauqua Summer Course	June 2016 Green Bank Observatory
<i>NANOGrav: Opening a New Frontier in Astronomy</i> Chautauqua Summer Course	June 2015 NRAO-GB
<i>NANOGrav: Opening a New Frontier in Astronomy</i> McGill Student Astronomy Club	Oct. 2013 McGill University

<i>NANOGrav: Opening a New Frontier in Astronomy</i> AstroMcGill Public Night	July 2013 McGill University
<i>NANOGrav: A New Way of Looking at the Universe</i> NANOGrav Winter Meeting	Oct. 2012 Oberlin College
<i>Ryan's Advice for Giving Technical Talks or How NOT to Put an Audience to Sleep in 45 Minutes or Less</i> Technophile Conference	July 2012 McGill University
<i>Pulsars: Unlocking the Secrets of Nature's Extremes</i> AstroMcGill Public Night	March 2012 McGill University
<i>Pulsars: Unlocking the Secrets of Nature's Extremes</i> Student Lecture	March 2012 Vanier College
<i>The Dark Skies, Bright Kids Program</i> Public Night	April 2011 Fan Mountain Observatory
<i>The Pulsar Search Collaboratory: Your Discovery is Here</i> Pulsar Search Collaboratory Recruitment Talk	Nov. 2010 Rockwood High School, PA
<i>The Pulsar Search Collaboratory: Your Discovery is Here</i> Pulsar Search Collaboratory Recruitment Talk	Nov. 2010 James River High School, VA
<i>Dark Skies, Bright Kids: Bringing Astronomy to Rural Virginia</i> Richmond Astronomical Society	July 2010 Richmond, VA
<i>Recent Pulsar Discoveries with the Green Bank Telescope</i> Charlottesville Astronomical Society	March 2010 Charlottesville, VA
<i>The Cosmic Laboratory</i> Pulsar Search Collaboratory Recruitment Talk	Nov. 2009 Hedgesville High School, WV
<i>The Pulsar Search Collaboratory: Your Discovery is Here</i> Pulsar Search Collaboratory Recruitment Talk	Oct. 2009 Blacksburg High School, VA
<i>The Pulsar Search Collaboratory: Your Discovery is Here</i> Pulsar Search Collaboratory Recruitment Talk	Oct. 2009 Robinson Secondary School, VA
<i>The Dark Side of the Universe: Dark Energy and the Accelerating Expansion</i> Richmond Astronomical Society	Sept. 2009 Richmond, VA
<i>What's New with Dead Stars?: Recent Pulsar Discoveries</i> Jefferson Institute of Lifelong Learning	Sept. 2008 Charlottesville, VA
<i>Is Pluto a Planet?</i> Public Night	Oct. 2006 Fan Mountain Observatory

The Universe of Astronomy
John Hopkins Center for Talented Youth

Sept. 2006
Charlottesville, VA

To The Moon and Beyond!
Astrofest (Children's Lecture)

July 2006
Pennsylvania State University

The Dark Side of the Universe: Dark Matter and Dark Energy
Astrofest

July 2005
Pennsylvania State University