David J. Nice

Curriculum Vitae and Publications

Physics Department
Lafayette College
Easton, PA 18042
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office +1-610-330-5204

Positions Held:

Lafayette College
- 2024– Charles A. Dana Professor, Physics
- 2019–2024 Professor, Physics
- 2016–2024 Department Head, Physics
- 2010–2019 Associate Professor, Physics

Bryn Mawr College
- 2005–2010 Visiting Assistant Professor, Physics

Princeton University
- 1997–2005 Assistant Professor, Physics
- 1996–1997 Lecturer, Physics

National Radio Astronomy Observatory
- 1993–1996 Jansky Postdoctoral Fellow

University of Virginia
- 1995 Lecturer, Astronomy

Princeton University
- 1992–1993 Research Associate, Physics

Education:

1992 Ph.D., Physics, Princeton University
- Dissertation: *Two High-Sensitivity Pulsar Searches* (doi:10.5281/zenodo.49375)
- Supervisor: *Prof. Joseph H. Taylor, Jr.*

1989 M.A., Physics, Princeton University

1987 B.S. with Honor, Physics, California Institute of Technology

Research Interests:

Radio telescope observations of pulsars
Tests of relativistic gravity
Binary star evolution
Characteristics and physics of neutron stars
Radio telescope instrumentation, software, and data analysis
Gravitational waves at nanohertz frequencies (NANOGrav collaboration)

Selected Service Work:

2024	Member, Working at Lafayette Strategic Plan Working Group
2023–	Member, Promotion, Tenure, and Review Committee
2023	Co-chair, Vice President for Student Life Search Committee
2023	Chair, Physics Visiting Faculty Search Committee (two positions)
2022–2023	Member, Faculty Academic Policy Committee, Lafayette Coll.
2022–2023	Faculty Associate, Trustees Committee on Student Life, Lafayette Coll.
2022	Chair, Physics Visiting Faculty Search Committee (two positions)
2021–	Member, Management Team, NANOGrav collaboration
2021–2022	Alternate Faculty Associate, Trustees Committee on Student Life, Lafayette Coll.
2020–2021	Member, Faculty Academic Policy Committee, Lafayette Coll.
2011–2020	Chair, Pulsar Timing Working Group, NANOGrav collaboration
2018–2019	Chair, Academic Research Committee, Lafayette Coll.
2016–2019	Member, Academic Research Committee, Lafayette Coll.
2019	Organizer, NANOGrav Timing Working Group Workshop (held at Lafayette)
2019	Chair, Physics Faculty Search Committee
2019	Chair, Physics Visiting Faculty Search Committee
2017	Organizer, NANOGrav Collaboration Workshop (held at Lafayette)
2017	Honors Examiner, Oberlin College Physics Department
2017	Chair, Physics Faculty Search Committee (two positions)
2017	Chair, Physics Visiting Faculty Search Committee
2015	Member, Math Visiting Faculty Search Committee
2014–2015	Chair, Information Technology & Library Committee, Lafayette Coll.
2013–2015	Member, Information Technology & Library Committee, Lafayette Coll.
2014	Chair, Scientific Org. Committee, Int'l Pulsar Timing Array meeting, Banff
2013–2014	Member, Electrical & Computer Engineering Faculty Search Committee
2011–2012	Chair, Ad Hoc Publication Policy Group, NANOGrav collaboration
2011	Special Session Organizer, American Astronomical Society Meeting, Seattle
2008–2011	Chair, Student Observing Support Committee, Nat'l Radio Astronomy Obs.
2004–2011	Member, Student Observing Support Committee, Nat'l Radio Astronomy Obs.
2008	Session Organizer, Texas Symposium on Relativistic Astrophysics, Vancouver
2008	Scientific Organizing Committee, Int'l Pulsar Timing Array Meeting, Arecibo, PR
2005–2007	Member, Users Committee, National Astronomy and Ionosphere Center
2003–2005	Member, Committee on Undergraduate Life, Princeton University
2003	Organizer, Baseband Recorder Workshop, IAU Symposium 218, Sydney
2002	Organizer, Radio Pulsars Conference, Chania, Crete
2001	Chair, Users Committee, National Radio Astronomy Observatory
2001	Honors Examiner, Oberlin College Physics Department
1998–2004	Academic Adviser & Faculty Fellow, Mathey College, Princeton University
1998–2001	Member, Users Committee, National Radio Astronomy Observatory

Publications

Books Edited:

1. **Radio Pulsars**
   M. Bailes, D. J. Nice, and S. E. Thorsett, editors
   2003 (San Francisco: Astronomical Society of the Pacific)
   ISBN: 1-58381-151-6

Peer-Reviewed Publications:

1. **The NANOGrav 15-year Gravitational-Wave Background Methods**
   D. Johnson *et al.* (NANOGrav collaboration)
   Physical Review D, 109, 103012 (2024)
   arXiv:2306.16223,doi:10.1103/PhysRevD.109.103012

2. **Comparing Recent PTA Results on the Nanohertz Stochastic Gravitational Wave Background**
   G. Agazie *et al.* (International Pulsar Timing Array)
   Astrophysical Journal, 966, 105 (2024)
   arXiv:2309.00693,doi:10.3847/1538-4357/ad36be

3. **The NANOGrav 12.5-year Data Set: Dispersion Mis-Estimation with Varying Bandwidths**
   S. V. Sosa Fiscella *et al.* (NANOGrav Noise Budget and Timing Working Groups)
   Astrophysical Journal, 966, 95 (2024)
   arXiv:2307.13248,doi:10.3847/1538-4357/ad2858

4. **An unusual pulse shape change event in PSR J1713+0747 observed with the Green Bank Telescope and CHIME**
   R. Jennings *et al.* (NANOGrav Noise Budget and Timing Working Groups; CHIME/Pulsar)
   Astrophysical Journal, 964, 179 (2024)
   arXiv:2210.12266,doi:10.3847/1538-4357/ad2930

5. **The NANOGrav 15-year Data Set: Search for Transverse Polarization Modes in the Gravitational-Wave Background**
   G. Agazie *et al.* (NANOGrav Collaboration)
   Astrophysical Journal Letters, 964, L14 (2024)
   arXiv:2310.12138,doi:10.3847/2041-8213/ad2a51

6. **The NANOGrav 12.5-year data set: A Computationally-Efficient Eccentric Binary Search Pipeline and Constraints on an Eccentric Supermassive Binary in 3C 66B**
   G. Agazie et al. (NANOGrav collaboration)
   Astrophysical Journal, 963, 144 (2024)
   arXiv:2309.17438,doi:10.3847/1538-4357/ad1f61

7. **The NANOGrav 12.5-year Data Set: Search for Gravitational Wave Memory**
   G. Agazie *et al.* (NANOGrav collaboration)
   Astrophysical Journal, 963, 61 (2024)
   arXiv:2307.13797,doi:10.3847/1538-4357/ad0726

8. **How to Detect an Astrophysical Nanohertz Gravitational Wave Background**
   B. Bécsy *et al.* (NANOGrav collaboration)
   Astrophysical Journal, 959, 9 (2023)
   arXiv:2309.04443; doi:10.3847/1538-4357/ad09e4

9. **The NANOGrav 15-year Data Set: Search for Anisotropy in the Gravitational-Wave Background**
G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 956, L3 (2023)
arXiv:2306.16221; doi:10.3847/2041-8213/acf4fd

10. **The NANOGrav 15-year Data Set: Constraints on Supermassive Black Hole Binaries from the Gravitational Wave Background**
G. Agaze *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 952, L37 (2023)
arxiv:2306.16220; doi:10.3847/2041-8213/ace18b

11. **The NANOGrav 15-year data set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries**
G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L50 (2023)
arXiv:2306.16222, doi:10.3847/2041-8213/ace18a

12. **The NANOGrav 12.5-year data set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries**
Z. Arzoumanian *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L28 (2023)
arXiv:2301.03608, doi:10.3847/2041-8213/acdbc7

13. **The NANOGrav 15-year Data Set: Evidence for a Gravitational-Wave Background**
G. Agaze *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L8, (2023)
arXiv:2306.16213; doi:10.3847/2041-8213/acdac6

14. **The NANOGrav 15-year Data Set: Observations and Timing of 68 Millisecond Pulsars**
G. Agaze *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L9 (2023)
arXiv:2306.16217; doi:10.3847/2041-8213/acda9a

15. **The NANOGrav 15-year Data Set: Detector Characterization and Noise Budget**
G. Agaze *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L10 (2023)
arXiv:2306.16218; doi:10.3847/2041-8213/acda88

16. **The NANOGrav 15-year Data Set: Search for Signals from New Physics**
A. Afzal*et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L11 (2023)
arXiv:2306.16219; doi:10.3847/2041-8213/acdc91

17. **Searching for continuous Gravitational Waves in the second data release of the International Pulsar Timing Array**
M. Falxa *et al.* (International Pulsar Timing Array collaboration)
Monthly Notices of the Royal Astronomical Society, 521, 5077 (2023)
arxiv:2303.10767,doi:10.1093/mnras/stad813

18. **Bayesian Solar Wind Modeling with Pulsar Timing Arrays**
J. S. Hazboun *et al.* (NANOGrav Timing and Noise Budget Working Groups)
Astrophysical Journal, 929, 39 (2022)
arXiv:2111.09361; doi:10.3847/1538-4357/ac5829

19. **The NANOGrav 12.5-year Data Set: Polarimetry, Rotation Measures, and Galactic Magnetic Field Strengths from NANOGrav Observations with the Green Bank Telescope**
H. M. Wahl *et al.* (NANOGrav Timing Working Group)
Astrophysical Journal, 168, 23 (2022)
arXiv:2104.05723,doi:10.3847/1538-4357/ac4045

20. **The International Pulsar Timing Array second data release: Search for an isotropic Gravitational Wave Background**
J. Antoniadis *et al.* (International Pulsar Timing Array collaboration)
Monthly Notices of the Royal Astronomical Society, 510, 4873 (2022)
arxiv:2201.03980,doi:10.1093/mnras/stab3418

21. **Searching For Gravitational Waves From Cosmological Phase Transitions With The NANOGrav 12.5-year dataset**
Z. Arzoumanian *et al.* (NANOGrav collaboration)
Physical Review Letters, 127, 251302 (2021)
arXiv:2104.13930,doi:10.1103/PhysRevLett.127.251302

22. **The NANOGrav 12.5-year Data Set: Search for Non-Einsteinian Polarization Modes in the Gravitational-Wave Background**
Z. Arzoumanian *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 923, L22 (2021)
arXiv:2109.14706; doi:10.3847/2041-8213/ac401c

23. **The NANOGrav 12.5-year Data Set: Monitoring Interstellar Scattering Delays**
J. E. Turner *et al.*
Astrophysical Journal, 917, 10 (2021)
arXiv:2012.09884; doi:10.3847/1538-4357/abfafe

24. **Refined Mass and Geometric Measurements of the High-Mass PSR J0740+6620**
E. Fonseca *et al.*
Astrophysical Journal Letters, 915, L12 (2021)
arXiv:2104.00880; doi:10.3847/2041-8213/ac03b8

25. **The NANOGrav 11yr Data Set: Limits on Supermassive Black Hole Binaries in Galaxies within 500Mpc**
Z. Arzoumanian *et al.*
Astrophysical Journal, 914, 121 (2021)
arXiv:2101.02716, doi:10.3847/1538-4357/abfcd3

26. **Astrophysics Milestones for Pulsar Timing Array Gravitational-wave Detection**
N. S. Pol *et al.*
Astrophysical Journal Letters, 911, L34, (2021)
arXiv:2010.11950, doi:10.3847/2041-8213/abf2c9

27. **The NANOGrav 12.5-year Data Set: Observations and Narrowband Timing of 47 Millisecond Pulsars**
M. F. Alam *et al.*
Astrophysical Journal Supplement Series, 252, 4 (2021)
arXiv:2005.06490, doi:10.3847/1538-4365/abc6a0

28. **The NANOGrav 12.5-year Data Set: Wideband Timing of 47 Millisecond Pulsars**
M. F. Alam *et al.*
Astrophysical Journal Supplement Series, 252, 5 (2021)
arXiv:2005.06495, doi:10.3847/1538-4365/abc6a1

29. **The NANOGrav 12.5-year Data Set: Search for an Isotropic Stochastic Gravitational-Wave Background**
Z. Arzoumanian *et al.*
Astrophysical Journal Letters, 905, L34 (2020)
arXiv:2009.04496, doi:10.3847/2041-8213/abd401

30. **Multi-Messenger Gravitational Wave Searches with Pulsar Timing Arrays: Application to 3C66B Using the NANOGrav 11-year Data Set**
Z. Arzoumanian *et al.*
Astrophysical Journal, 900, 102 (2020)
arXiv:2005.07123, doi:10.3847/1538-4357/ababa1

31. **Modeling the Uncertainties of Solar System Ephemerides for Robust Gravitational-wave Searches with Pulsar-timing Arrays**
M. Vallisneri *et al.*
Astrophysical Journal, 893, 112 (2020)
arXiv:2001.00595, doi:10.3847/1538-4357/ab7b67

32. **The NANOGrav 11-year Data Set: Constraints on Planetary Masses Around 45 Millisecond Pulsars**
E. A. Behrens *et al.*
Astrophysical Journal Letters, 893, L8 (2020)
arXiv:1912.00482, doi:10.3847/2041-8213/ab8121

33. **The NANOGrav 11-Year Data Set: Evolution of Gravitational Wave Background Statistics**
J. Hazboun *et al.*
Astrophysical Journal, 890, 108 (2020)
arXiv:1909.08644, doi:10.3847/1538-4357/ab68db

34. **The NANOGrav 11-Year Data Set: Limits on Gravitational Wave Memory**
K. Aggarwal *et al.*
Astrophysical Journal, 889, 38 (2020)
arXiv:1911.08488, doi:10.3847/1538-4357/ab6083

35. **A very massive neutron star: relativistic Shapiro delay measurements of PSR J0740+6620**
H. T. Cromartie *et al.*
Nature Astronomy, 4, 72 (2020)
arXiv:1904.06759, doi:10.1038/s41550-019-0880-2

36. **A Pulsar-based Timescale from the International Pulsar Timing Array**
G. Hobbs *et al.*
Monthly Notices of the Royal Astronomical Society, 491, 5951 (2020)
arXiv:1910.13628, doi:10.1093/mnras/stz3071

37. **The International Pulsar Timing Array: Second Data Release**
B. B. P. Perera *et al.*
Monthly Notices of the Royal Astronomical Society, 490, 4666 (2019)
arXiv:1909.04534, doi:10.1093/mnras/stz2857

38. **The NANOGrav 11-Year Data Set: Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries**
K. Aggarwal *et al.*
Astrophysical Journal, 880, 116 (2019)
arXiv:1812.11585, doi:10.3847/1538-4357/ab2236

39. **High-Precision X-ray Timing of Three Millisecond Pulsars with NICER: Stability Estimates and Comparison with Radio**
J. S. Deneva *et al.*
Astrophysical Journal, 874, 160 (2019)
arXiv:1902.07130, doi:10.3847/1538-4357/ab0966

40. **The NANOGrav 12.5-Year Data Set: The Frequency Dependence of Pulse Jitter in Precision Millisecond Pulsars**
M. Lam *et al.*
Astrophysical Journal, 872, 193 (2019)
arXiv:1809.03058, doi:10.3847/1538-4357/ab01cd

41. **The NANOGrav 11-year Data Set: Solar Wind Sounding Through Pulsar Timing**
D. R. Madison *et al.*
Astrophysical Journal, 872, 150 (2019)
arXiv:1808.07078, doi:10.3847/1538-4357/ab01fd

42. **PSR J2234+0611: A New Laboratory for Stellar Evolution**
K. Stovall *et al.*
Astrophysical Journal, 870, 74 (2019)
arXiv:1809.05064, doi:10.3847/1538-4357/aaf37d

43. **Tests of Gravitational Symmetries with Pulsar Binary J1713+0747**
W. W. Zhu *et al.*
Monthly Notices of the Royal Astronomical Society, 482, 3249 (2019)
arXiv:1802.09206, doi:10.1093/mnras/sty2905

44. **Studying the Solar System with the International Pulsar Timing Array**
R. N. Caballero *et al.*
Monthly Notices of the Royal Astronomical Society, 481, 5501 (2018)
arXiv:1808.07078, doi:10.1093/mnras/sty2632

45. **The NANOGrav 11-year Data Set: Pulse Profile Variability**
P. R. Brook *et al.*
Astrophysical Journal, 868, 122 (2018)
arXiv:1810.08269, doi:10.3847/1538-4357/aae9e3

46. **A VLBI Distance and Transverse Velocity for PSR B1913+16**
A. T. Deller, J. M. Weisberg, D. J. Nice, and S. Chatterjee
Astrophysical Journal, 862, 139 (2018)
arXiv:1806.10265, doi:10.3847/1538-4357/aacf95

47. **The NANOGrav Eleven-Year Data Set: Polarimetry and Pulse Microcomponents**
P. Gentile *et al.*
Astrophysical Journal, 862, 47 (2018)
arXiv:1807.00708, doi:10.3847/1538-4357/aac9c9

48. **A Second Chromatic Timing Event of Interstellar Origin toward PSR J1713+0747**
M. Lam *et al.*
Astrophysical Journal, 861, 132 (2018)
arXiv:1712.03651, doi:10.3847/1538-4357/aac770

49. **The NANOGrav 11-Year Data Set: Pulsar-Timing Constraints on the Stochastic Gravitational-Wave Background**
Z. Arzoumanian *et al.*
Astrophysical Journal, 859, 47 (2018)
arXiv:1801.02617, doi:10.3847/1538-4357/aabd3b

50. **The NANOGrav 11-Year Data Set: High-Precision Timing of 45 Millisecond Pulsars**
Z. Arzoumanian *et al.*
Astrophysical Journal Supplement Series, 235, 37 (2018)
arXiv:1801.01837, doi:10.3847/1538-4365/aab5b0

51. **The NANOGrav Nine-Year Data Set: Measurement and Interpretation of Variations in Dispersion Measures**
M. Jones *et al.*
Astrophysical Journal, 841, 125 (2017)
arXiv:1612.03187, doi:10.3847/1538-4357/aa73df

52. **The NANOGrav Nine-Year Data Set: Excess Noise in Millisecond Pulsar Arrival Times**
M. Lam *et al.*
Astrophysical Journal, 834, 35 (2017)
arXiv:1610.01731, doi:10.3847/1538-4357/834/1/35

53. **The NANOGrav Nine-Year Data Set: Mass and Geometric Measurements of Binary Millisecond Pulsars**
E. Fonseca *et al.*
Astrophysical Journal, 832, 167 (2016)
arXiv:1603.00545, doi:10.3847/0004-637X/832/2/167

54. **PSR J1024−0719: A Millisecond Pulsar in an Unusual Long-Period Orbit**
D. Kaplan *et al.*
Astrophysical Journal, 826, 86 (2016)
arXiv:1604.00131, doi:10.3847/0004-637X/826/1/86

55. **The NANOGrav Nine-Year Data Set: Limits on the Isotropic Stochastic Gravitational Wave Background**
Z. Arzoumanian *et al.*
Astrophysical Journal, 821, 13 (2016)
arXiv:1508.03024, doi:10.3847/0004-637X/821/1/13

56. **From Spin-Noise to Systematics: Stochastic Processes in the First International Pulsar Timing Array Data Release**
L. Lentati *et al.*
Monthly Notices of the Royal Astronomical Society, 458, 2161 (2016)
arXiv:1602.05570, doi:10.1093/mnras/stw395

57. **The International Pulsar Timing Array: First Data Release**
J. P. W. Verbiest *et al.*
Monthly Notices of the Royal Astronomical Society, 458, 1267 (2016)
arXiv:1602.03640, doi:10.1093/mnras/stw347

58. **The NANOGrav Nine-Year Data Set: Noise Budget for Pulsar Arrival Times on Intraday Timescales**
M. Lam *et al.*
Astrophysical Journal, 819, 155 (2016)
arXiv:1512.08326, doi:10.3847/0004-637X/819/2/155

59. **The NANOGrav Nine-Year Data Set: Monitoring Interstellar Scattering Delays**
L. Levin *et al.*
Astrophysical Journal, 818, 166 (2016)
arXiv:1601.04490, doi:10.3847/0004-637X/818/2/166

60. **The NANOGrav Nine-Year Data Set: Astrometric Measurements of 37 Millisecond Pulsars**
A. Matthews *et al.*
Astrophysical Journal, 818, 92 (2016)
arXiv:1509.08982, doi:10.3847/0004-637X/818/1/92

61. **The NANOGrav Nine-Year Data Set: Observations, Arrival Time Measurements, and Analysis of 37 Millisecond Pulsars**
Z. Arzoumanian *et al.*
Astrophysical Journal, 813, 65 (2015)
arXiv:1505.07540, doi:10.1088/0004-637X/813/1/65

62. **NANOGrav Constraints on Gravitational Wave Bursts with Memory**
Z. Arzoumanian *et al.*
Astrophysical Journal, 810, 150 (2015)
arXiv:1501.05343, doi:10.1088/0004-637X/810/2/150

63. **Testing Theories of Gravitation Using 21-Year Timing of Pulsar Binary J1713+0747**
W. W. Zhu *et al.*
Astrophysical Journal, 809, 41 (2015)
arXiv:1504.00662, doi:10.1088/0004-637X/809/1/41

64. **The Binary Companion of Young, Relativistic Pulsar J1906+0746**
J. van Leeuwen *et al.*
Astrophysical Journal, 798, 118 (2015)
arXiv:1411.1518, doi:10.1088/0004-637X/798/2/118

65. **NANOGrav Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries in Circular Orbits**
Z. Arzoumanian *et al.*
Astrophysical Journal, 794, 141 (2014)
arXiv:1404.1267, doi:10.1088/0004-637X/794/2/141

66. **Arecibo Pulsar Survey Using ALFA. III. Precursor Survey and Population Synthesis**
J. K. Swiggum *et al.*
Astrophysical Journal, 787, 137 (2014)
arXiv:1405.7953, doi:10.1088/0004-637X/787/2/137

67. **Timing and Interstellar Scattering of 35 Distant Pulsars Discovered in the PALFA Survey**
D. J. Nice *et al.*
Astrophysical Journal, 772, 50 (2013)
arXiv:1304.7370, doi:10.1088/0004-637X/772/1/50

68. **Limits on the Stochastic Gravitational Wave Background from the North American Nanohertz Observatory for Gravitational Waves**
P. Demorest *et al.*
Astrophysical Journal, 762, 94 (2013)
arXiv:1201.6641, doi:10.1088/0004-637X/762/2/94

69. **Time Correlated Structure in Spin Fluctuations in Pulsars**
S. Price, B. Link, S. N. Shore, & D. J. Nice
Monthly Notices of the Royal Astronomical Society, 426, 2507 (2012)
arXiv:1208.0807, doi:10.1111/j.1365-2966.2012.21863.x

70. **Four Highly Dispersed Millisecond Pulsars Discovered in the Arecibo PALFA Galactic Plane Survey**
F. Crawford *et al.*
Astrophysical Journal, 757, 90 (2012)
arXiv:1208.1273, doi:10.1088/0004-637X/757/1/90

71. **Two Millisecond Pulsars Discovered by the PALFA Survey and a Shapiro Delay Measurement**
J. S. Deneva *et al.*
Astrophysical Journal, 757, 89 (2012)
arXiv:1208.1228, doi:10.1088/0004-637X/757/1/89

72. **High-Precision Timing of Five Millisecond Pulsars: Space Velocities, Binary Evolution, and Equivalence Principles**
M. E. Gonzalez, I. H. Stairs, R. D. Ferdman, P. C. C. Freire, D. J. Nice, P. B. Demorest, S. M. Ransom, R. N. Manchester, G. Hobbs, and A. G. Lyne
Astrophysical Journal, 743, 102 (2011)
arXiv:1109.5638, doi:10.1088/0004-637X/743/2/102

73. **Arecibo PALFA Survey and Einstein@Home: Binary Pulsar Discovery by Volunteer Computing**
B. Knispel *et al.*
Astrophysical Journal (Letters), 732, L1-L5 (2011)
arXiv:1102.5340, doi:10.1088/2041-8205/732/1/L1

74. **On the Nature and Evolution of the Unique Binary Pulsar PSR J1903+0327**
P. C. C. Freire *et al.*
Monthly Notices of the Royal Astronomical Society, 412, 2763-2780 (2011)
arXiv:1011.5809, doi:10.1111/j.1365-2966.2010.18109.x

75. **Timing Measurements of the Relativistic Binary Pulsar PSR B1913+16**
J. M. Weisberg, D. J. Nice, and J. H. Taylor
Astrophysical Journal, 722, 1030-1034 (2010)
arXiv:1011.0718, doi:10.1088/0004-637X/722/2/1030

76. **Pulsar Discovery by Global Volunteer Computing**
B. Knispel *et al.*
Science, 329, 1305 (2010)
arXiv:1008.2172, doi:10.1126/science.1195253

77. **Measuring the Mass of Solar System Planets Using Pulsar Timing**
D. J. Champion *et al.*
Astrophysical Journal (Letters), 720, L201-L205 (2010)
arXiv:1008.3607, doi:10.1088/2041-8205/720/2/L201

78. **A Precise Mass Measurement of the Intermediate-Mass Binary Pulsar PSR J1802-2124**
R. D. Ferdman, I. H. Stairs, M. Kramer, M. A. McLaughlin, D. R. Lorimer, D. J. Nice, R. N. Manchester, G. Hobbs, A. G. Lyne, F. Camilo, A. Possenti, P .B. Demorest, I. Cognard, G. Desvignes, G. Theureau, A. Faulkner, and D. C. Backer
Astrophysical Journal, 711, 764-771 (2010)
arXiv:1002.0514, doi:10.1088/0004-637X/711/2/764

79. **Arecibo Pulsar Survey Using ALFA. Probing Radio Pulsar Intermittency and Transients**
J. S. Deneva *et al.*
Astrophysical Journal, 703, 2259-2274 (2009)
arXiv:0811.2532, doi:10.1088/0004-637X/703/2/2259

80. **Multi-Telescope Timing of PSR J1518+4904**
G. H. Janssen, B. W. Stappers, M. Kramer, D. J. Nice, A. Jessner, I. Cognard, and M. Purver
Astronomy and Astrophysics, 490, 753 (2008)
arXiv:0808.2292, doi:10.1051/0004-6361:200810076

81. **PSR J1856+0245: Arecibo Discovery of a Young, Energetic Pulsar Coincident with the TeV γ-Ray Source HESS J1857+026**
J. W. T. Hessels *et al.*
Astrophysical Journal (Letters), 682, L41 (2008)
arXiv:0806.1200, doi:10.1086/590908

82. **An Eccentric Binary Millisecond Pulsar in the Galactic Plane**
D. J. Champion *et al.*
Science, 320, 1309 (2008)
arXiv:0805.2396, doi:10.1126/science.1157580

83. **The Parallax and Proper Motion of PSR J0030+0451**
A. N. Lommen, R. A. Kipphorn, D. J. Nice, E. M. Splaver, I. H. Stairs, and D. C. Backer
Astrophysical Journal, 642, 1012 (2006)
arXiv:astro-ph/0601521, doi:10.1086/501067

84. **Arecibo Pulsar Survey Using ALFA. II. The Young, Highly Relativistic Binary Pulsar J1906+0746**
D. R. Lorimer *et al.*
Astrophysical Journal, 640, 428 (2006)
arXiv:astro-ph/0511523, doi:10.1086/499918

85. **Arecibo Pulsar Survey Using ALFA. I. Survey Strategy and First Discoveries**
J. M. Cordes *et al.*
Astrophysical Journal, 637, 446 (2006)
arXiv:astro-ph/0509732, doi:10.1086/498335

86. **A 2.1 Solar Mass Pulsar Measured by Relativistic Orbital Decay**
D. J. Nice, E. M. Splaver, I. H. Stairs, O. Löhmer, A. Jessner, M. Kramer, and J. M. Cordes
Astrophysical Journal, 634, 1242 (2005)
arXiv:astro-ph/0508050, doi:10.1086/497109

87. **The Millisecond Pulsars in NGC 6760**
P. C. Freire, J. W. T. Hessels, D. J. Nice, S. M. Ransom, D. R. Lorimer, and I. H. Stairs
Astrophysical Journal, 621, 959 (2005)
arXiv:astro-ph/0411160, doi:10.1086/427748

88. **Masses, Parallax, and Relativistic Timing of the PSR J1713+0747 Binary System**
E. M. Splaver, D. J. Nice, I. H. Stairs, A. N. Lommen, and D. C. Backer
Astrophysical Journal, 620, 405 (2005)
arXiv:astro-ph/0410488, doi:10.1086/426804

89. **Multifrequency Observations of Radio Pulse Broadening and Constraints on Interstellar Electron Density Microstructure**
N. D. R. Bhat, J. M. Cordes, F. Camilo, D. J. Nice, and D. R. Lorimer
Astrophysical Journal, 605, 759 (2004)
arXiv:astro-ph/0401067, doi:10.1086/382680

90. **Probing the Masses of the PSR J0621+1002 Binary System Through Relativistic Apsidal Motion**
E. M. Splaver, D. J. Nice, Z. Arzoumanian, F. Camilo, A. G. Lyne, and I. H. Stairs
Astrophysical Journal, 581, 509 (2002)
arXiv:astro-ph/0208281, doi:10.1086/344202

91. **On the Mass and Inclination of the PSR J2019+2425 Binary System**
D. J. Nice, E. M. Splaver, and I. H. Stairs
Astrophysical Journal, 549, 516 (2001)
arXiv:astro-ph/0010489, doi:10.1086/319079

92. **Five Years of Flux Density Monitoring: Refractive Scintillation and the Interstellar Medium**
D. R. Stinebring, T. V. Smirnova, T. H. Hankins, J. S. Hoves, V. M. Kaspi, J. C. Kempner, E. Myers, and D. J. Nice
Astrophysical Journal, 539, 300 (2000)
doi:10.10.1086/309201

93. **A Baseband Recorder for Radio Pulsar Observations**
I. H. Stairs, E. M. Splaver, S. E. Thorsett, D. J. Nice, and J. H. Taylor
Monthly Notices of the Royal Astronomical Society, 314, 459 (2000)
arXiv:astro-ph/9912272, doi:10.1046/j.1365-8711.2000.03306.x

94. **Timing Observations of Four Millisecond Pulsars with the Arecibo and Effelsberg Radiotelescopes**
A. Wolszczan, O. Doroshenko, M. Konacki, M. Kramer, A. Jessner, R. Wielebinski, D. J. Nice, and J. H. Taylor
Astrophysical Journal, 528, 907 (2000)
doi:10.1086/308206

95. **Profile Instabilities of the Millisecond Pulsar PSR J1022+1001**
M. Kramer, K. M. Xilouris, F. Camilo, D. J. Nice, D. C. Backer, C. Lange, D. R. Lorimer, O. Doroshenko, and S. Sallmen
Astrophysical Journal, 520, 324 (1999)
arXiv:astro-ph/9903048, doi:10.1086/307449

96. **Radio Pulses along the Galactic Plane**
D. J. Nice
Astrophysical Journal, 513, 927 (1999)
arXiv:astro-ph/9809095, doi:10.1086/306898

97. **Measurement of Relativistic Orbit Decay in the PSR B1534+12 Binary System**
I. H. Stairs, Z. Arzoumanian, F. Camilo, A. G. Lyne, D. J. Nice, J. H. Taylor, S. E. Thorsett, and A. Wolszczan
Astrophysical Journal, 505, 352 (1998)
arXiv:astro-ph/9712296, doi:10.1086/306151

98. **A Survey of *EGRET* Sources for Pulsed Radio Emission**
D. J. Nice and R. W. Sayer
Astrophysical Journal, 476, 261 (1997)
doi:10.1086/303595

99. **The Green Bank Northern Sky Survey for Fast Pulsars**
R. W. Sayer, D. J. Nice, and J. H. Taylor
Astrophysical Journal, 474, 426 (1997)
doi:10.1086/303446

100. **A Survey for Millisecond Pulsars**
P. S. Ray, S. E. Thorsett, F. A. Jenet, M. H. van Kerkwijk, S. R. Kulkarni, T. A. Prince, J. S. Sandhu, and D. J. Nice
Astrophysical Journal, 470, 1103 (1996)
doi:10.1086/177934

101. **Princeton-Arecibo Declination-Strip Survey for Millisecond Pulsars: Part I**
F. Camilo, D. J. Nice, J. A. Shrauner, and J. H. Taylor
Astrophysical Journal, 469, 819 (1996)
doi:10.1086/177829

102. **PSR J1518+4904: A Mildly Relativistic Binary Pulsar System**
D. J. Nice, R. W. Sayer, and J. H. Taylor
Astrophysical Journal (Letters), 466, L87 (1996)
arXiv:astro-ph/9605122, doi:10.1086/310178

103. *EGRET* **High Energy Gamma-Ray Pulsar Studies III: A Survey**
H. I. Nel *et al.*
Astrophysical Journal, 465, 898 (1996)
doi:10.1086/177473

104. **A Search for Millisecond Pulsars at Galactic Latitudes** $-50^\circ < b < -20^\circ$
F. Camilo, D. J. Nice, and J. H. Taylor
Astrophysical Journal, 461, 812 (1996)
doi:10.1086/177103

105. **A Search for Pulsar Companions to OB Runaway Stars**
R. W. Sayer, D. J. Nice, and V. M. Kaspi
Astrophysical Journal, 461, 357 (1996)
doi:10.1086/177063

106. **A Search for Fast Pulsars along the Galactic Plane**
D. J. Nice, A. S. Fruchter, and J. H. Taylor
Astrophysical Journal, 449, 156 (1995)
doi:10.1086/176041

107. *EGRET* **High-Energy Gamma-Ray Pulsar Studies. II. Individual Millisecond Pulsars**
J. M. Fierro *et al.*
Astrophysical Journal, 447, 807 (1995)
doi:10.1086/175919

108. **Timing Parameters of 29 Pulsars**
F. Camilo and D. J. Nice
Astrophysical Journal, 445, 756 (1995)
doi:10.1086/175737

109. **PSRs J2019+2425 and J2322+2057 and the Proper Motions of Millisecond Pulsars**
D. J. Nice and J. H. Taylor
Astrophysical Journal, 441, 429 (1995)
doi:10.1086/175367

110. *EGRET* **High-Energy Gamma-Ray Pulsar Studies. I. Young Spin-Powered Pulsars**
D. J. Thompson *et al.*
Astrophysical Journal, 436, 229 (1994)
doi:10.1086/174895

111. ***EGRET* Observations of the Vela Pulsar, PSR 0833−45**
G. Kanbach *et al.*
Astronomy and Astrophysics, 289, 855 (1994)

112. **Timing Behavior of 96 Pulsars**
Z. Arzoumanian, D. J. Nice, J. H. Taylor, and S. E. Thorsett
Astrophysical Journal, 422, 671 (1994)
doi:10.1086/173760

113. **Discovery of Two Fast-Rotating Pulsars**
F. Camilo, D. J. Nice, and J. H. Taylor
Astrophysical Journal (Letters), 412, L37 (1993)
doi:10.1086/186934

114. **Observations of the Crab Pulsar and Nebula by the *EGRET* Telescope on the Compton Gamma Ray Observatory**
P. L. Nolan *et al.*
Astrophysical Journal, 409, 697 (1993)
doi:10.1086/172699

115. **Two Newly Discovered Millisecond Pulsars**
D. J. Nice, J. H. Taylor, and A. S. Fruchter
Astrophysical Journal (Letters), 402, L49 (1993)
doi:10.1086/186697

116. **Pulsed High Energy γ-Rays from PSR 1706−44**
D. J. Thompson *et al.*
Nature, 359, 615 (1992)
doi:10.1038/365188b0

117. **Pulsar PSR 1744-24A: Timing, Eclipses, and the Evolution of Neutron Star Binaries**
D. J. Nice and S. E. Thorsett
Astrophysical Journal, 397, 249 (1992)
doi:10.1086/171784

118. **The Princeton Mark III Pulsar Timing System**
D. R. Stinebring, V. M. Kaspi, D. J. Nice, M. F. Ryba, J. H. Taylor, S. E. Thorsett, and T. H. Hankins
Review of Scientific Instruments, 63, 3551 (1992)
doi:10.1063/1.1143763

119. **Eclipses of the Ablating Binary Pulsar PSR 1744−24A**
S. E. Thorsett and D. J. Nice
Nature, 353, 731 (1991)
doi:10.1038/353731a0

120. **Observations of the Eclipsing Binary Pulsar in Terzan 5**
D. J. Nice, S. E. Thorsett, J. H. Taylor, and A. S. Fruchter
Astrophysical Journal (Letters), 361, L61 (1990)
doi:10.1086/185827

121. **The Eclipsing Millisecond Pulsar PSR 1957+20**
A. S. Fruchter, G. Berman, G. Bower, M. Convery, W. M. Goss, T. H. Hankins, J. R. Klein, D. J. Nice, M. F. Ryba, D. R. Stinebring, J. H. Taylor, S. E. Thorsett, and J. M. Weisberg
Astrophysical Journal, 351, 642 (1990)
doi:10.1086/168502

Contributions to Published Conference Proceedings (first-author papers only):

1. **Masses of Neutron Stars in Binary Pulsar Systems**
   D. J. Nice, I. H. Stairs, and L. E. Kasian
   Forty Years of Pulsars, C. G. Bassa et al., eds., AIP conference Proceedings No. 983, 453 (2008)
   doi:10.1063/1.2900273

2. **Neutron Star Masses Derived from Relativistic Measurements of Radio Pulsars**
   D. J. Nice
   Advances in Space Research, 38, 2721 (2006)
   doi:10.1016/j.asr.2006.04.024

3. **GBT Observations of Very Low Mass Binary Millisecond Pulsars: A Search for Eclipses**
   D. J. Nice, I. H. Stairs, and Z. Arzoumanian
   Binary Radio Pulsars, F. A. Rasio & I. H. Stairs, eds., ASP Conference Series, 328, 417 (2005)
   arXiv:astro-ph/0411208

4. **Arecibo Measurements of Pulsar–White Dwarf Binaries: Evidence for Heavy Neutron Stars**
   D. J. Nice, E. M. Splaver, and I. H. Stairs
   Binary Radio Pulsars, F. A. Rasio & I. H. Stairs, eds., ASP Conference Series 328, 371 (2005)
   arXiv:astro-ph/0411207

5. **Heavy Neutron Stars? A Status Report on Arecibo Timing of Four Pulsar–White Dwarf Systems**
   D. J. Nice, E. M. Splaver, and I. H. Stairs
   Young Neutron Stars, F. Camilo & B. M. Gaensler, eds., Proc. IAU Symposium. 218, 49 (2004)
   arXiv:astro-ph/0311296

6. **Neutron Star Masses from Arecibo Timing Observations of Five Pulsar–White Dwarf Binary Systems**
   D. J. Nice, E. M. Splaver, and I. H. Stairs
   Radio Pulsars, M. Bailes, D. J. Nice, & S. E. Thorsett, eds., ASP Conference Series, 302, 75 (2003)
   arXiv:astro-ph/0210637

7. **Binary Eclipsing Millisecond Pulsars: A Decade of Timing**
   D. J. Nice, Z. Arzoumanian, and S. E. Thorsett
   Pulsar Astronomy: 2000 and Beyond, M. Kramer, N. Wex, & R. Wielebinski, eds., Astronomical Society of the Pacific conference series, 202, 67 (2000)
   arXiv:astro-ph/9911211

8. **Timing Observations of the J1518+4904 Double Neutron Star System**
   D. J. Nice, J. H. Taylor, and R. W. Sayer
   Pulsar Timing, General Relativity, and the Interior Structure of Neutron Stars, E. P. J. van den Heuvel, J. van Paradijs, & Z. Arzoumanian, eds., Elsevier, 79 (1999)

9. **The Green Bank Northern Sky Survey: Discovery of a Neutron Star–Neutron Star Binary**
   D. J. Nice, R. W. Sayer, and J. H. Taylor
   Pulsars: Problems & Progress, M. Bailes, S. Johnston, & M. Walker, eds., Astronomical Society of the Pacific Conference Series, 105, 11 (1996)

10. **Rotational and Orbital Fluctuations in Eclipsing Binary Pulsar PSR B1744−24A**
    D. J. Nice and S. E. Thorsett
    Pulsars: Problems & Progress, M. Bailes, S. Johnston, & M. Walker, eds., Astronomical Society of the Pacific Conference Series, 105, 523 (1996)

11. **Pulsar Searches at Arecibo**
    D. J. Nice
    Millisecond Pulsars: a Decade of Surprise, A. S. Fruchter, M. Tavani, & D. C. Backer, eds., Astronomical Society of the Pacific Conference Series, 72, 9 (1995)

12. **Radio Pulsars: An Observer's Perspective**
    D. J. Nice
    The Lives of the Neutron Stars, M. A. Alpar, Ü. Kızıloğlu, & J. van Paradijs, eds., Kluwer, 225 (1995)

13. **A Search for Radio Pulsars in the Directions of *EGRET* High-Latitude Point Sources**
    D. J. Nice, R. W. Sayer, and J. H. Taylor
    The Second Compton Symposium, C. E. Fichtel, N. Gehrels, & J. P. Norris, eds., AIP conference Proceedings No. 304, 82 (1994)

14. **Daily Glitch Monitoring of 35 pulsars**
    D. J. Nice
    Isolated Pulsars, K. A. van Riper, R. Epstein, & C. Ho, eds., Cambridge, 391 (1993)

15. **Ablating Millisecond Binary Pulsars: Progenitors of Pulsar Planetary Systems?**
    D. J. Nice and S. E. Thorsett
    Planets Around Pulsars, J. A. Phillips, S. E. Thorsett & S. R. Kulkarni, eds., ASP Conference Series 36, 289 (1993)

Selected Published Abstracts:

1. **The NANOGrav Observing Program: High-precision Millisecond Pulsar Timing and the Search for Nanohertz Gravitational Waves**
    D. J. Nice and the NANOGrav collaboration
    American Astronomical Society, AAS Meeting 231, 255.19 (2018)

2. **The NANOGrav Eleven-Year Data Set: High-precision timing of 48 Millisecond Pulsars**
    D. J. Nice and the NANOGrav collaboration
    American Astronomical Society, AAS Meeting 229, 137.02 (2017)

3. **NANOGrav Millisecond Pulsar Observing Program**
    D. J. Nice and the NANOGrav collaboration
    American Astronomical Society, AAS Meeting 225, 341.09 (2015)

4. **Neutron Star Masses**
    D. J. Nice
    Proceedings of the International Astronomical Union, 291, 156 (2013)
    doi:10.1017/S1743921312023423

5. **NANOGrav High-Precision Millisecond Pulsar Timing and Gravitational Wave Background Limit**
    D. J. Nice, P. B. Demorest, M. E. Gonzalez, R. D. Ferdman, S. M. Ransom, and I. H. Stairs
    Bulletin of the American Astronomical Society, 44, 146.16 (2012)

6. **High Precision Timing of Millisecond Pulsars at Arecibo and Green Bank**
   D. J. Nice, P. B. Demorest, M. E. Gonzalez, R. D. Ferdman, S. M. Ransom, and I. H. Stairs
   Bulletin of the American Astronomical Society, 43, 139.06 (2011)

7. **Arecibo Observations of Relativistic Binary Pulsars J0621+1002 and J0751+1807: Refined Mass Measurements**
   D. J. Nice, I. H. Stairs, and L. E. Kasian
   Bulletin of the American Astronomical Society, 39, 918 (2007)

8. **Arecibo Measurement of the Proper Motion of Binary Pulsar B1913+16**
   D. J. Nice, J. M. Weisberg, and J. H. Taylor
   Bulletin of the American Astronomical Society, 37, 1468 (2005)

9. **Relativistic Measurements of Pulsar-White Dwarf Binaries: New Results from Arecibo**
   D. J. Nice
   Revista Mexicana de Astronomía y Astrofísica (Serie de Conferencias), 20, 275 (2004)

10. **Radio Interference Excision: A Pulsar Observer's Perspective**
    D. J. Nice
    IEEE Antennas and Propagation Society International Symposium (URSI Digest), 2003 (Piscataway, NJ: IEEE), 646

11. **Eclipsing Binary Millisecond Pulsars: Observations of Orbit and Pulse Phase Variability**
    D. J. Nice, Z. Arzoumanian, S. E. Thorsett
    Bulletin of the American Astronomical Society, 33, 1312 (2001)

12. **Pulsar Timing Measurements of Gravitational Waves**
    D. J. Nice
    Bulletin of the American Astronomical Society, 30, 1326 (1998)

13. **Binary Pulsar PSR J1518+4904: Orbital Precession and Mass Estimates**
    D. J. Nice, R. W. Sayer, and J. H. Taylor
    Bulletin of the American Astronomical Society, 27, 879 (1995)

14. **Timing Behavior and Proper Motions of Millisecond Pulsars PSR J2019+2425 and PSR J2322+2057**
    D. J. Nice
    Bulletin of the American Astronomical Society, 25, 1346 (1993)

15. **Recent Results from a High-Latitude Survey for Fast Pulsars**
    D. J. Nice, F. Camilo, and J. H. Taylor
    Bulletin of the American Astronomical Society, 24, 1277 (1992)

16. **Daily Monitoring of 35 Slow Pulsars**
    D. J. Nice, J. H. Taylor, and D. R. Stinebring
    Bulletin of the American Astronomical Society, 22, 1286 (1990)