

David J. Nice
Curriculum Vitae and Publications

Physics Department
Lafayette College
Easton, PA 18042

niced@lafayette.edu
<http://sites.lafayette.edu/niced>
office +1-610-330-5204

ORCID ID: 0000-0002-6709-2566

Positions Held:

Lafayette College
2019– Professor, Physics
2016– 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 Data Set: Search for Transverse Polarization Modes in the Gravitational-Wave Background**

G. Agazie *et al.* (NANOGrav Collaboration)
Astrophysical Journal, accepted February 2024
arXiv:2310.12138

2. **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, accepted February 2024
arXiv:2307.13248

3. **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, accepted February 2024
arXiv:2210.12266

4. **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, accepted January 2024
arXiv: 2309.17438

5. **The NANOGrav 12.5-year Data Set: Search for Gravitational Wave Memory**

G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal, accepted October 2023
arXiv:2307.13797

6. **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

7. **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

8. **The NANOGrav 15-year Data Set: Constraints on Supermassive Black Hole Binaries from the Gravitational Wave Background**

G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 952, L37 (2023)
arxiv:2306.16220; doi:10.3847/2041-8213/ace18b

9. **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
10. **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
11. **The NANOGrav 15-year Data Set: Evidence for a Gravitational-Wave Background**
G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L8, (2023)
arXiv:2306.16213; doi:10.3847/2041-8213/acdac6
12. **The NANOGrav 15-year Data Set: Observations and Timing of 68 Millisecond Pulsars**
G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L9 (2023)
arXiv:2306.16217; doi:10.3847/2041-8213/acda9a
13. **The NANOGrav 15-year Data Set: Detector Characterization and Noise Budget**
G. Agazie *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L10 (2023)
arXiv:2306.16218; doi:10.3847/2041-8213/acda88
14. **The NANOGrav 15-year Data Set: Search for Signals from New Physics**
A. Afzalet *et al.* (NANOGrav collaboration)
Astrophysical Journal Letters, 951, L11 (2023)
arXiv:2306.16219; doi:10.3847/2041-8213/acdc91
15. **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
16. **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
17. **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
18. **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

19. **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
20. **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
21. **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/abfafa
22. **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
23. **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/abfed3
24. **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
25. **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
26. **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
27. **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
28. **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

29. **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
30. **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
31. **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
32. **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
33. **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
34. **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
35. **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
36. **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
37. **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
38. **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

39. **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
40. **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
41. **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
42. **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
43. **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
44. **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
45. **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
46. **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
47. **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
48. **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
49. **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

50. **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
51. **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
52. **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
53. **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
54. **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
55. **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
56. **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
57. **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
58. **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
59. **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

60. **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
61. **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
62. **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
63. **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
64. **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
65. **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
66. **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
67. **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
68. **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
69. **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

70. **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
71. **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
72. **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
73. **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
74. **Pulsar Discovery by Global Volunteer Computing**
B. Knispel *et al.*
Science, 329, 1305 (2010)
arXiv:1008.2172, doi:10.1126/science.1195253
75. **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
76. **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
77. **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
78. **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
79. **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

80. **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
81. **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
82. **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
83. **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
84. **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
85. **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
86. **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
87. **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
88. **Probing the Masses of the PSR J0621+1002 Binary System Through Relativistic Apical 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
89. **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

90. **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:10.1086/309201
91. **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
92. **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
93. **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
94. **Radio Pulses along the Galactic Plane**
D. J. Nice
Astrophysical Journal, 513, 927 (1999)
arXiv:astro-ph/9809095, doi:10.1086/306898
95. **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
96. **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
97. **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
98. **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
99. **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

100. **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
101. **EGRET High Energy Gamma-Ray Pulsar Studies III: A Survey**
H. I. Nel *et al.*
Astrophysical Journal, 465, 898 (1996)
doi:10.1086/177473
102. **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
103. **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
104. **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
105. **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
106. **Timing Parameters of 29 Pulsars**
F. Camilo and D. J. Nice
Astrophysical Journal, 445, 756 (1995)
doi:10.1086/175737
107. **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
108. **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
109. **EGRET Observations of the Vela Pulsar, PSR 0833-45**
G. Kanbach *et al.*
Astronomy and Astrophysics, 289, 855 (1994)
110. **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

111. **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
112. **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
113. **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
114. **Pulsed High Energy γ -Rays from PSR 1706–44**
D. J. Thompson *et al.*
Nature, 359, 615 (1992)
doi:10.1038/365188b0
115. **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
116. **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
117. **Eclipses of the Ablating Binary Pulsar PSR 1744–24A**
S. E. Thorsett and D. J. Nice
Nature, 353, 731 (1991)
doi:10.1038/353731a0
118. **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
119. **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)