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Research Interests:

- Pulsar Timing Arrays and Gravitational Waves
- Interstellar Medium
- Fast Radio Bursts and Radio Propagation Effects
- Astronomical Cyber-infrastructure

Education:

- 2016 Ph. D. in Astronomy, Cornell University (Ithaca, NY)
Dissertation: “[Characterization of a Precision Pulsar Timing Gravitational Wave Detector](#)”
Advisor: James M. Cordes
- 2014 M. S. in Astronomy, Cornell University (Ithaca, NY)
- 2011 B. A. in Astronomy-Physics, Computer Science, Colgate University (Hamilton, NY)
Honors in Computer Science

Professional Employment and Research Experience:

- 2023 — Research Scientist
SETI Institute, Mountain View, CA
- 2019 — 2023 Assistant Professor, School of Physics and Astronomy
Program Faculty, Astrophysical Sciences and Technology PhD Program
Rochester Institute of Technology, Rochester, NY
- 2016 — 2019 NANOGrav Physics Frontier Center Postdoctoral Research Fellow
Department of Physics and Astronomy, West Virginia University, Morgantown, WV
- 2013 — 2016 Graduate Research Assistant
Department of Astronomy, Cornell University, Ithaca, NY
- 2011 — 2013 Graduate Teaching Assistant
Department of Astronomy, Cornell University, Ithaca, NY

Awards:

- 2016 Cornell University Department of Astronomy
Cranson and Edna B. Shelley Graduate Research Award
- 2015 New York Space Grant Fellowship
- 2011 Colgate University Award for Academic Excellence in Computer Science
- 2011 Colgate University Physics and Astronomy Alumni Award

Research Grants:

- 2022 — 2025 *NANOGrav@UPRM: Growing and Characterizing the NANOGrav Gravitational-Wave Detector*, #2216793
Co-Investigator, NSF PREP, \$520,646 [Local: \$35,872]
- 2022 — 2027 *AccelNet-Implementation: The International Pulsar Timing Array*, #2114721
Co-Investigator, NSF AccelNet, \$1,998,146 [Local: \$0]
- 2021 — 2026 *The NANOGrav Physics Frontiers Center*
Senior Investigator, NSF PHY-2020265, \$17,000,000 [Local: \$676,664]
- 2020 — 2023 *The Construction of a Pulsar Interstellar Medium Array Detector*
Principal Investigator, NSF AST-2009468, \$347,753
- 2020 — 2021 *The NANOGrav Physics Frontiers Center*
Senior Investigator, NSF PHY-1430284, \$57,847
- 2020 — 2021 *From Electromagnetic Counterparts to Gravitational-Wave Sources and Back: Preparing for the Search for Supermassive Black Hole Binaries with the Large Synoptic Survey Telescope*
Principal Investigator, RIT COS D-RIG, \$13,000

Select Scheduled Observations:

- Green Bank Observatory, GBT22A-359, *Searching for Short Timescale Mode Changes in the Millisecond Pulsar J1713+0747*
- Very Large Array, VLA21A-426, *Tracking rapid, unexpected pulse shape changes in MSP J1713+0747*
- Green Bank Observatory, GBT20A-541, *Characterizing the Impact of Interstellar Refraction on Precision Pulsar Timing*
- Long Wavelength Array, LD014, *New Pulsar Detections with the LWA*
- Green Bank Observatory, GBT18B-355, *High Time Resolution Observations of a Bright Millisecond Pulsar*
- Green Bank Telescope, GBT17A-401, *High-Fluence Timing of a Radio Millisecond Pulsar*
- Arecibo Observatory, P3077, *Characterizing Galactic Scintillations of Fast Radio Bursts using Radio Pulsars*

Student Research Mentoring and Supervision:

- 2022 — 2023 Myrra Small (RIT, BS)
Systematic and Stochastic Trends in Dispersion Measure Variations
- 2022 — 2023 Noah Manning (RIT, BS)
Time-Domain Methods for Modeling Stochastic Gravitational Waves
- 2022 Benjamin Ramsey (RIT, MS)
Single Pulse Statistics in the Millisecond Pulsar J1713+0747
- 2022 — 2023 Tobias Keohokapu (RIT, BS)
BS, Capstone: *Searching for a Double Gravitational Wave Background*
- 2022 Matthew Heustis (MVCC, BS)
Modeling Profile Evolution for NANOGrav Pulsars
- 2022 Taylor Starkman (MCCC, BS)
Modeling Profile Evolution for NANOGrav Pulsars
- 2022 Karina Bryant (RIT, BS)
Time-Domain Methods for Modeling Stochastic Gravitational Waves
- 2022 — 2023 Rae Maily (RIT, BS)
Investigating Cancellation of GWB Earth and Pulsar Terms
- 2022 — Sophia Sosa (RIT, PhD)
Chromatic Noise and Pulsar Timing Mis-Estimation
- 2022 Maya Offen (Ossining High School)
Measuring Hubble's Constant with Binary Pulsars
- 2021 — 2022 Abra Geiger (Spencerport High School)
Spectral Characteristics of Spin Noise in Millisecond Pulsars
NANOGrav Memo Series #8:
[The Frequency-Dependent Scattering of Pulsar J1903+0327](#)
- 2021 — 2022 Charles Brinsfield (RIT, BS)
Analyzing Angular Broadening through Scattering of Intergalactic Sources
- 2021 Ethan Champion (University of Pittsburgh at Greensburg, BA)
Correlating Satellite and Pulsar Solar Wind Observations
- 2021 Sinclair Ogaf (RIT, BA)
Investigating Increases in Radio Frequency Intereference over Time
- 2021 — 2023 Lekshmi Rajagopal (RIT, MS)
Scintillation Parameters of PSR J1614–2230
- 2021 Amir Ibrahim (RIT, BS)
Optimizing Bandwidth Ranges in Pulsar Timing
- 2021 — 2022 Jackson Hebel (RIT, MS)
MS, Thesis: *[Timing Jitter from Broadband Radio Observations of Millisecond Pulsars](#)*
- 2020 Nathan Klein (RIT, BS)
Noise in Millisecond Pulsar Timing
- 2020 — Olivia Young (RIT, MS/PhD)
MS, Thesis: *[CLEAN Deconvolution of Radio Pulsar Pulses](#)*
- 2020 Philip Andrews (Hillsdale College, BA)
NANOGrav Memo Series #4:

- 2020 *Investigating the Impact of Slicing on Fitted Timing Model Parameters*
Jackson Connors (RIT, BS)
Searching for Pulsar Glitches in NANOGrav Data
- 2019 — 2022 Brendan Drachler (RIT, MS)
MS, Thesis: *Mixed Signals in Pulsar Timing Arrays - Discerning Red Spin Noise from Gravitational Waves*
Searches for Fuzzy Dark Matter in NANOGrav Data
- 2019 — 2020, Ashley Martsen (RIT, BS)
2021 — 2022 *Pulse Profile Energetics and Variability*
Deblending interacting galaxies using SCARLET
BS, Capstone: *Pulsar Mode Changes and Nulling*
- 2019 — 2021 Zachary Diermyer (RIT, BS/MS)
BS/MS, Thesis: *A Spectral Component Analysis of FRB121102*
- 2019 — 2021 Sarah Vaughn (RIT, MS)
Supermassive Black Hole Environments in the LSST Era
- 2019 Paula Moraga (RIT, MS/PhD)
Binary Pulsar Timing
- 2017 — 2020 Michelle Lin (Ossining High School)
Stellar Metallicity and Age Distribution of the Galactic Habitable Zone
Regeneron STS 2019 Semi-Finalist, GENIUS Olympiad 2019, Silver Award
- 2017 Casey Wilson (West Virginia University, BS)
Frequency-Dependent Contributions to Pulse Arrival Times
- 2017 — 2019 Nihan Pol (West Virginia University, PhD)
Estimates of Fast Radio Burst Dispersion Measures from Cosmological Simulations
ApJ, **886**, 135
- 2017 — 2018 Tyler Shaw (Ossining High School)
Supermassive Black Hole Binary Candidates from Periodicities in Quasar Lightcurves
- 2015 — 2016 Douglas Riegel (Cornell University, BS)
Development of Quicklook: Quasi-real-time Investigation of NANOGrav Observations
<https://github.com/mtlam/Quicklook>
- 2013 — 2015 Charles Gulian (Ossining High School)
A Search for Tidally-Distorted White Dwarf Binaries in the Kepler Survey
Intel STS 2015 Finalist, Siemens Competition 2014 Regional Finalist

Teaching Experience:

2023 Stars and Galaxies PHYS 104
2022 AST Graduate Seminar AST 601
2022 University Astronomy PHYS 220
2022 Stars and Galaxies PHYS 104
2021 Special Topics: Astrophysics of Compact Objects PHYS 789
2021 University Astronomy PHYS 220
2020 Computational (and Statistical) Methods in Astrophysics ASTP 720
2020 Computational Methods in Astrophysics ASTP 720
2019 University Astronomy PHYS 220
2018 Honors Astronomy HONR 298B, Lead Instructor
2016 — 2018 Graduate Astrophysics Seminar ASTR 693A, Co-Instructor
2013, 2015 Teaching Assistant: Cornell Adult University
2011 — 2013 Teaching Assistant, Cornell University: Astronomy 1101, 1102, 2201, 2202
2008 — 2010 Teaching Assistant, Colgate University: Astronomy 101, 102, Physics 111, Computer Science 101, 102

Other Research Experience:

2009 Summer Student Research Assistant
National Radio Astronomy Observatory, Charlottesville, VA
Poster at AAS 215: *Lam, M. & Demorest, P. 2010, BAAS, 42, #453.24*

2008, 2010 Independent Student Researcher
Department of Physics and Astronomy, Colgate University, Hamilton, NY
Poster at AAS 217: *Lam, M. T. & Balonek, T. J. 2011, BAAS, 43, #142.10*
Poster at AAS 217: *Balonek, T. J., Lam, M. T., et al., 2011, BAAS, 43, #142.09*
Poster at AAS 213: *Balonek, T. J., Lam, M. T., et al., 2009, BAAS, 41, #446.02*

Outreach Experience:

2022 —	Physicist To-Go
2021	RIT Opportunity for Astronomy in Rochester (ROAR) Supervisor
2020	Author Contributor to <i>The Conversation</i>
2019	Nestler, J. H., Drumheller, S. K., Lam, M. T., Pritchard, A. C., Borths, M. R., Leone Gold, M. E., Miller, J. H., 2019. “ <i>Half a decade of large-scale science outreach: using the internet forum AskScience to connect with the public.</i> ” Society of Vertebrate Paleontology 79th Annual Meeting, Brisbane, Queensland, Australia. (Poster Presentation).
2015 —	AskScience Moderator and AMA Coordinator <i>Organize direct Q&As between the public (~21.3 million subscribers) and scientists.</i>
2014 — 2016	Cornell Astronomy REU Python Programming, Gravitational Wave Workshop
2014	GRASSHOPR Graduate Student Fellow <i>Developed four-day lesson plan in astronomy with local high school physics class.</i>
2011 — 2016	Cornell University Ask an Astronomer Administrator <i>Answer questions from the public and manage website.</i>

Software:

PyPulse: A Python package for handling and analyzing PSRFITS files
<http://ascl.net/1706.011>

Thesis Committees:

2023	Tim Olszanski (MS, WVU)	Member, upcoming
2023	Jared Wofford (PhD)	Member, upcoming
2023	Lekshmi Rajagopal (MS)	Chair
2022	Jackson Hebel (MS)	Chair
2022	Serena Tramm (MS)	Member
2022	Olivia Young (MS)	Chair
2022	Isabella Cox (MS)	Member
2022	Kate Wagner (MS)	Member
2021	Rohan Pattnaik (MS)	Member
2021	Paula Moraga (MS)	Member
2021	Zachary Diermyer (MS)	Chair
2020	Brendan Drachler (MS)	Chair
2017	Katherine Karnes (BS Honors, Colgate)	Member
2017	Zachary Weaver (BS Honors, Colgate)	Member

Other Committees and Service:

2023	GWIC-Braccini Thesis Prize Committee
2023	15th Amaldi Meeting, Logistics Organizing Committee
2023	Spring NANOGrav Collaboration Meeting, Student Workshop Organizing Committee Chair
2023	RIT School of Physics and Astronomy - AST Recruitment & Admissions Committee

2023 — NANOGrav Equity and Climate Committee
 2022 Fall NANOGrav Collaboration Meeting, Scientific Organizing Committee
 2022 — VLA / VLBA to ngVLA Transition Advisory Group
 2022 — NANOGrav Management Team Member
 2020 International Pulsar Timing Array Collaboration Meeting, Virtual Organizer
 2020 — RIT School of Physics and Astronomy - Astronomy Colloquium Committee Chair
 2020 Virtual American Physical Society April Meeting Organization
Emergency COVID-19 transition, assisted in DGRAV session coordination
 2020 Spring NANOGrav Collaboration Meeting, Local Organizing Committee
 2020 Spring NANOGrav Collaboration Meeting, Student Workshop Organizing Committee
 2019 — 2020 RIT School of Physics and Astronomy - Astronomy Curriculum Committee
 2019 — 2020 RIT School of Physics and Astronomy - Astronomy Colloquium Committee Co-Chair
 2019 Fall NANOGrav Collaboration Meeting, Science Organizing Committee Chair
 2019 Fall NANOGrav Collaboration Meeting, Local Organizing Committee
 2019 — 2020 NANOGrav Noise Budget Working Group Co-Chair
 2018 — 2021 NANOGrav Equity and Climate Committee
 2018 — 2021 American Physical Society Division of Gravitational Physics Executive Committee
 Member-at-Large
 2017 Spring NANOGrav Collaboration Meeting, Science Organizing Committee Chair
 2016 — 2019 West Virginia University Astronomy arXiv Journal Club lead
 2015 — 2016 Astronomy Grads Network Officer, President
 2015 Spring NANOGrav Collaboration Meeting, Science Organizing Committee
 2014 International Pulsar Timing Array Conference Student Week Organizing Committee
 2012 — 2015 Astronomy Grads Network Officer, Webmaster/Secretary

Manuscript Reviewer: MNRAS, ApJ, PASA, PASP, IEEE Access, JAI, A&A
 Telescope Proposal Reviewer: GMRT, GBO
 Grant Proposal Reviewer: NSF, NASA, DFG

Selected Talks:

2023 241st American Astronomical Society Meeting
 NASA Gravitational Wave Science Interest Group Splinter Session
 Invited Talk: *Recent Highlights of the NANOGrav Pulsar Timing Array*
 2022 48th Annual Fall Scientific Paper Session, Rochester Academy of Science
“Autoregressive Models for Pulsar Dispersion Measure Timeseries” (poster)
 2022 Nebraska Physics and Astronomy Summit
 Keynote Talk: *“Simplifying Pulsar Timing Array Science for Students”*
 2022 Ruckman Public Lecture
“Celestial Clocks and Ripples in Spacetime”
 2022 American Association of Physics Teachers
 Invited Talk: *“Simplifying Pulsar Timing Array Science for Students”*
 2022 Illinois State University
“Gravitational Wave Astronomy with a Precision Pulsar Timing Array Detector”
 2021 California State University, Long Beach Physics Colloquium

- 2020 “Gravitational Wave Astronomy with a Precision Pulsar Timing Array Detector”
236th American Astronomical Society Meeting
- 2020 “Gravitational Wave Astronomy with a Precision Pulsar Timing Array Detector”
McGill University Astrophysics Seminar
- 2020 “Astrophysics with the NANOGrav Pulsar Timing Array”
235th American Astronomical Society Meeting
- 2020 Special Session: New Results from the North American Nanohertz Observatory for Gravitational Waves
“Noise Characterization of a Precision Pulsar-Timing Gravitational Wave Detector”
- 2019 School of Physics and Astronomy Colloquium
“Gravitational Waves, Heavy Pulsars, and Plasma Lenses, Oh My!”
- 2019 National Association of Science Writers: ScienceWriters 2019 Conference
“Beyond the press release: New ways to get your research story out”
Panel with Maggie Villiger (The Conversation), Shannon Odell (Weill Cornell Medical College), Arvind Suresh (University of Pittsburgh Medical Center)
- 2019 University of Wisconsin-Milwaukee Seminar
“Gravitational Wave Astronomy with a Next-Generation Pulsar Timing Array Detector”
- 2019 Colgate University Physics and Astronomy Seminar
“A Plasma Lens of Interstellar Origin Toward the Millisecond Pulsar J1713+0747”
- 2018 University of Vermont Physics Colloquium
“Gravitational Wave Astronomy with a Next-Generation Pulsar Timing Array Detector”
- 2018 International Pulsar Timing Array Conference
“Optimal Frequency Ranges for Sub-Microsecond Precision Pulsar Timing”
- 2018 Green Bank Observatory Talk
“Towards a Next Generation Pulsar Timing Array”
- 2018 231st American Astronomical Society Meeting
“Optimal Frequency Ranges for Sub-Microsecond Precision Pulsar Timing”
- 2017 Transformative Science for the Next Generation Green Bank Observatory
“Optimal Frequency Ranges for Sub-Microsecond Precision Pulsar Timing”
- 2017 International Pulsar Timing Array Conference
“The NANOGrav Nine-Year Data Set: Excess Noise in Millisecond Pulsar Arrival Times”
- 2017 Fast Radio Bursts: New Probes of Fundamental Physics and Cosmology
“Characterizing Galactic Scintillations of Fast Radio Bursts using Radio Pulsars”
(poster)
- 2017 229th American Astronomical Society Meeting
“A Precision Pulsar Timing Array Gravitational Wave Detector”
- 2016 University of Sussex Cosmology Seminar
“Astrophysical Constraints from Gravitational Wave Limits using Pulsar Timing Arrays”
- 2016 International Pulsar Timing Array Conference
“Systematic and Stochastic Variations in Pulsar Dispersion Measures”
- 2016 Colgate University Physics and Astronomy Seminar
“Gravitational Wave Astronomy using Pulsar Timing Arrays”
- 2015 Max Planck Institute for Radio Astronomy Lunch Colloquium
“A Short Timescale Noise Model for Pulsar Timing”
- 2014 Cornell Physics Department Lunch Talk Series

- 2014 *“Gravitational Wave Astronomy with Pulsar Timing Arrays”*
International Pulsar Timing Array Conference
- 2014 *“Investigation ISM Noise Processes for Gravitational Wave Detection”*
TEDxIthaca College
- “Celestial Clocks and Ripples in Spacetime”*

Publications:

NOTE: Certain publications produced by the NANOGrav and IPTA collaborations have all authors or a subset of the authors listed in alphabetical order. This ordering does not represent the proportion of contributions made to the papers. Publications that I have led or where I have made critical contributions are highlighted in bold. Publications where I have advised or helped to advise students are denoted by ***.

68. “The NANOGrav 12.5-year Data Set: Bayesian Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries”
Arzoumanian, Z. et al., (78 authors, including **Lam, M. T.**), 2023
submitted to *ApJ*
67. “An unusual pulse shape change event in PSR J1713+0747 observed with the Green Bank Telescope and CHIME”
Jennings, R. J., et al., (44 authors, including **Lam, M. T.**), 2022
submitted to *ApJ*
66. “**Frequency-dependent dispersion measure detected during the Solar approach of PSR J1022+1001**”
Tiburzi, C., Bondonneau, L., **Lam, M. T.**, et al. (25 authors), 2021
submitted to *A&A*
65. “Searching for continuous Gravitational Waves in the second data release of the International Pulsar Timing Array”
Falxa, M. et al., (126 authors, including **Lam, M. T.**), 2023
accepted by *MNRAS*
64. “The NANOGrav 12.5-Year Data Set: Polarimetry, Rotation Measures, and Galactic Magnetic Field Strengths from NANOGrav Observations with the Green Bank Telescope”
Wahl, H. M., et al., (31 authors, including **Lam, M. T.**), 2022
ApJ, **926**, 168
63. “Bayesian Solar Wind Modeling with Pulsar Timing Arrays”
Hazboun, J. S., et al., (28 authors, including **Lam, M. T.**), 2022
ApJ, **929**, 39
62. “The International Pulsar Timing Array second data release: Search for an Isotropic Gravitational Wave Background”
Antoniadis, J., et al., (126 authors, including **Lam, M. T.**), 2022
MNRAS, **510**, 4873
61. “Searching For Gravitational Waves From Cosmological Phase Transitions with the NANOGrav 12.5-year Dataset”
Arzoumanian, Z., et al., (64 authors, including **Lam, M. T.**), 2021
PRL, 127, 251302

60. [“The NANOGrav 12.5-year data set: Search for Non-Einsteinian Polarization Modes in the Gravitational-Wave Background”](#)
Arzoumanian, Z., et al., (71 authors, including **Lam, M. T.**), 2021
ApJL, **923**, L22
59. [“The NANOGrav 12.5-Year Data Set: Monitoring Interstellar Scattering Delays”](#)
Turner, J. E., McLaughlin, M. A., Cordes, J. M., **Lam, M. T.**, et al. (36 authors), 2021
ApJ, **917**, 10
58. [“Refined Mass and Geometric Measurements of the High-Mass PSR J0740+6620”](#)
Fonseca, E., et al., (46 authors, including **Lam, M. T.**), 2021
ApJL, **915**, L12
57. [“Evaluating Low-Frequency Pulsar Observations to Monitor Dispersion with the Giant Metrewave Radio Telescope”](#)
Jones, M. L., McLaughlin, M. A., Roy, J., **Lam, M. T.**, Cordes, J. M., Kaplan, D. L., Bhattacharyya, B., Levin, L., 2021
ApJ, **915**, 15
56. [“The NANOGrav 11yr Data Set: Limits on Supermassive Black Hole Binaries in Galaxies within 500 Mpc”](#)
Arzoumanian, Z., et al., (56 authors, including **Lam, M. T.**), 2021
ApJ, **914**, 121
55. [“Deconvolving Pulsar Signals with Cyclic Spectroscopy: A Systematic Evaluation”](#)
Dolch, T., Stinebring, D. R., Jones, G., Zhu, H., Lynch, R. S., Cohen, T., Demorest, P. B., **Lam, M. T.**, Levin, L., McLaughlin, M. A., Palliyaguru, N. T., 2021
ApJ, **913**, 98
54. [“Astrophysics Milestones For Pulsar Timing Array Gravitational Wave Detection”](#)
Pol, N. S., et al., (52 authors, including **Lam, M. T.**), 2021
ApJL, **911**, L34
53. [“Precision Timing of PSR J0437–4715 with the IAR Observatory and Implications for Low-Frequency Gravitational Wave Source Sensitivity”](#)
Lam, M. T. and Hazboun, J. S., 2021
ApJ, **911**, 137
52. [“PINT: A Modern Software Package for Pulsar Timing”](#)
Luo, J., Ransom, S. M., Demorest, P. B., Ray, P. S., Archibald, A., Kerr, M., Jennings, R., Bachetti, M., van Haasteren, R., Colen, J., Phillips, C., Stovall, K., **Lam, M. T.**, Jenet, F., 2021
ApJ, **911**, 45
51. [“A Study in Frequency-Dependent Effects on Precision Pulsar Timing Parameters with the Pulsar Signal Simulator”](#)
Shapiro-Albert, B. J., Hazboun, J. S., McLaughlin, M. A., **Lam, M. T.**, 2021
ApJ, **909**, 219

50. **“The Pulsar Signal Simulator: A Python Package for Simulating Radio Signal Data from Pulsars”**
Hazboun, J. S., Shapiro-Albert, B. J., Baker, P. T., Henkel, A. M., Wagner, C. M., Hesse, J., Brook, P. R., **Lam, M. T.**, McLaughlin, M. A., Garver-Daniels, N., 2021
JOSS, **6(58)**, 2757
49. **“A Measurement of the Galactic Plane Mass Density from Binary Pulsar Accelerations”**
Chakrabarti, S., Chang, P., **Lam, M. T.**, Vigeland, S. J., Quillen, A. C., 2021
ApJL, **907**, L26
48. **“The NANOGrav 12.5-year Data Set: Wideband Timing of 47 Millisecond Pulsars”**
Alam, M. F., et al. (70 authors, including **Lam, M. T.**), 2021
ApJS, **252**, 5
47. **“The NANOGrav 12.5-year Data Set: Observations and Narrowband Timing of 47 Millisecond Pulsars”**
Alam, M. F., et al. (70 authors, including **Lam, M. T.**), 2021
ApJS, **252**, 4
46. **“The NANOGrav 12.5-year Data Set: Search For An Isotropic Stochastic Gravitational-Wave Background”**
Arzoumanian, Z., et al. (61 authors, including **Lam, M. T.**), 2020
ApJ, **905**, L34
45. **“Multimessenger Gravitational Wave Searches with Pulsar Timing Arrays: Application to 3C66B Using the NANOGrav 11-year Data Set”**
Arzoumanian, Z., et al. (55 authors, including **Lam, M. T.**), 2020
ApJ, **900**, 102
44. **“The NANOGrav 11-year Data Set: Constraints on Planetary Masses Around 45 Millisecond Pulsars”**
Behrens, E. A., et al. (30 authors, including **Lam, M. T.**), 2020
ApJL, **893**, L8
43. **“Modeling the Uncertainties of Solar-System Ephemerides for Robust Gravitational-Wave Searches with Pulsar Timing Arrays”**
Vallisneri, M., et al. (64 authors, including **Lam, M. T.**), 2020
ApJ, **893**, 112
42. **“On Frequency-Dependent Dispersion Measures and Extreme Scattering Events”**
Lam, M. T., Lazio, T. J. W., Dolch, T., Jones, M. L., McLaughlin, M. A., Stinebring, D. R., Surnis, M., 2020
ApJ, **892**, 89
41. **“A Pulsar-based Timescale from the International Pulsar Timing Array”**
Hobbs, G., et al. (58 authors, including **Lam, M. T.**), 2020
MNRAS, 491, 5951

40. *** **“Analysis of Multi-Hour Continuous Observations of Seven Millisecond Pulsars”**
Shapiro-Albert, B. J., McLaughlin, M. A., **Lam, M. T.**, Cordes, J. M., and Swiggum, J. K., 2019
ApJ, **890**, 123
39. **“The NANOGrav 11-Year Data Set: Evolution of Gravitational Wave Background Statistics”**
Hazboun, J. S., Simon, J., Taylor, S. R., **Lam, M. T.**, et al. (63 authors), 2020
ApJ, **890**, 108
38. **“Relativistic Shapiro Delay Measurements of an Extremely Massive Millisecond Pulsar”**
Cromartie, H. T., et al. (27 authors, including **Lam, M. T.**), 2020
Nature Astronomy, **4**, 72
37. **“The NANOGrav 11-Year Data Set: Limits on Gravitational Wave Memory”**
Aggarwal, K., et al. (61 authors, including **Lam, M. T.**), 2020
ApJ, **889**, 38
36. **“The International Pulsar Timing Array: Second Data Release”**
Perera, B. B. P., et al. (67 authors, including **Lam, M. T.**), 2019
MNRAS, **490**, 4
35. **“A Deep Targeted Search for Fast Radio Bursts from the Sites of Low-Redshift Short Gamma-Ray Bursts”**
Madison, D. R., Agarwal, D., Aggarwal, K., Young, O., Cromartie, H. T., **Lam, M. T.**, Chatterjee, S., Cordes, J. M., Garver-Daniels, N., Lorimer, D. R., Lynch, R. S., McLaughlin, M. A., Ransom, S. M., and Wharton, R. S., 2019
AJ, **887**, 2
34. *** **“Estimates of Fast Radio Burst Dispersion Measures from Cosmological Simulations”**
Pol, N. S., **Lam, M. T.**, McLaughlin, M. A., Lazio, T. J. W., Cordes, J. M., 2019
ApJ, **886**, 135
33. **“The NANOGrav 11-year Data Set: Limits on Gravitational Waves from Individual Supermassive Black Hole Binaries”**
Aggarwal, K., et al. (60 authors, including **Lam, M. T.**), 2019
ApJ, **880**, 116
32. **“High-Precision X-ray Timing of Three Millisecond Pulsars with *NICER*: Stability Estimates and Comparison with Radio”**
Deneva, J. S., et al. (48 authors, including **Lam, M. T.**), 2019
ApJ, **874**, 160
31. **“The NANOGrav 12.5-Year Data Set: The Frequency Dependence of Pulse Jitter in Precision Millisecond Pulsars”**
Lam, M. T., et al. (28 authors), 2019
ApJ, **872**, 193
30. **“The NANOGrav 11-year Data Set: Solar Wind Sounding through Pulsar Timing”**
Madison, D. R., et al. (31 authors, including **Lam, M. T.**), 2019
ApJ, **872**, 150

29. [“Tests of Gravitational Symmetries with Pulsar Binary J1713+0747”](#)
Zhu, W. W., et al. (53 authors, including **Lam, M. T.**), 2019
MNRAS, **482**, 3249
28. [“PSR J2234+0611: A New Laboratory for Stellar Evolution”](#)
Stovall, K., et al. (33 authors, including **Lam, M. T.**), 2019
ApJ, **870**, 74
27. [“Studying the Solar System with the International Pulsar Timing Array”](#)
Caballero, R., et al. (90 authors, including **Lam, M. T.**), 2018
MNRAS, **481**, 5501
26. [“The NANOGrav 11-year Data Set: Pulse Profile Variability”](#)
Brook, P. R., Karastergiou, A., McLaughlin, M. A., **Lam, M. T.**, et al. (33 authors), 2018
ApJ, **868**, 122
25. [“Optimizing Pulsar Timing Array Observational Cadences for Sensitivity to Low-Frequency Gravitational-wave Sources”](#)
Lam, M. T., 2018
ApJ, **868**, 33
24. [“An Acoustical Analogue of a Galactic-scale Gravitational-Wave Detector”](#)
Lam, M. T., Romano, J. D., Key, J. S., Normandin, M., Hazboun, J. S., 2018
AJP, **86**, 755
23. [“The NANOGrav 11-year Data Set: Arecibo Observatory Polarimetry and Pulse Microstructure”](#)
Gentile, P. A., et al. (21 authors, including **Lam, M. T.**), 2018
ApJ, **862**, 47
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