Curriculum Vitae: M. Coleman Miller

Date of Birth: 6 July 1968
Place of Birth: Detroit, MI
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Research Interests

Theoretical Astrophysics	Computer Simulations and Modeling
Physics of Dense Matter	Physics in Strong Magnetic Fields
General Relativity	Gravitational Radiation
Plasma Physics	Gravitational Lensing

Education

1984 - 1990	California Institute of Technology, Pasadena, California Department: Physics, with Computer Science minor Thesis Topic: Radiation Transfer in Very Strong Magnetic Fields Degrees: M.S. (1986), Ph.D. (1990) (Advisor: E. S. Phinney) National Science Foundation Graduate Fellow, 1984-1987
1980 - 1984	Hillsdale College, Hillsdale, Michigan Major fields: Mathematics and Physics Degree: B.S., Summa Cum Laude (1984)

Research Experience

2009 -	Professor of Astronomy, University of Maryland
2020	Radboud Excellence Professor, Radboud University, Nijmegen, Netherlands
2017 - 2019	Chair, Maryland Astronomy Center for Theory and Computation
2015 - 2019	Astronomy Director, Joint Space-Science Institute
2013 - 2014	Director, Joint Space-Science Institute
2004 - 2009	Associate Professor of Astronomy, University of Maryland
2004 - 2006	Chair, Maryland Astronomy Center for Theory and Computation
1999 - 2004	Assistant Professor of Astronomy, University of Maryland
1997 - 1999	Member of the AXAF Science Center, Chicago beta test site
1994 - 1997	Compton Gamma-Ray Observatory Fellow, University of Chicago
1993 - 1999	Research Scientist, University of Chicago Constructed the first detailed model of kilohertz QPOs of neutron star low-mass X-ray binaries, investigated gravitational lensing of gamma-ray bursts and galaxies, and performed various studies of accreting black holes and neutron stars.
1993	Visiting Scientist, Nordita, Copenhagen Examined effects of radiation forces on accretion onto unmagnetized neutron stars in full general relativity
1990 - 1993	Postdoctoral Research Associate, University of Illinois at Urbana-Champaign Studied electrodynamics and particle acceleration around accretion-powered neutron stars, investigated thermal emission from isolated neutron stars, and examined methods for the determination of the magnetic inclination angles of pulsars
1985 - 1990	Research Assistant, California Institute of Technology Developed and extended computer programs to calculate atomic data in very strong magnetic fields, used this data to investigate radiation transfer in the atmospheres of neutron stars with strong magnetic fields, and studied particle orbits around rotating and nonrotating black holes

1984	Capacity Planning Analyst, Burroughs Corp., Detroit, Michigan Designed computer performance reporting and analysis programs

Teaching and Outreach Experience

2023	Distinguished Faculty Teaching Prize in the Department of Astronomy, University of Maryland
2022	Prize for Excellence in Mentoring in the Department of Astronomy, University of Maryland
2021	Instructor, Karpacz School of Theoretical Physics, Karpacz, Poland (virtual)
2019	Instructor, masterclass on neutron stars, Nordita, Stockholm, Sweden
2017	Distinguished Faculty Teaching Prize in the Department of Astronomy, University of Maryland
2017	Instructor, Kavli summer school on gravitational wave astronomy at the Niels Bohr Institute, Copenhagen, Denmark
2016	Instructor, winter school on gravitational wave astronomy at UFABC, São Paulo, Brazil
2015	Instructor, summer school on gravitational wave astronomy at the Indian Institute of Science, Bengaluru, India
2014	Instructor, "Look & Listen" winter school (gave lectures on gravitational waves), Playa del Carmen, Mexico
2012	Consultant for the Maryland Dance Ensemble performance "Gravity"
2005, 2006	Astrophysics instructor for University of Texas at Brownsville summer school on gravitational radiation
2004	Instructor, summer school on "Hot Points in Astrophysics and Cosmology", Dubna, Russia
2004	Dean's Award for Excellence in Teaching, College of Computer, Mathematical, and Physical Sciences, University of Maryland
2000	Scriptwriter, Adler Planetarium, Chicago, Illinois Head writer for the planetarium show "Black Holes: Into the Dark Abyss", which debuted in the Fall of 2000
1999 -	Assistant professor (1999–2004), associate professor (2004–2009), and full professor (2009–), University of Maryland Courses include graduate stellar structure and evolution (spring 2000 and spring 2002), graduate high energy astrophysics (fall 2000, spring 2007, spring 2009, spring 2017, and fall 2022), introductory astronomy for non-majors (spring 2001, fall 2001, spring 2005, fall 2006, fall 2011, and spring 2024), graduate radiative processes (fall 2002, fall 2013, fall 2014, fall 2015, fall 2016, and fall 2021), undergraduate theoretical astrophysics (spring 2003), introductory astronomy for majors (fall 2003, continued spring 2004; fall 2017, continued spring 2018; fall 2018, continued spring 2019; fall 2020, continued spring 2021; fall 2024, continued spring 2025), undergraduate cosmology for majors (fall 2007), high energy astrophysics for undergraduate majors (spring 2008), life in the universe (fall 2008 and fall 2009), problem solving in astrophysics (spring 2010), honors class on black holes (spring 2010, spring 2011, and spring 2012), honors class on life in the universe (spring 2014, spring 2015, and spring 2016), graduate course on practical astrostatistics (spring 2018), undergraduate course on practical astrostatistics (spring 2019), black holes for undergraduate non-majors (spring 2022), stellar structure and evolution for undergraduate majors (spring 2023).

1999 -	Graduate thesis advisor or co-advisor at the University of Maryland for Jamie Cohen, Megan DeCesar, Alex Dittmann, Mike Gill, Kayhan Gültekin, Isiah Holt, Vanessa Lauburg, Dheeraj Pasham, Siddhant Solanki, Gokul Srinivasaragavan, Corbin Taylor, Yvette Thackeray, and John Vanlandingham. Graduate thesis committee member for an additional 95 students. Postdoctoral advisor for Joanna Berteaud, Sudip Bhattacharyya, and Stratos Boutloukos, and co-advisor for postdoctoral researchers Bruno Giacomazzo and Sean O'Neill. Undergraduate thesis advisor or co-advisor for Ryan Abrahams, Shreya Anand, Ernesto Benitez, Mia Bovill, Dylan Britt, Laura Dunlap, Ben Flaggs, Katie Futrowsky, Jacob Golomb, Thomas Griffith, Bryan Holler, Ben Johanson, Brooke Kaluzienski, Ashley King, Kalman Knizhnik, Scott Lawrence, Jennifer Liang, Nick Magnelli, Brian Prager, Shawn Rosofsky, Mackenzie Samartzis, Joseph Weller, Yuqin Wang, and Logan Wood.
1999 -	Public speaker 22 talks at the University of Maryland Open House on topics including black holes, neutron stars, cosmology, and life in the universe. More than 40 additional talks to school groups from kindergarten to AP physics classes, as well as to astronomical societies
1995 - 1999	Lecturer, Adler Planetarium Delivered series of lectures on black holes and neutron stars, and series of lectures on the cosmological distance scale, in the Adler Adult Lecture Series. Also taught general relativity and black hole theory to gifted high school students.
1996 - 1998	Consultant, Adler Planetarium Helped develop scientific content for "Seeing the Invisible Universe", the Fall 1996 planetarium sky show describing recent discoveries in X-ray and gamma-ray astronomy, and consulted on exhibit development and presentations
1995	Internet instructor, DuSable High School, Chicago, Illinois Introduced high school students and teachers to Unix and the World Wide Web

Prizes and Awards

Co-Awardee of the 2022 Bruno Rossi Prize, with the NICER team

Professional Societies

International Astronomical Union
American Astronomical Society
American Physical Society

Accepted Proposals

2024	Co-Investigator on the proposal "Pair Discharges and Magnetic Reconnection in Pulsars: Implications for the Multi-Wavelength Emission", NSF Physics
2020	Principal Investigator on the proposal "Optimizing Mass, Radius, and Equation of State Information from NICER Data", NASA Astrophysics Data Analysis Program
2017	Co-Investigator on the proposal "The Central Role of Compact Star Clusters in the Early Universe", NASA Astrophysics Theory Program
2016	Co-Investigator on the proposal "Unifying Spectral and Timing Studies of Relativistic Reflection in Active Galactic Nuclei", NASA Astrophysical Data Analysis Program
2016	Principal Investigator on the proposal "Gravitational Waves and Neutron Star Oscillations", Fundação de Amparo à Pesquisa do Estado de São Paulo
2013	Co-Investigator on the proposal "The Multiscale Physics of Massive Black Hole Formation, Growth and Feedback", Theoretical and Computational Astrophysics Network

2012	Simons sabbatical fellowship, for the study of electromagnetic counterparts to supermassive black hole binary mergers
2010	Principal Investigator on the proposal "Exploration of Extreme Mass Ratio Inspirals with a Tree Code" to the NASA Astrophysics Theory Program
2007	Principal Investigator on the proposal "Development of a Tree Code for Extreme Mass Ratio Inspirals" to the NASA Astrophysics Theory Program
2007	Principal Investigator on the proposal "Probing Extreme Physics Through Analysis of Neutron Star Surface Emission" to the National Science Foundation Stellar Astronomy and Astrophysics program
2007	Co-Investigator on the proposal "Intermediate-Mass Black Holes in Globular Clusters: Key Photometric Fingerprints" to the Hubble Theory program
2006	Co-Investigator on the proposal "In Search of Black Hole Spin" to the National Science Foundation Stellar Astronomy and Astrophysics program
2003	Co-Investigator on the proposal "Ultra-Luminous X-ray Sources in the Barred Spiral Galaxy NGC 1672", using the XMM-Newton spacecraft
2003	Principal Investigator on the proposal "Dynamics of Black Holes in Dense Stellar Regions", to the NASA Astrophysics Theory Program
2001	Principal Investigator on the proposal "Understanding High-Density Matter Through Analysis of X-ray Bursts", to the National Science Foundation Stellar Astronomy and Astrophysics program

Professional Activities

2018–2021	Councilor, Division of Astrophysics, American Physical Society
2018-2021	Member, Executive Committee, Division of Astrophysics, American Physical Society
2018	Reviewer, Narodowe Centrum Nauki (Polish National Science Centre)
2017	Member, Einstein/Hubble/Sagan Prize Committees, American Astronomical Society Reviewer, Established Program to Stimulate Competitive Research (EPSCoR) Reviewer for New York University Abu Dhabi Member, Pierce and Warner Prize Committees, American Astronomical Society
2016	Part of committee to review the Institute for Mathematics, Astrophysics and Particle Physics at Radboud University (Nijmegen, the Netherlands) Member, Pierce and Warner Prize Committees, American Astronomical Society Chair, advisory board for the West Virginia Center for Gravitational Waves and Cosmology (to 2018)
2015	Reviewer, United States-Israel Binational Foundation Member, Bethe Prize Committee, American Physical Society Reviewer, NASA Postdoctoral Program
2014	Member, Bethe Prize Committee, American Physical Society Reviewer, Established Program to Stimulate Competitive Research (EPSCoR) Organizer, session for 2014 COSPAR meeting
2013	Organizer, relativistic astrophysics session for the 10th Amaldi Conference on Gravitational Waves Science advisor for the KITP workshop A Universe of Black Holes
2012	Reviewer for NASA Postdoctoral Program Reviewer for the Netherlands Organisation for Scientific Research Reviewer for NSF Centers for Research Excellence in Science and Technology Program Member of Executive Committee, Division of Astrophysics, American Physical Society (to 2014)
2011	Reviewer for Swiss National Science Foundation Reviewer for Deutsche Forschungsgemeinschaft program Member, NSF Centers of Research Excellence in Science and Technology review panel Member, NSF Astronomy and Astrophysics Postdoctoral Fellowship panel Scientific organizing committee, conference on single and double massive black holes in galaxies, Ann Arbor, MI, 22-25 August 2011
2010	Member, INCITE review panel Chair, LIGO Program Advisory Committee (to 2014) Chair, Chandra proposal review, June 2010
2009	Co-Organizer, "Matter and Electromagnetic Fields in Strong Gravity", College Park, Maryland, 24-28 August 2009
2008	Member, Rossi X-ray Timing Explorer panel Member of scientific organizing committee for dense matter session at July 2008 COSPAR meeting in Montreal
2006	Exec. Comm. member of the High Energy Astrophysics division of the AAS (to 2009) Member, LIGO Program Advisory Committee (to 2009) External reviewer for the PPARC program

2005	Member, NSF review panel for LIGO Member of scientific organizing committee, "Sixth LISA International Symposium", Goddard Space Flight Center
2004	Member, Chandra X-ray Observatory review panel Member of scientific organizing committee, "Making Waves with Intermediate-Mass Black Holes", Penn State University
2003	Reviewer for the United States-Israel Binational Science Foundation Session chair and member of scientific organizing committee, meeting on astrophysical sources of gravitational radiation Member, NSF review panel for the Advanced LIGO concept Member, Chandra X-ray Observatory review panel Session chair, 10th Marcel Grossman meeting on general relativity Member of scientific organizing committee, "Globular Clusters and Gravitational Waves", Penn State University Member of scientific organizing committee, Second Gravitational Wave Phenomenology Workshop, Penn State University
2000	Panel chair, RXTE proposal review Session chair, 2000 Maryland October Astrophysics Conference Reviewer for the Cooperative Grants Program of the U.S. Civilian Research and Development Foundation
1999	External reviewer for the Scholarly Studies Program of the Harvard-Smithsonian CfA Member, Astro-E proposal review panel
1997	Member, Compton Gamma-Ray Observatory proposal review panel
1992–	Member of multiple theory proposal review panels for National Science Foundation (including the Stellar Astronomy and Astrophysics Program and the Gravitational Physics program) and NASA (including the Astrophysics Theory Program)
1992–	Reviewer of more than 200 articles submitted to ApJ, MNRAS, Phys. Rev. Letters, Phys. Rev. D., Nature, Science, Astronomy & Astrophysics, and several other journals
1992–	Reviewer of books and book proposals for various publishers including Princeton University Press and Oxford University Press

Presentations

1. "A Method for Discovering QPOs in Power Spectra from Gamma-Ray Bursts", contributed talk, 246th American Astronomical Society meeting, Anchorage, Alaska, 10 June 2025
2. "Environmental Effects on BH-BH GW Waveforms", invited talk, Gravitational Wave Probes of Black Hole Environments, Institute for Fundamental Physics of the Universe, Trieste, Italy, 27 May 2025
3. "Learning About Dense Matter from EM and GW Observations", invited talk, Extreme Physics of Neutron Star Interiors, Princeton University, 14 May 2025
4. "The Evolution of Neutron Star Magnetic Fields", invited talk, Mal Ruderman memorial conference, Columbia University, 26 February 2025
5. "An Overview of Everything (in theory)", keynote talk, The Era of Binary Supermassive Black Holes: Coordination of Nanohertz-Frequency Gravitational-Wave Follow-up, Aspen, 4 February 2025
6. "From Neutron Stars to Dense Matter", physics colloquium, Caltech, 14 November 2024
7. "Accreting Neutron Stars and Black Holes", invited talk, Time Domain And MultiMessenger meeting, Baton Rouge, 23 September 2024
8. "Neutron Star Measurements and Implications for Dense Matter", NP3M seminar, 20 September 2024
9. "The Physics of Neutron Stars", plenary talk (interdisciplinary lecture), COSPAR meeting, Busan, South Korea, 19 July 2024
10. "The Sins of the Priors: Inverse Problems and Statistical Estimation", invited talk, Inverse Problems and Uncertainty Quantification in Nuclear Physics, Institute for Nuclear Theory, Seattle, 9 July 2024
11. "Measurement of Neutron Star Properties and What We Can Learn from Them", invited talk, Latin American Conference on Astrophysics and Relativity, Bogotá, Colombia, 25 June 2024
12. "Radius measurements of neutron stars and implications for dense matter", remote seminar, Xiamen University, Xiamen, China, 18 April 2024
13. "The EMRI-TDE connection", invited talk, Loss cones in Como meeting, Como, Italy, 8 February 2024
14. "Learning about nuclear physics from neutron star observations", astronomy colloquium, Radboud University, 28 November 2023
15. "Learning about fundamental physics using black hole observations", invited talk, Dutch Black Hole Consortium meeting, Radboud University, 17 November 2023
16. "Neutron stars, the high-density equation of state, and NICER", invited talk, Physics of Neutron Stars meeting, University of Maryland, 27 October 2023
17. "Neutron Star Observations and Dense Matter", invited talk, Modern Physics of Compact Stars meeting, Yerevan, Armenia, 12 September 2023
18. "A NICER View of Neutron Stars", physics colloquium, University of Virginia, 8 September 2023
19. "Neutron Star Cooling", invited talk, Aspen Center for Physics, 24 July 2023
20. "PREX/CREX and Astronomical Observations of Neutron Stars", invited talk, Jefferson Laboratory Hall A/C meeting, 30 June 2023
21. "Understanding dense matter using NICER observations", physics colloquium, Texas A&M, 19 January 2023
22. "Neutron Stars and Nuclear Physics", invited talk to the Physical Review, 1 December 2022
23. "Measuring Neutron Stars", colloquium, symposium in honor of Mal Ruderman, Columbia, 31 October 2022
24. "Electromagnetic Observations of Neutron Stars", invited talk, The Future of Neutron Rich Matter, Amherst, MA, 13 October 2022
25. "Measurements of Neutron Stars and Clues to the Nature of Dense Matter", invited talk, Brazilian Physical Society Spring Meeting, Natal, Brazil, 26 September 2022
26. "Tidal disruptions and EMRIs from tidal separation of binaries", invited talk, TDEs and EMRIs dynamics, Como, Italy, 6 September 2022

27. "NICER Measurements and Implications for Dense Matter", invited talk, CSQCD, Banff, Canada, 5 August 2022
28. "X-ray Measurements of Neutron Star Masses and Radii", invited talk, IAU general assembly, Busan, South Korea, 5 August 2022
29. "Learning about dense matter from gravitational waves", invited talk, PAX22 meeting, MIT, 2 August 2022
30. "Learning about dense matter from NICER observations",invited talk, European Centre for Theoretical Studies workshop on "Neutron stars as multi-messenger laboratories for dense matter", 21 June 2022
31. "Clues to the properties of dense matter using NICER observations", physics colloquium, University of Illinois, 9 February 2022
32. "Learning About Dense Matter from Astronomical Observations", seminar, nuclear theory group, University of Maryland, 9 December 2021
33. "Taking the Measure of Neutron Stars with NICER", colloquium, California State University at Long Beach, 18 October 2021
34. "A NICER Path to Neutron Star Radii", colloquium, University of Chicago, 13 October 2021
35. "NICER and Neutron Star Radii", invited talk, Modern Physics of Compact Stars, 27 September 2021
36. "Neutron Star Measurements with NICER", invited talk, International Symposium on Nuclear Symmetry Energy, 23 September 2021
37. "What Have We Learned About Dense Matter from NICER?", seminar, Astrophysical and Cosmological Relativity division of the Albert Einstein Institute, Potsdam, Germany, 22 September 2021
38. "Implications of Neutron Star Radius Measurements Using NICER", astrophysics seminar, Los Alamos National Laboratory, 2 September 2021
39. "NICER Constraints on the Nuclear Equation of State", invited talk, "Exploring Extreme Matter in the Era of Multimessenger Astronomy: from the Cosmos to Quarks", Aspen Center for Physics, 13 July 2021
40. "Measuring the Radii of Neutron Stars", colloquium, Aspen Center for Physics, 1 July 2021
41. "NICER Measurements of the 2.1 $M_\odot$ pulsar J0740+6620", invited talk, European Centre for Theoretical Studies workshop on "Neutron stars as multi-messenger laboratories for dense matter", 15 June 2021
42. "Learning about neutron stars with NASA's NICER mission", IAG-USP Astronomy seminar, University of São Paulo, 12 May 2021
43. "NICER Measurements of Pulsars PSR J0030+0451 and PSR J0740+6620", S@INT seminar, Institute for Nuclear Theory, University of Washington, 22 April 2021
44. "NICER Constraints on the Neutron Star Equation of State", invited talk, American Physical Society meeting, 17 April 2021
45. "NICER, Gravitational Waves, and Neutron Stars", nuclear theory seminar, Arizona State University, 23 September 2020
46. "Learning About Dense Matter from Neutron Stars", nuclear theory seminar, University of Minnesota Twin Cities, 22 September 2020
47. "Learning About Dense Matter Using NICER", invited talk, Compact Stars and Quantum Chromodynamics meeting, 17 August 2020
48. "What Can We Learn From Gravitational-Wave Observations?", invited talk, European Astronomical Society meeting, 3 July 2020
49. "The Insides of Neutron Stars", astrophysics seminar, Center for Computational Astrophysics, Flatiron Institute, 16 April 2020
50. "A NICER Measurement of a Neutron Star", astronomy colloquium, Radboud University, 10 March 2020
51. "Extremal Principles in Physics", astronomy theory seminar, Radboud University, 19 February 2020
52. "A NICER View of a Neutron Star", astronomy colloquium, University of Maryland, 29 January 2020

53. "Neutron Star Mass and Radius from X-ray Observations: the Next Five Years", invited talk, Dense Matter & Neutron Star Mergers, Institute for Nuclear Theory, University of Washington, 16 December 2019
54. "A NICER View of a Neutron Star", strong gravity seminar, Perimeter Institute, 12 December 2019
55. "Multiscale Applications of Gravitational-Wave Physics", astronomy seminar, University of Michigan, 26 November 2019
56. "Exploring the Interiors of Neutron Stars", physics colloquium, University of Guelph, 12 November 2019
57. "Unveiling the Interiors of Neutron Stars", nuclear physics seminar, Ohio University, 29 October 2019
58. "What We Do and Do Not Know About Neutron Star Cores", strong gravity seminar, Perimeter Institute, 25 September 2019
59. "Gravity in Astrophysics", invited talk, Precision Gravity: from the LHC to LISA, Munich Institute for Astrophysics and Particle Physics, Garching, Germany, 5 September 2019
60. "Astrophysical Context of BH-BH Coalescences", invited talk, Precision Gravity: from the LHC to LISA, Munich Institute for Astrophysics and Particle Physics, Garching, Germany, 27 August 2019
61. "Spilling the Guts of Neutron Stars", invited talk, Nordita, Stockholm, Sweden, 16 August 2019
62. "What your competitor's BBH model can't do", invited talk, The New Era of Gravitational-Wave Physics and Astrophysics, Kavli Institute of Theoretical Physics, 10 July 2019
63. "Constraining the High-Density Equation of State with Astronomical Observations", invited talk, Merging Visions, Kavli Institute of Theoretical Physics, 26 June 2019
64. "Understanding the Interiors of Neutron Stars", KIPAC astronomy colloquium, Stanford University, 23 May 2019
65. "Peering Inside Neutron Stars", astronomy colloquium, University of Maryland, 1 May 2019
66. "What can Gravitational Waves Tell Us About the Assembly of Supermassive Black Holes?", invited talk, American Astronomical Society meeting, Seattle, Washington, 7 January 2019
67. "LISA in the Extreme", physics colloquium, Montana State University, 2 November 2018
68. "Frontiers in Black Hole Astrophysics", invited review, Unsolved Problems in Astrophysics and Cosmology, Budapest, Hungary, 2 July 2018
69. "Extreme and Intermediate-mass Black Hole Inspirals", invited talk, 21st Capra meeting, Golm, Germany, 28 June 2018
70. "What can NS Mergers Tell Us About Dense Matter?", invited talk, Compact Stars and QCD, New York, NY, 13 June 2018
71. "Arguments For and Against Intermediate-Mass Black Holes", invited talk, APS April Meeting, Columbus, Ohio, 17 April 2018
72. "Could Dark Matter Consist of Primordial Black Holes?", physics seminar, University of São Paulo, São Paulo, Brazil, 21 March 2018
73. "Neutron Stars Going Bump in the Night", cosmology seminar, Johns Hopkins University, 16 November 2017
74. "When Neutron Stars Collide", astrophysics theory seminar, University of Florida, 25 October 2017
75. "Why Should We Care About Double Neutron Star Mergers?", invited talk, Joint Space-Science Institute symposium on neutron star gravitational wave detection, University of Maryland, 16 October 2017
76. "Brainstorming: Key Questions and Challenges", invited review talk, And then there was Light: Electromagnetic Signatures of Stellar Mass Binary Black Hole Mergers, Leiden, Netherlands, 4 September 2017
77. "Putting a Spin on Stellar-Mass Black Holes", astronomy seminar, Penn State, 1 September 2017
78. "Basics of Magnetic Accretion", invited talk, High Energy Astrophysics Division meeting, Sun Valley, Idaho, 24 August 2017
79. "Systematics in Mass and Radius Measurements Using NICER data", invited talk, eXtreme Matter meets eXtreme Gravity, Bozeman, Montana, 18 August 2017

80. "Neutron Star Measurements Using X-rays and Gravitational Waves", colloquium, Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil, 9 August 2017
81. "Astrophysical Implications of LIGO's Gravitational Wave Detections", invited talk, The Physics of Extreme-Gravity Stars, Nordita, Stockholm, Sweden, 21 June 2017
82. "NICER overview and Status", invited talk, Nuclear Astrophysics in the Gravitational Wave Era, Trento, Italy, 13 June 2017
83. "Neutron Star Measurements Using X-rays and Gravitational Waves", invited talk, Nuclear Astrophysics in the Gravitational Wave Era, Trento, Italy, 13 June 2017
84. "Black Holes and Revelations: Gravitational Wave Detections", physics colloquium, University of Iceland, Reykjavik, Iceland, 29 May 2017
85. "The Wave of the Future", astronomy colloquium, University of São Paulo, 22 March 2017
86. "How to Tell When You've Busted CDM", physics colloquium, MIT, 18 October 2016
87. "CDM vs. Perceived Structure", astronomy seminar, Johns Hopkins University, 10 October 2016
88. "Future X-ray and Gravitational Wave Measurements of Neutron Star Masses and Radii", invited talk, workshop on laboratory and astronomical observations of dense matter, Institute for Nuclear Theory, University of Washington, Seattle, 18 July 2016
89. "An Upper Bound on Neutron Star Masses from Models of Short Gamma-Ray Bursts", contributed talk, 21st International Conference on General Relativity and Gravitation, Columbia University, 11 July 2016
90. "Implications of the Gravitational Wave Event GW151226", invited talk, Dense Stellar Environments as a Probe of Astrophysics and General Relativity, Benasque, Spain, 15 June 2016
91. "Dynamical Formation of Double Black Hole Binaries", invited talk, Dense Stellar Environments as a Probe of Astrophysics and General Relativity, Benasque, Spain, 9 June 2016
92. "Systematic Errors in Neutron Star Radius Measurements", invited talk, Neutron Stars in the Multi-Messenger Era, Ohio University, 25 May 2016
93. "The Wave of the Future", physics colloquium, University of Maryland, Baltimore County, 27 April 2016
94. "A New Method for Finding Point Sources in High-energy Neutrino Data", ITC lunchtime seminar, Harvard, 21 April 2016
95. "GW, short γ-ray bursts, and constraints on NS matter", ITC colloquium, Harvard, 21 April 2016
96. "The Prospects and Challenges of Measuring NS Masses and Radii Using Waveform Modeling", invited talk, Accretion onto Magnetized Neutron Stars, Nordita, Stockholm, Sweden, 23 March 2016
97. "The Era of Gravitational-Wave Astronomy", astronomy seminar, University of Michigan, 18 March 2016
98. "Short GRBs and the Maximum Mass of Neutron Stars", astronomy colloquium, University of Michigan, 17 March 2016
99. "The Implications of GW150914", physics seminar, Hillsdale College, 14 March 2016
100. "Neutron Star Upper Mass Limits from GRBs and GWs", physics colloquium, Texas Tech University, 25 February 2016
101. "Standard Channels for Binary Formation", invited talk, Rapid-Fire Workshop on Compact Binary Mergers, Columbia University, 20 February 2016
102. "The Discovery of Gravitational Waves: GW at GW", physics seminar, George Washington University, 16 February 2016
103. "Learning about Neutron Star Matter from X-rays and Gravitational Waves", invited talk, The Many Faces of Neutron Stars, Garching, Germany, 14 September 2015
104. "Systematics and Statistics for NICER Determination of Neutron Star Masses and radii", invited talk, Extreme Gravity Workshop, Bozeman, Montana, 20 August 2015
105. "The Challenges of Determining Neutron Star Masses and Radii", invited talk, The Neutron Star Radius and All That Jazz, Montreal, Canada, 2 July 2015
106. "Constraints on the Dense Matter EOS from Burst Oscillations", invited talk, Forty Years of X-ray Bursts, Madrid, Spain, 18 June 2015

107. "Neutron Star Upper Mass limits from GRBs and GWs", contributed talk, What Comes Next for LIGO?, Silver Spring, MD, 7 May 2015
108. "Measurements, Causes, and Effects of Black Hole Spin", invited talk, Compact Objects as Astrophysical and Gravitational Probes, Leiden, Netherlands, 5 February 2015
109. "Gravitational Wave Detection of Massive Stellar BH Binaries", invited talk, Aspen meeting on black holes in dense star clusters, Aspen, CO, 22 January 2015
110. "Determining Neutron Star Masses and Radii using NICER Energy-Resolved Waveform Data", contributed talk, AAS meeting, Seattle, 6 January 2015
111. "Black Hole Astrophysics", invited talk, GR@99, Bad Honnef, Germany, 18 September 2014
112. "Challenges in Measuring Neutron Star Radii", colloquium, Tuorla Observatory, University of Turku, Finland, 12 August 2014
113. "Alignment of Supermassive Black Hole Binary Orbits and Spins", invited talk, COSPAR meeting, Moscow, Russia, 6 August 2014
114. "Challenges in Measuring Neutron Star Radii", invited talk, workshop on Binary Neutron Star Coalescence as a Fundamental Physics Laboratory, Seattle, Washington, 15 July 2014
115. "Supermassive Black Hole Binaries: The Case for Aligned Spins", invited talk, workshop on Unsolved Problems in Astrophysics and Cosmology, Budapest, Hungary, 5 July 2014
116. "Physics with Gravitational Wave Detections", invited talk, Aspen workshop on ultracompact binaries, Aspen, Colorado, 13 June 2014
117. "Gravitational Waves and the Joint Space-Science Institute", presentation to congressional staffers, University of Maryland, 17 April 2014
118. "Lemming Black Holes", astronomy colloquium, McGill University, 15 April 2014
119. "Theoretical Ideas for the Formation and Feeding of IMBHs", invited talk, ULXs and their Implications for our View of the Universe, Leiden, the Netherlands, 2 April 2014
120. "Lemming Black Holes", astronomy colloquium, Radboud University, Nijmegen, the Netherlands, 1 April 2014
121. "Mass-Radius Constraints for NS from Pulse Profile Modeling", invited talk, Joint Space-Science Institute minisymposium, Goddard Space Flight Center, 27 March 2014
122. "Ways to Measure Neutron Star Radii", invited presentation, workshop on the structure and signals of neutron stars, Florence, Italy, 19 March 2014
123. "Neutron Stars and Very Dense Matter", seminar, Case Western Reserve University, 5 March 2014
124. "Lemming Black Holes", colloquium, Case Western Reserve University, 5 March 2014
125. "Measuring the Radii of Neutron Star X-ray Bursters with NICER", invited talk, American Astronomical Society meeting, Washington, DC, 8 January 2014
126. "Formation of Black Hole Seeds by Core Collapse", invited talk, Astro-GR@Atlanta, Atlanta, Georgia, 18 November 2013
127. "Current Challenges in the Astrophysics of Neutron Stars and Black Holes", Rowan University physics colloquium, 27 September 2013
128. "Neutron Stars and Their Planets", Goddard Space Flight Center Astrophysics Colloquium, 27 August 2013
129. "The Universe of Black Holes that will be Revealed with Gravitational Waves", Blackboard Lunch talk, Kavli Institute of Theoretical Physics, 19 August 2013
130. "Alignment of the Spins of Supermassive Black Hole Binaries", invited talk, A Universe of Black Holes, Kavli Institute of Theoretical Physics, 16 August 2013
131. "Systematics in Measurements of Neutron Star Radii", invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 20 June 2013
132. "Intermediate-Mass Black Holes", invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 19 June 2013

133. "Gravitational Wave Radiation and Sources", invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 18 June 2013
134. "Challenges in the Measurement of Neutron Star Radii", invited talk, Max Born Symposium, Wrocław, Poland, 15 June 2013
135. "How Well Can We Measure Neutron Star Radii?", invited talk, University of Wrocław, Poland, 13 June 2013
136. "Electromagnetic Counterparts to High-Frequency Gravitational Wave Sources", invited talk, Science from the First Gravitational Wave Detections, 23 May 2013, South Padre Island, Texas
137. "How Can We Measure Neutron Star Radii?", invited seminar, Canadian Institute for Theoretical Astrophysics, 29 April 2013, Toronto, Canada
138. "The Dynamics of Galactic Nuclei", invited review talk, Black Hole Fingerprints, 20 March 2013, Snowbird, Utah
139. "Neutron Stars and Physical Extremes", astronomy colloquium, Universidad de Chile, 14 March 2013
140. "Hearing the Universe with Gravitational Waves", astronomy colloquium, Pontifica Universidad Católica de Chile, 12 March 2013
141. "The Difficulties and Rewards of Neutron Star Radii", astronomy seminar, Pontifica Universidad Católica de Chile, 11 March 2013
142. "The Near Future of Gravitational Wave Detection", astronomy colloquium, Universidade Federal do ABC, São Paulo, Brazil, 7 March 2013
143. "Neutron Stars and the Unknowns of Dense Matter", astronomy colloquium, Universidad Nacional de La Plata, Argentina, 5 March 2013
144. "The Universe As Heard With Gravitational Waves", astronomy colloquium, Instituto de Astronomía y Física del Espacio, University of Buenos Aires, Argentina, 4 March 2013
145. "Planets Around Neutron Stars", invited talk, AAS Meeting, Long Beach, CA, 10 January 2013
146. "Fermi Synergies with Advanced LIGO", invited talk, Fermi Symposium, Monterey, CA, 30 October 2012
147. "How Accretion Disks Wiggle", CAS seminar, Johns Hopkins University, 9 October 2012
148. "Dynamics and Intermediate-Mass Black Holes", invited talk at the Chirps, Mergers, and Explosions workshop at the Kavli Institute for Theoretical Physics, Santa Barbara, CA, 12 September 2012
149. "Using Thermonuclear Burst Spectra to Constrain NS Masses and Radii", invited talk, IAU General Assembly, Beijing, China, 20 August 2012
150. "Neutron Stars and the Extremes of Matter", colloquium, Yonsei University, Seoul, South Korea, 16 August 2012
151. "The Promise of Gravitational Waves", colloquium, Seoul National University, 14 August 2012
152. "So What Happens When We Detect GWs from CBCs?", invited talk, Rattle and Shine conference, Kavli Institute for Theoretical Physics, 3 August 2012
153. "The Implications of Neutron Star Observations for Dense Matter", plenery talk, CompStar meeting, Tahiti, 7 June 2012
154. "Gravitational Wave Sources from a few Hz to a few kHz", invited talk, Gravitational Wave Advanced Detector Workshop, Waikoloa Beach, HI, 14 May 2012
155. "The Implications of kHz QPOs", invited talk, 16 Years of Discovery with RXTE, Goddard Space Flight Center, 30 March 2012
156. "Planets in the Extreme Environments of Neutron Stars", invited talk, Planets around Stellar Remnants, Arecibo Observatory, Puerto Rico, 26 January 2012
157. "Lemming Black Holes", University of California at Santa Cruz astronomy colloquium, 23 November 2011
158. "The Connection of LIGO to Astrophysics", invited talk, Gravitational Wave Open Data Workshop, Livingston, LA, 27 October 2011
159. "Lemming Black Holes", Howard University physics colloquium, 12 October 2011

160. "Galactic Centers: it's a Binary's Life", invited talk, Astro-GR conference, Palma de Mallorca, Spain, 9 September 2011
161. "Using Thermonuclear Burst Spectra to Constrain Neutron Star Masses and Radii", invited talk, Astrophysical Transients workshop, University of Washington, 18 July 2011
162. "Tidal Disruption of Tidally Separated Binaries", invited seminar, Aspen workshop on low-mass and intermediate-mass black holes, Aspen, CO, 7 June 2011
163. "The Spins of Supermassive Black Holes", invited seminar, Aspen workshop on supermassive black holes, Aspen, CO, 1 June 2011
164. "Middleweight Black Holes", general relativity seminar, University of Maryland, 4 May 2011
165. "Probing NS EOS and Synergy with Advanced LIGO and Virgo", invited talk, International X-ray Observatory meeting, Rome, Italy, 16 March 2011
166. "Using Millisecond Pulsars to Detect 10^{-9} to 10^{-7} Hz Gravitational Waves", invited talk, Joint Space-Science Institute mini-symposium, College Park, MD, 25 February 2011
167. "Using Gravitational Waves to Constrain Neutron Star Structure", general relativity seminar, Penn State, 15 February 2011
168. "New Results on the X-ray Spectra of Thermonuclear Bursts", invited talk, HTRS meeting, Champéry, Switzerland, 9 February 2011
169. "Learning about Dense Matter from Neutron Stars", astronomy colloquium, University of British Columbia, 10 January 2011
170. "Neutron Stars and the Extremes of Matter", invited talk, III Challenges workshop, Campos do Jordao, Brazil, 16 December 2010
171. "Introduction to Gravitational Radiation", invited talk, III Challenges workshop, Campos do Jordao, Brazil, 13 December 2010
172. "X-ray Burst Spectra", invited talk, Exploring Physics with Neutron Stars, Tucson, Arizona, 19 November 2010
173. "A Possible Explanation for Puzzling Properties of X-ray Bursts", astronomy colloquium, Caltech, 20 October 2010
174. "Dynamical processes in the production of EMRIs", invited talk, LISA-GR meeting, Paris, France, 17 September 2010
175. "Putting a spin on supermassive black holes", astronomy seminar, University of Melbourne, 11 August 2010
176. "What do we know about black holes?", astronomy seminar, Monash University, Melbourne, Australia, 10 August 2010
177. "AIGO and the structure of neutron stars", astrophysics seminar, University of Western Australia, 6 August 2010
178. "Astrophysics with gravitational waves", IAS masterclass, University of Western Australia, 5 August 2010
179. "Formation of stellar-mass black hole binaries", invited talk, 460th Heraeus symposium, on black holes, Bad Honnef, Germany, 11 June 2010
180. "Learning about neutron stars with LIGO", LIGO seminar, Caltech, 20 April 2010
181. "Probing the high-density matter of neutron stars", ITC colloquium, Harvard, 1 April 2010
182. "Introduction to gravitational radiation", invited talk, Advanced gravitational wave detectors and Advanced LIGO technology, Perth, Australia, 28 February 2010
183. "Astrophysical Influences on the Spins of Supermassive Black Holes", colloquium, Naval Research Laboratory, Washington, DC, 25 February 2010
184. "Astrophysical Sources for Ground-Based Gravitational Wave Detectors", invited talk, Advanced gravitational wave detectors and Advanced LIGO technology, Perth, Australia, 23 February 2010
185. "Prospects for gravitational wave detection", invited talk, Probing Strong Gravity Near Black Holes, Prague, Czech Republic, 18 February 2010

186. "Extreme mass ratio inspirals", invited talk, Stars and Singularities, Rehovot, Israel, 10 December 2009
187. "Neutron stars, high densities, and nuclear physics", physics colloquium, Wake Forest University, 4 November 2009
188. "Observations of Black Holes", invited talk, Shining Light on Black Holes, Ann Arbor, MI, 25 September 2009
189. "Signatures of Kicked Disks and Mass Loss", invited talk, Matter and Electromagnetic Fields in Strong Gravity, College Park, MD, 27 August 2009
190. "Compact Binaries", invited talk, Fujihara Seminar, Hayama, Japan, 27 May 2009
191. "Astrophysics With Few-Hz Gravitational Waves", invited talk, GWADW meeting, Ft. Lauderdale, FL, 11 May 2009
192. "Astrophysical Influences on the Spins of Supermassive Black Holes", invited talk, Observational Signatures of Black Hole Mergers, Space Telescope Science Institute, 1 April 2009
193. "Intermediate-Mass Black Holes", Blackboard Lunch talk, Kavli Institute of Theoretical Physics, 23 March 2009
194. "The Spins and Eccentricities of Comparable-mass Black Hole Binaries", TAPIR seminar, California Institute of Technology, 9 January 2009
195. "Extreme and Intermediate-Mass Ratio Inspirals", invited talk, winter AAS meeting, Long Beach, CA, 5 January 2009
196. "Properties of Comparable-Mass Black Hole Binaries", math seminar, Rochester Institute of Technology, 19 September 2008
197. "What Neutron Stars Can Tell Us About Cold High-Density Matter", invited talk, meeting on the high-density equation of state in astrophysics, Argonne National Lab, 18 August 2008
198. "Astrophysics with the Laser Interferometer Space Antenna", invited talk, COSPAR Scientific Assembly, Montreal, Canada, 16 July 2008
199. "Models of Kilohertz Quasi-Periodic Brightness Oscillations", invited talk, COSPAR Scientific Assembly, Montreal, Canada, 13 July 2008
200. "Intermediate-Mass Black Holes", invited talk, Seventh International LISA Symposium, Barcelona, Spain, 20 June 2008
201. "How to Make a Stellar-Mass Black Hole Merge", invited colloquium, University of Amsterdam, Amsterdam, Netherlands, 13 June 2008
202. "The Astrophysical Context of Black Hole Mergers", invited talk, APS April meeting, St. Louis, Missouri, 14 April 2008
203. "Astrophysical Consequences of Black Hole Kicks", ASD colloquium, Goddard Space Flight Center 4 March 2008
204. "The Plasma Extremes of Neutron Stars", plasma physics seminar, University of Maryland, 28 November 2007
205. "Gravitational Wave Observations as Probes of Dark Energy", invited talk, dark energy workshop, University of Maryland, 15 November 2007
206. "Off the Edge: the Innermost Stable Circular Orbit around Neutron Stars", astronomy colloquium, University of Michigan, Ann Arbor, Michigan, 13 September 2007
207. "Alignment of black holes in microquasars", Microquasar workshop, Agios Nikolaos, Crete, Greece, 4 June 2007
208. "Getting a kick out of black hole spin alignment", Lund Observatory seminar, Lund, Sweden, 31 May 2007
209. "Supermassive black hole alignment, merger, and spin kicks", astrophysics colloquium, Albert Einstein Institute, Potsdam, Germany, 25 May 2007
210. "Implications of the spin distribution of LMXBs", invited talk, workshop on neutron star populations, Green Bank, WV, 21 May 2007

211. "Intermediate-Mass Black Holes and Gravitational Radiation", astrophysics colloquium, Institute for Advanced Study, Princeton, NJ, 6 March 2007
212. "Intermediate-Mass Black Holes", astronomy colloquium, University of Virginia, Charlottesville, VA, 13 November 2006
213. "Massive Black Holes", invited review talk, LISA EMRI workshop, Golm, Germany, 18 September 2006
214. "Observations of Massive Black Holes with LISA", invited talk, LISA analysis workshop, Greenbelt, MD, 25 June 2006
215. "Compact Binaries as Sources of Gravitational Radiation", invited talk, compact objects conference, Cefalu, Sicily, 20 June 2006
216. "Ultraluminous X-ray Sources", invited talk, fourth Harvard Conference on astrophysics, Cambridge, MA, 18 May 2006
217. "Astrophysical Applications of Numerical Relativity", invited talk, AANR meeting, Guanajuato, Mexico, 6 May 2006
218. "Gravitational Waves from Intermediate-Mass Black Holes", invited talk, APS, Dallas, Texas, 24 April 2006
219. "Constraints on Alternatives to Supermassive Black Holes", invited talk, MODEST-6a, Lund, Sweden, 15 December 2005
220. "Gravitational Wave Sources from Dense Star Clusters", invited talk, MODEST-6, Evanston, IL, 31 August 2005
221. "QPO constraints on neutron stars", invited talk, A Life With Stars, Amsterdam, Holland, 24 August 2005
222. "Astrophysics With LISA", invited talk, LISA Data: Analysis, Sources, and Science, Aspen, CO, 30 May 2005
223. "Formation Mechanisms for Intermediate-Mass Black Holes", invited talk, High Energy Phenomena of Compact Objects, Hsinchu, Taiwan, 14 March 2005
224. "Production of QPOs in Accreting Neutron Star Systems", invited talk, COSPAR Colloquium on Spectra and Timing of Compact X-ray Binaries, Mumbai, India, 17 January 2005
225. "Why Neutron Stars Are Interesting", physics colloquium, Georgetown University, 30 November 2004
226. "Gravitational Radiation from Inspirals of Intermediate-Mass Black Holes", astronomy seminar, University of Pennsylvania, 20 October 2004
227. "Probing General Relativity With Mergers of Supermassive and Intermediate-Mass Black Holes", solicited talk HEAD Meeting, New Orleans, LA, 9 Sep 2004
228. "Sources of Gravitational Radiation", Hot Points in Astrophysics, Dubna, Russia, 11 Aug 2004
229. "Quasi-Periodic Brightness Oscillations from Accreting Neutron Stars and Black Holes", Hot Points in Astrophysics, Dubna, Russia, 4 Aug 2004
230. "Intermediate-Mass Black Holes", invited review talk, Making Waves With Intermediate-Mass Black Holes, Penn State University, 20 May 2004
231. "And All the Rest (Primordial, Intermediate, and Orphan Black Holes)", invited review talk, APS April Meeting, Denver, CO, 1 May 2004
232. "Intermediate-Mass Black Holes", astronomy colloquium, Rutgers University, 26 March 2004
233. "Intermediate-Mass Black Holes", talk presented to the Data Analysis Working Group of the LISA International Science Team, College Park, MD, 8 December 2003
234. "Fundamental Physics in Quasiperiodic Brightness Oscillations", invited review talk, X-Ray Timing 2003 Meeting, Boston, MA, 5 November 2003
235. "Challenges for Models of Intermediate-Mass Black Holes", theoretical astrophysics seminar, University of Illinois at Urbana-Champaign, 15 October 2003
236. "Searching for Gravitational Radiation Sources Using Fluctuation Analysis", astronomy colloquium, University of Illinois at Urbana-Champaign, 14 October 2003

237. "Black Hole Binaries, Gravitational Waves, and Cockroaches", astronomy colloquium, University of Maryland, 8 October 2003
238. "Constraints on Superdense Matter from X-ray Binaries", invited review talk, NATO Advanced Research Workshop on Superdense QCD Matter and Compact Stars, Yerevan, Armenia, 30 September 2003
239. "Formation of Ultraluminous X-ray Sources", invited talk, workshop on ULXs, Johns Hopkins University, Baltimore, MD, 12 September 2003
240. "Implications of Intermediate-Mass Black Holes for Gravitational Radiation", invited talk, 10th Marcel Grossman meeting on general relativity, Rio de Janeiro, Brazil, 22 July 2003
241. "Sonic-Point and Spin Resonance Beat Frequency Model For Kilohertz QPOs", contributed talk, Neutron Stars on Fire, Princeton, NJ, 11 May 2003
242. "Formation Scenarios for Intermediate-Mass Black Holes", invited talk, The Astrophysics of Gravitational Wave Sources, College Park, MD, 25 April 2003
243. "Gravitational Waves from Intermediate-Mass Black Holes", High Energy Astrophysics Division Meeting, Mt. Tremblant, Quebec, 26 March 2003
244. "Intermediate-Mass Black Holes and Gravitational Radiation", Penn State Gravity Center colloquium, State College, PA, 3 March 2003
245. "Intermediate-Mass Black Holes and Gravitational Radiation", invited talk, Aspen Winter Conference on Gravitational Waves, 3 February 2003
246. "Intermediate-Mass Black Holes", Astronomy colloquium, Case Western Reserve University, Cleveland, OH, 15 January 2003
247. "Black Holes in Dense Stellar Regions", Astronomy and Solar Physics colloquium, Goddard Space Flight Center, Greenbelt, MD, 7 November 2002
248. "Intermediate-Mass Black Holes and Gravitational Radiation", colloquium, LIGO Science Center, 1 November 2002
249. "Black Hole Dynamics in Stellar Clusters", astronomy seminar, Southwest Research Institute, 12 July 2002
250. "Origin and Implications of Intermediate-Mass Black Holes", astronomy colloquium, University of Massachusetts at Amherst, 16 May 2002
251. "Intermediate-Mass Black Holes", astrophysics seminar, Institute for Advanced Study, Princeton, New Jersey, 1 May 2002
252. "Medium-Size Black Holes", plenary talk, April Meeting of the American Physical Society, Albuquerque, New Mexico, 20 April 2002
253. "The Neutron Star Equation of State From Fast Timing of X-ray Bursts", XEUS Science Workshop, Munich, Germany, 12 March 2002
254. "Intermediate-Mass Black Holes", invited review talk, Black Holes: Theory Confronts Reality, Santa Barbara, California, 25 February 2002
255. "Gravitational Waves and X-rays from Black Holes in Dense Stellar Clusters", invited talk, AAS Winter Meeting, Washington, D.C., 9 January 2002
256. "Origin and Implications of Intermediate-Mass Black Holes", astronomy colloquium, University of Maryland, 31 October 2001
257. "Origin and Implications of Intermediate-Mass Black Holes", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 9 October 2001
258. "Production of Intermediate-Mass Black Holes in Globular Clusters", invited talk, Two Years of Science With Chandra, Washington, D.C., 7 September 2001
259. "Consequences of Accretion onto Primordial Compact Objects",invited talk, APS meeting, Washington, D.C., 28 April 2001
260. "Neutron Star Masses", invited review talk, Quark Matter 2001 Conference, Stony Brook, New York, 18 January 2001

261. "Strong Gravity and Dense Matter from Observations of Compact Objects", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 28 November 2000
262. "Strong Gravity and Neutron Star X-ray Binaries", invited talk, HEAD meeting, Honolulu, Hawaii, 9 November 2000
263. "Small-Scale Structure in Galactic Objects Deduced from X- and Gamma Ray Timing Measurements", invited talk, IAU Symposium #205, Manchester, England, 15 August 2000
264. "Fast Oscillations, General Relativity, and Dense Matter", Astronomy Colloquium, Pennsylvania State University, 26 April 2000
265. "Science With a Large-Area Timing Instrument", invited talk, Rossi 2000 meeting, Goddard Space Flight Center, 24 March 2000
266. "Strong Gravity and Ultradense Matter: Implications of Kilohertz Brightness Oscillations", Astronomy colloquium, University of Virginia, 28 September 1999
267. "Beat-Frequency Models", invited review talk, X-ray astronomy meeting, Bologna, Italy, 6 September 1999
268. "Recent Developments in Kilohertz QPOs", invited review talk, HEAD meeting, Charleston, SC, 12 April 1999
269. "Theoretical Interpretation of Kilohertz Brightness Oscillations", astrophysics colloquium, University of Maryland, 17 March 1999
270. "Taking the Pulse of a Neutron Star", astrophysics colloquium, University of Chicago, 6 January 1999
271. "Gravitational Lensing Limits on the Average Redshift of Gamma-Ray Bursts", contributed talk, 19th Texas Symposium on Relativistic Astrophysics, Paris, France, 16 December 1998
272. "A 2.3 $M_\odot$ Neutron Star? Results from Kilohertz Brightness Oscillations", theory seminar, Institute of Astronomy, Cambridge, England, 9 December 1998
273. "Implications of Kilohertz Brightness Oscillations in Neutron Star Low-Mass X-ray Binaries", invited theory seminar, Max Planck Center for Theoretical Astrophysics, Garching, Germany, 2 December 1998
274. "Evidence for a 2.3 Solar Mass Neutron Star and Implications for Dense Matter", theory seminar, Argonne National Laboratory, Argonne, Illinois, 17 September 1998
275. "Constraints on Neutron Star Masses and Equations of State from Kilohertz QPOs", theory seminar, Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts, 11 February 1998
276. "General Relativistic Effects on Gas Dynamics and Radiation Transport Near Neutron Stars", invited talk, HEAD meeting, Estes Park, CO, 7 November 1997
277. "Neutron Star Mass and Radius Constraints from High-Frequency QPOs", contributed talk, HEAD meeting, Estes Park, CO, 6 November 1997
278. "Constraints on Neutron Stars Implied by Kilohertz QPOs", invited talk, BeppoSAX/RXTE Symposium, Rome, 22 October 1997
279. "Models of Kilohertz Quasi-Periodic Brightness Oscillations", invited talk, 8th Annual October Astrophysics Conference, College Park, MD, 14 October 1997
280. "Sonic-Point Model for Kilohertz Brightness Oscillations in LMXBs", contributed talk, American Astronomical Society meeting, Winston-Salem, NC, 11 June 1997
281. "Theoretical Interpretation of Kilohertz QPO from LMXBs", invited talk, American Physical Society general meeting, Washington, DC, 19 April 1997
282. "The Origin of Cosmic Gamma-Ray Bursts", physics seminar, University of Illinois at Urbana-Champaign, Urbana, Illinois, 17 April 1997
283. "Entering a Data-Rich Era in the Study of Soft Gamma-Ray Repeaters", relativistic astrophysics seminar, University of Illinois at Urbana-Champaign, Urbana, Illinois, 16 April 1997
284. "The Songs of Neutron Stars: High-Frequency X-ray Brightness Oscillations", astrophysics colloquium, University of Illinois at Urbana-Champaign, Urbana, Illinois, 15 April 1997
285. "Sonic-Point Model for High-Frequency QPOs in Neutron Star Low-Mass X-ray Binaries", invited talk, 18th Texas Symposium on Relativistic Astrophysics, Chicago, Illinois, 19 December 1996

286. "Models for Kilohertz Brightness Oscillations", physics seminar, Stanford University, Palo Alto, California, 5 December 1996
287. "Sonic-Point Interpretation of High-Frequency QPOs", astronomy seminar, University of California at Berkeley, Berkeley, California, 3 December 1996
288. "Implications of Kilohertz QPOs", physics seminar, University of California at San Diego, San Diego, California, 26 November 1996
289. "A Model for High-Frequency Brightness Oscillations from Neutron-Star LMXBs", astronomy seminar, Yale University, New Haven, Connecticut, 21 November 1996
290. "Constraints on Neutron Stars in LMXBs from High-Frequency QPOs", astronomy seminar, Columbia University, New York City, 20 November 1996
291. "Sonic-Point Model for Kilohertz Brightness Oscillations", astronomy colloquium, Copernicus Astronomical Center, Warsaw, Poland, 30 October 1996
292. "Optical/Near-IR Observations of the Bursting Pulsar", astronomy seminar, Copernicus Astronomical Center, Torun, Poland, 28 October 1996
293. "Interpretation of High-Frequency Quasi-Periodic Oscillations", physics seminar, Nordita, Copenhagen, 23 October 1996
294. "Constraints on Neutron Star Masses and Radii from Kilohertz Oscillations", astronomy seminar, Astronomical Institute "Anton Pannekoek", Amsterdam, 21 October 1996
295. "Soft Gamma-Ray Repeaters: Probes of a New Physical Regime?", physics seminar, Naval Research Laboratory, Washington, DC, 9 July 1996
296. "Entering a Data-Rich Era in the Study of Soft Gamma-Ray Repeaters", high energy astrophysics physics seminar, Goddard Space Flight Center, Greenbelt, Maryland, 8 July 1996
297. "Soft Gamma-Ray Repeaters: Probes of a New Physical Regime?". physics seminar, University of Illinois, Urbana, Illinois, 13 May 1996
298. "Soft Gamma-Ray Repeaters and Ultrastrong Magnetic Fields", astronomy seminar, University of Wisconsin, Madison, Wisconsin, 4 April 1996
299. "Spectral Signatures of Supercritical Magnetic Fields", physics seminar, University of North Carolina, Chapel Hill, North Carolina, 1 March 1996
300. "Soft Gamma-Ray Repeaters", astronomy seminar, North Carolina State, Raleigh, North Carolina, 29 February 1996
301. "Developments in the Study of Soft Gamma-Ray Repeaters", astrophysics colloquium, University of Chicago, Chicago, Illinois, 21 February 1996
302. "Critical Luminosities in Ultrastrong Magnetic Fields", astronomy seminar, Northwestern University, Evanston, Illinois, 12 February 1996
303. "Optical/IR Observations of the Bursting Pulsar", contributed talk, Aspen Workshop on Black-Hole X-ray Transients, Aspen, Colorado, 25 January 1996
304. "Compton Scattering Effects in the Spectra of Soft Gamma-Ray Repeaters", contributed talk, Third Huntsville Symposium on Gamma-Ray Bursts, Huntsville, Alabama, 27 October 1995
305. "Radiation Drag near Slowly Rotating Neutron Stars", contributed talk, High Energy Astrophysics Division Meeting, Napa, CA, 2 November 1994
306. "Radiation Drag Near Slowly Rotating Neutron Stars", contributed talk, Lund workshop on neutron stars, Lund, Sweden, 1 April 1993
307. "Radiation Forces Near Neutron Stars — What a Drag!", contributed talk, Compact Objects, Nordita, Copenhagen, Denmark, 24 March 1993
308. "Gamma-Ray Production by Neutron Stars Accreting From a Disk", contributed talk, Compton Gamma-Ray Observatory meeting, St. Louis, Missouri, 16 October 1992
309. "Thermal Emission From Isolated Neutron Stars", contributed talk, Isolated Pulsars, Taos, New Mexico, 24 February 1992

Publications

Articles in Journals

1. "Comparing the Space Densities of Millisecond-Spin Magnetars and Fast X-Ray Transients", S. Biswas, P. G. Jonker, M. C. Miller, A. Levan, and J. Quirola-Vsquez 2025, arXiv:2506.11676.
2. "Dense Matter in Neutron Stars with eXTP", A. Li et al. 2025, arXiv:2506.08104.
3. "EP250108a/SN 2025kg: A Broad-Line Type Ic Supernova Associated with a Fast X-ray Transient Showing Evidence of Extended CSM Interaction", G. Srinivasaragavan et al. 2025, arXiv:2504.17516.
4. "The fast X-ray transient EP240315a: a $z \sim 5$ gamma-ray burst in a Lyman continuum leaking galaxy", A. Levan et al. 2024, arXiv:2404.16350.
5. "Evidence for eccentricity in the population of binary black holes observed by LIGO-Virgo-KAGRA", N. Gupte et al. 2024, arXiv:2404.14286.
6. "Multi-Wavelength Analysis of AT 2023sva: a Luminous Orphan Afterglow With Evidence for a Structured Jet", G. Srinivasaragavan et al. 2025, *MNRAS*, **538**, 351 (22 pages).
7. "Theoretical and experimental constraints for the equation of state of dense and hot matter", R. Kumar et al. 2024, *LRR*, **27**, 3 (115 pages).
8. "The interacting double white dwarf population with LISA; stochastic foreground and resolved sources", A Toubiana, N. Karnesis, A. Lamberts, and M. C. Miller 2024, *A&A*, **692**, A165 (13 pages).
9. "Exploring Waveform Variations among Neutron Star Ray-tracing Codes for Complex Emission Geometries", D. Choudhury et al. 2024, *ApJ*, **975**, 202 (15 pages).
10. "A More Precise Measurement of the Radius of PSR J0740+6620 Using Updated NICER Data", A. Dittmann et al. 2024, *ApJ*, **974**, 295 (19 pages).
11. "Investigating the Mass of the Black Hole and Possible Wind Outflow of the Accretion Disk in the Tidal Disruption Event AT2021ehb", X. Xiang et al. 2024, *ApJ*, **972**, 106 (13 pages).
12. "Characterizing the Ordinary Broad-lined Type Ic SN 2023pel from the Energetic GRB 230812B", G. Srinivasaragavan et al. 2024, *ApJ*, **960** (15 pages).
13. "Evidence for a strong 19.5 Hz flux oscillation in Swift BAT and Fermi GBM gamma-ray data from GRB 211211A", C. Chirenti, S. Dichiara, A. Lien, and M. C. Miller 2024, *ApJ*, **967**, 26.
14. "Nontrivial features in the speed of sound inside neutron stars", D. Mroczek, M. C. Miller, J. Noronha-Hostler, and N. Yunes 2024, *PRD*, **110**, 123009 (36 pages).
15. "Do gravitational wave observations in the lower mass gap favor a hierarchical triple origin?", V. Gayathri, I. Bartos, S. Rosswog, M. C. Miller, D. Veske, W. Lu, and S. Marka 2023, arXiv:2307.09097.
16. "Hierarchical Triples as Early Sources of r-process Elements", I. Bartos, S. Rosswog, V. Gayathri, M. C. Miller, D. Veske, and S. Marka 2023, arXiv:2302.10350.
17. "A Sensitive Search for Supernova Emission Associated with the Extremely Energetic and Nearby GRB 221009A", G. Srinivasaragavan et al. 2023, *ApJ*, **949**, L39 (13 pages).
18. "The Decoupling of Binaries from Their Circumbinary Disks", A. J. Dittmann, G. Ryan, and M. C. Miller 2023, *ApJ*, **949**, L30 (8 pages).
19. "Kilohertz Quasiperiodic Oscillations in Short Gamma-ray Bursts", C. Chirenti, S. Dichiara, A. Lien, M. C. Miller, and R. Preece 2023, *Nature*, **613**, 253 (4 pages).
20. "Astrophysics with the Laser Interferometer Space Antenna", P. Amaro-Seoane et al. 2023, *LRR*, **26**, 2 (328 pages).
21. "A Very Luminous Jet from the Disruption of a Star by a Massive Black Hole", I. Andreoni et al. 2022, *Nature*, **612**, 430 (5 pages).
22. "The Radius of PSR J0740+6620 from NICER with NICER background estimates", T. Salmi, S. Vinciguerra, D. Choudhury, T. E. Riley, A. L. Watts, R. A. Remillard, P. S. Ray, S. Bogdanov, S. Guillot, Z. Arzoumanian, C. Chirenti, A. J. Dittmann, K. C. Gendreau, W. C. G. Ho, M. C. Miller, S. M. Morsink, Z. Wadiasingh, and M. T. Wolff 2022, *ApJ*, **941**, 150 (23 pages).

23. "Electromagnetic Counterparts to Massive Black Hole Mergers", T. Bogdanovic, M. C. Miller, and L. Blecha 2022, *LRR*, **25**, 3 (127 pages).
24. "Gravitational-Wave and X-ray Probes of the Neutron Star Equation of State", N. Yunes, M. C. Miller, and K. Yagi 2022, *Nature Reviews Physics*, **4**, 237 (10 pages).
25. "The Uncertain Future of Massive Binaries Obscures the Origin of LIGO/Virgo Sources", K. Belczynski, A. Romagnolo, A. Olejak, J. Klencki, D. Chattopadhyay, S. Stevenson, M. C. Miller, J.-P. Lasota, and P. A. Crowther 2022, *ApJ*, **925**, 69 (13 pages).
26. "Observing intermediate-mass black holes and the upper–stellar-mass gap with LIGO and Virgo", A. K. Mehta, A. Buonanno, J. Gair, M. C. Miller, E. Farag, R. J. deBoer, M. Wiescher, and F. X. Timmies 2022, *ApJ*, **924**, 39 (21 pages).
27. "The Radius of PSR J0740+6620 from NICER and XMM-Newton Data", M. C. Miller, F. K. Lamb, A. J. Dittmann, S. Bogdanov, Z. Arzoumanian, K. C. Gendreau, S. Guillot, W. C. G. Ho, J. M. Lattimer, M. Loewenstein, S. M. Morsink, P. S. Ray, M. T. Wolff, C. L. Baker, T. Cazeau, S. Manthripragada, C. B. Markwardt, T. Okajima, S. Pollard, I. Cognard, H. T. Cromartie, E. Fonseca, L. Guillemot, M. Kerr, A. Parthasarathy, T. T. Pennucci, S. Ransom, and I. Stairs 2021, *ApJ Letters*, **918**, L28 (31 pages).
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