CURRICULUM VITAE: PATRICK BRADY

Mailing address:

Department of Physics,
University of Wisconsin - Milwaukee,
P.O. Box 413, Milwaukee WI 53201

Degrees:

Ph.D.	Theoretical Physics. (University of Alberta, Canada. 1994)
M.Sc.	Mathematical Physics. (University College Dublin. 1989)
B.Sc.	Mathematical Science. (University College Dublin. 1988)

Appointments:

2014-	Distinguished Visiting Research Chair, Perimeter Institute, Canada
2009-	Director, Center for Gravitation, Cosmology and Astrophysics
2007-	Professor of Physics, UWM
2004-2007	Associate Professor of Physics, UWM
1999-2004	Assistant Professor of Physics, UWM
1998-1999	Research Associate, Institute for Theoretical Physics, U. C. Santa Barbara
1995-1998	Prize Fellow, California Institute of Technology
1993-1995	Research Associate, University of Newcastle, England

Awards and Honors:

2016	Breakthrough Prize (awarded to the LIGO Scientific Collaboration)
2011	UWM Research Foundation Senior Faculty Award
2010	Elected Fellow of the American Physical Society
2006	Graduate School/UWM Foundation Research Award
2002-2007	Cottrell Scholar
2002-2006	Sloan Research Fellow
1993	Izaak Walton Killam Memorial Scholarship, University of Alberta
1993	Andrew Stewart Memorial Prize, University of Alberta
1990	Recruitment Scholarship, University of Alberta
1989	Eolas Basic Research Award for study in Ireland
1988	Scholarship in Mathematical Science, University College, Dublin.

Grants Awarded:

2019-(2021) *National Science Foundation, Gravity Program, OAC-1934752*
Amount: $2,800,000
Investigators: P. R. Brady, W. G. Anderson, P. Chang, D. L. A. Kaplan.

2019-(2022) *National Science Foundation, Gravity Program, PHY-1912649*
Amount: $1,350,000
Investigators: P. R. Brady and J. Creighton

2019-(2021) *National Science Foundation, Gravity Program, OAC-1841625*
Amount: $262,279

Investigators: P. R. Brady, W. G. Anderson, P. Chang, D. L. A. Kaplan.
2017-(2021) *National Science Foundation, Gravity Program, PHY-1607585*
Amount: $7,200,000
Investigators: P. R. Brady, J. Smith, P. Couvares, C. Hanna, W. Anderson
2016-2019 *National Science Foundation, Gravity Program, PHY-1607585*
Amount: $1,349,989
Investigators: P. R. Brady, J. Creighton, X. Siemens, A. Wiseman
2016-2019 *National Science Foundation, Major Research Instrumentation, PHY-1626190*
Amount: $874,669
Investigators: P. Brady, J. Creighton, T. Downes, D. Kaplan and A. Wiseman
2013-2016 *National Science Foundation, Gravity Program, PHY-1307429*
Amount: $960,000
Investigators: P. R. Brady, J. Creighton, X. Siemens, A. Wiseman
2011-2017 *National Science Foundation, Gravity Program, PHY-1104371*
Amount: $9,000,000
Investigators: P. R. Brady, S. B. Anderson, S. Koranda, E. Katsavounidis, D. Brown
2010-2013 *National Science Foundation, Gravity Program, PHY-0970074*
Amount: $1,800,000
Investigators: P. Brady, J. Creighton, X. Siemens and A. Wiseman
2009-2012 *National Science Foundation, Major Research Instrumentation, PHY-0923409*
Amount: $1,188,018
Investigators: B. Allen, P. Brady, J. Creighton, X. Siemens and A. Wiseman
2007-2010 *National Science Foundation, Gravity Program, PHY-0701817*
Amount: $1,380,000
Investigators: B. Allen, P. Brady, J. Creighton, M. Papa and A. Wiseman
2006-2011 *National Science Foundation, Physics at the Information Frontier, PHY-0600953*
Amount: $7,750,000 (approx 50% will remain at UWM)
Investigators: P. R. Brady, J. D. Creighton, L. S. Finn, E. Katsavounidis, A. Lazzarini
2004-2008 *National Science Foundation, Major Research Instrumentation, PHY-0421416*
Amount: $1,444,972
Investigators: B. Allen, P. Brady, J. Creighton, S. Koranda and A. Wiseman
2003-2008 *National Science Foundation, Information Technology Research, PHY-0326281*
Via subcontract from MIT, Amount: $847,000
Investigators: B. Allen, P. Brady, J. Creighton, S. Koranda and A. Wiseman
2002-2007 *National Science Foundation, Gravity Program, PHY-0200852*
Amount: $2,300,000
Investigators: B. Allen, P. Brady, J. Creighton, S. Koranda and A. Wiseman
2001-2006 *National Science Foundation, Information Technology Research*
Via subcontract from U. Florida, Amount: $932,000
Investigators: B. Allen, P. Brady, J. Creighton, S. Koranda and A. Wiseman
2000-2003 *National Science Foundation, Major Research Instrumentation, PHY-0079638*
Amount: $415,326
Investigators: B. Allen, P. Brady and A. Wiseman

1999-2002	*National Science Foundation, Gravity Program, PHY-9970821* Amount: $168,908 Investigators: P. Brady
1999	*Forbairt international collaboration grant, Republic of Ireland* Investigators: P. Brady and A. Ottewill
1996	*Forbairt international collaboration grant, Republic of Ireland* Investigators: P. Brady and A. Ottewill

Professional:

2019-	Spokesperson of LIGO Scientific Collaboration (LSC)
2017-	Member of Board, Zwicky Transient Facility
2016-2017	Member of LIGO Scientific Collaboration (LSC) Re-organization Committee
2010-2015	Member of NANOGrav PIRE Advisory Board
2010-2011	Member of LSC Committee on next LIGO Director
2009-	Member, LSC Executive Committee
2009-2012	Vice-Chair/Chair-Elect/Chair APS Topical Group on Gravitation
2015-	Chair, LSC Computing and Software Committee
2004-2015	Chair, LSC Data Analysis Software Working Group
1999-	Reviewer for Austrian Science Fund, Israeli Science Foundation, NASA and National Science Foundation.
1993-	Referee for Physical Review Letters, Physical Review D, Classical and Quantum Gravity, and Monthly Notices of the Royal Astronomical Society.
2005	External examiner on PhD by Jakob Hansen, University of Copenhagen
2005	Member of LIGO Scientific Collaboration (LSC) Committee on next LIGO Director
2004-2005	Member of LSC MOU review committee
2004-2006	Member, LSC Executive Committee
2002-2005	Secretary/Treasurer APS Topical Group on Gravitation
2002	*Task Group for an NSF/NASA Computational Effort in Gravitational Wave Science*. Committee member.
2000-2008	Co-chair of the LSC Inspiral Analysis Group `http://www.lsc-group.phys.uwm.edu/ligovirgo/cbc`

Graduate students:

2017-	Ignacio Magana-Hernandez, University of Wisconsin-Milwaukee. Project Title: *TBD*
2016-	Brandon Joseph Piotrzkowski, University of Wisconsin-Milwaukee. Project Title: *TBD*
2016-	Deep Chatterjee, University of Wisconsin-Milwaukee. Project Title: *TBD*
2018-	Caitlin Rose, University of Wisconsin-Milwaukee. Project Title: *TBD*
2016-	Chaoran Zhang, University of Wisconsin-Milwaukee.

Project Title: *TBD*
Co-advisor: David Kaplan

2013-2018 Debnandini Mukherjee, University of Wisconsin-Milwaukee.
Project Title: *Search for compact object coalescences and understanding their significance using data from advanced ligo*

2013-2018 Hong Qi, University of Wisconsin-Milwaukee.
Project Title: *Studies in gravitational-wave astronomy and tests of general relativity*

2011-2016 Alexander Urban, University of Wisconsin-Milwaukee.
Project Title: *Electromagnetic counterparts to gravitational-wave transients*

2006-2010 Nick Fotopoulos (joint with J. Creighton), University of Wisconsin-Milwaukee.
Project Title: *Search for compact binary coalescence in association with short GRBs with LIGO/Virgo S5/VSR1 data*

2005-2010 Rahul Biswas, University of Wisconsin-Milwaukee
Project Title: *Search for Gravitational Waves in LIGO-Virgo Science Data*

2005-2007 Wei Yan, University of Wisconsin-Milwaukee (MS May 2007)

2002-2006 Saikat Ray-Majumder, University of Wisconsin-Milwaukee (PhD: May 2006)
Project Title: *Searching for gravitational wave bursts*

1999-2004 Duncan Brown, University of Wisconsin-Milwaukee. (PhD: Sept 2004)
Project Title: *Search for gravitational waves from MACHO binaries*.

Undergraduate research projects:

2014-2015 Mark Poe, University of Wisconsin-Milwaukee
Monitoring GRBs for LIGO

2006 Sean Sweetnam, Carleton College
Effects of spin on detection of coalescing compact binaries with LIGO

2003 Denny Mackin, University of Wisconsin-Milwaukee
Verification of excess-power search code using hardware injections

2002 Mark Williamsen, University of Wisconsin-Milwaukee. (with Jolien Creighton)
Median estimators for noise spectra in gravitational-wave detection

2001 Jon D. Stone, University of Wisconsin-Milwaukee
Gravitational wave demonstrations

1998-1999 David Farnham, California Institute of Technology
Evolving the Riemann tensor via first-order hyperbolic equations

1996-1997 Mike J Cai, California Institute of Technology
Critical phenomena in the gravitational collapse of perfect fluids

Postdocs advised:

2018- Duncan Meacher, University of Wisconsin-Milwaukee

2017- Sinead Walsh, University of Wisconsin-Milwaukee

2016-2019 Shasvath Kapadia, University of Wisconsin-Milwaukee
Now: Postdoc, International Center for Theoretical Physics

2016-2019 Shaon Ghosh, University of Wisconsin-Milwaukee
Now: Assistant Professor, Montclair State University

2013-2016 Laleh Sadeghian, University of Wisconsin-Milwaukee

	Now: Data Scientist at Facebook
2012-2016	Sarah Caudill, University of Wisconsin-Milwaukee
	Now: Research Scientist at Nikhef, Netherlands
2011-2015	Chris Pankow, University of Wisconsin-Milwaukee
	Now: Postdoc Northwestern University
2013-2015	Laura Nutall, University of Wisconsin-Milwaukee
	Now: Senior Lecturer, University of Portsmouth
2010-2014	Richard O'Shaugnessy, University of Wisconsin-Milwaukee
	Now: Assistant Professor, Rochester Institute of Technology
2007-2011	Jessica Clayton, University of Wisconsin-Milwaukee
2008-2010	Larry Price, University of Wisconsin-Milwaukee
	Now: Postdoc Caltech
2007-2010	Ruslan Vaulin, University of Wisconsin-Milwaukee
	Now: Data Scientist, sqrrl
2004-2007	Kipp Cannon, University of Wisconsin-Milwaukee
	Now: Associate Professor, University of Tokyo
2003-2006	Stephen Fairhurst, University of Wisconsin-Milwaukee
	Now: Lecturer and Royal Society Fellow, Cardiff University
2003-2006	Eirini Messaratiki, University of Wisconsin-Milwaukee
	Now: Editor at Institute of Physics Publishing
2000-2001	Zeferino Andrade, University of Wisconsin-Milwaukee
	Transfered into computer science
1999-2001	Teviet Creighton, University of Wisconsin-Milwaukee
	Now: Asst. Professor at University of Texas at Brownsville

Courses Taught:

2020	188-103-203: Astronomy 103
2018	188-103-402: Astronomy 103
	188-400-001: Astronomy 400
	Sabbatical Spring 2018
2017	188-103-402: Astronomy 103
	Sabbatical Fall 2017
2016	188-103-402: Astronomy 103
	188-103-402: Astronomy 103
2015	188-103-402: Astronomy 103
	188-103-402: Astronomy 103
	745-717: General Relativity
2014	745-717: General Relativity
2013	188-103-401: Astronomy 103
	188-103-402: Astronomy 103
	745-411: Mechanics
2012	745-717: General Relativity
2011	188-103-401: Astronomy 103
2009	188-103-401: Astronomy 103

	745-817: Gravitation and Cosmology
2007	745-717: General Relativity
2006	745-711: Classical Dynamics
	188-103-402: Astronomy 103
2005	745-711: Classical Dynamics
	745-732: Quantum Field Theory II
2004	745-731: Quantum Field Theory I
2003	188-103-401: Astronomy 103
	188-103-402: Astronomy 103
2002	745-441: Quantum Physics
	188-103-401: Astronomy 103
	188-103-402: Astronomy 103
2001	745-441: Quantum Physics
	188-103-402: Astronomy 103
2000	745-717: General Relativity
	745-517: Special Relativity
1999	745-817: Advanced Topics in Gravitation

Reading courses and special instruction:

2002	Charles Vento. Advanced Reading in Modern Astronomy
2001	Duncan Brown. Reading course in Advanced General Relativity

Service:

1999-pres	Committee member for approximately 20 doctoral students in Physics.
2019-2020	Astronomy and Planetarium Committee, Faculty Fellowships and Prizes Committee, Workload Policy and Implementation Committee
2018-2019	Astronomy and Planetarium Committee, Workload Policy and Implementation Committee, Astrophysics Faculty Search Committee (chair), Graduate Academic Committee
2017-2018	Workload Policy and Implementation Committee
2016-2017	Astronomy and Planetarium Committee (chair), Graduate Academic Committee, Undergraduate Committee, Workload Policy Committee
2015-2016	Astronomy and Planetarium Committee (chair), Graduate Academic Committee, Undergraduate Committee
2014-2015	Astronomy and Planetarium Committee (chair) , Graduate Academic Committee, Undergraduate Committee
2012-2014	Astronomy and Planetarium Committee, Graduate Academic Committee, Graduate Recruitment Committee
2011-2012	Planetarium Committee, Graduate Recruitment Committee, Salary Committee
2009-2010	Astronomy Committee, Planetarium Committee, Long Range planning
2008-2009	Astronomy Committee, Planetarium Committee, Long Range planning, Webmaster
2007-2008	Astronomy Committee, Planetarium Committee, Webmaster
2006-2007	Astronomy Committee, Open House Committee, Webmaster
2004-2006	Academic Graduate Committee, Salary Committee, Webmaster
2003-2004	Academic Graduate Committee, Astronomy Committee, Webmaster

2002-2003	Academic Graduate Committee, Astronomy Committee, Webmaster
2001-2002	Academic Graduate Committee, Astronomy Committee, Graduate Financial Committee, Faculty Search Committee
2000-2001	Academic Graduate Committee (Chair), Astronomy Committee, Long Range Planning Committee
1999-2000	Academic Graduate Committee, Astronomy Committee

Talks and conferences

41. Invited talk. "Key Results from O3" at Annual Retreat of OzGrav, Lorne, Australia. November 2019.

40. Invited talk. "Gravitational-wave Observations of Binary Black Holes" at Gravitational Waves Outside the Box, Perimeter Institute for Theoretical Physics. October 2019.

39. Invited lecturer. "Cosmic Collisions: Learning about black holes and neutron stars using gravitational waves" at University of Tokyo RESCEU Summer School, Kakunodate Onsen Kayokan, Japan. August 2019.

38. Invited talk. "When neutron stars collide" at the 27th workshop on General Relativity and Gravitation, Hiroshima, Japan. November 2017.

37. Invited talk. "Gravitational-wave astronomy: the first two years" at Lights, Sound Action, Perimeter Institute for Theoretical Physics, Waterloo, ON. November 2017.

36. Invited talk. "Dawn of Gravitational-wave Astronomy" at PhysCon, San Francisco, CA. November 2016.

35. Invited talk. "Gravitational-wave Astronomy" at TEXAS Symposium, Sao Paulo Brazil. December 2012.

34. Invited talk. "Challenges in Gravitational-wave Astronomy" at Physics and Astrophysics at the Extreme, Nikhef, Amsterdam, Netherlands. August 2017.

33. Invited talk. "Internal Structure of Black Holes" at Numerical relativity beyond astrophysics, International Center for Mathematical Sciences. July 2011.

32. Invited talk. "LIGO Global Computing in the Next Decade" at 2nd ASPERA Workshop on Computing and Astroparticle Physics. May 2011.

31. Invited talk. "Gravitational-wave astronomy" at the 19th International Conference on General Relativity. July 2010

30. Invited talk. "Gravitational-wave astronomy" at 8th LISA International Symposium. June 2010.

29. Invited panelist. Capra Meeting on Radiation Reaction, Perimeter Institute, Ontario, Canada. June 2010

28. Invited lecturer. "Gravitational-wave astronomy and detection" at *International School on Numerical Relativity and Gravitation*, Seoul, Korea. December 2009.

27. Invited Chair/Speaker "Gravitational-wave astronomy" at *11th Japanese-American Frontiers of Science Meeting*, Shonan Village Center, Japan. December 2007.

26. Invited lecturer. "Gravitational-wave astronomy and detection" at *TIARA Winter School*, Taiwan. January 2007.

25. Invited talk. "Gravitational-wave astronomy" at *Black Holes VI*, White Point, Nova Scotia, Canada. May 2007.

24. Invited talk. "LIGO Observational Results" at *2nd Workshop On TeV Particle Astrophysics*, Madison, Wisconsin. August 2006.

23. Invited talk. "LIGO Observational Results I" at *April APS Meeting*, Dallas. April 2006.

22. Chair. Session on "Earth-based Gravitational-wave Detectors" at *April APS Meeting*, Tampa, Florida. April 2005

21. Invited talk. "How will theory, observation and instrument development interact within the field?" at Gravitational Wave Astronomy: Imagining the Future, Center for Gravitational-Wave Physics, Penn State University. October 2004

20. Invited talk. "LSC Data Analysis" at LISA Symposium, Noordwijk. July 2004

19. Invited talk. "The LSC Data Grid" at Condor Conference, Madison. April 2004.

18. Invited talk. "Searching for gravitational waves with LIGO" at workshop on *Gravitational Interaction of Compact Objects*, KITP, University of California-Santa Barbara. May 2003.

17. Invited talk. "Analysis of data from earth-based interferometric gravitational wave detectors" at *Workshop on Astrophysical Sources of Gravitational Waves*, University of Maryland. April 2003.

16. Contributed talk. "Upper Limits on binary inspiral signals using LIGO S1 Data" at *April APS Meeting*, Philadelphia. April 2003.

15. Invited talk. "Analysis of data from interferometric gravitational-wave detectors" at *SPIE conference on High Frequency Gravitational-wave Detection*, Hawaii. August 2002.

14. Invited lecturer. "Gravitational collapse and spacetime singularities" at *X Brazilian School on Cosmology and Gravitation*, Mangaratiba, Brazil. August 2002

13. Invited talk. "Detecting gravitational-waves from precessing neutron stars" *April APS Meeting*, Albuquerque. April 2002.

12. Chair. Parallel session on "Sources of Gravitational Waves." *GR16*, Durban, South Africa. July 2001.

11. Invited talk. "Gravitational-wave data analysis with LIGO" *American Physical Society Meeting*, Washington DC. April 2001.

10. Invited talk. "Gravitational-wave data analysis in the LIGO Scientific Collaboration" at *Workshop on Astrophysical Sources of Gravitational Waves*, Drexel University. October 2000.

9. Invited talk. "R-modes: prospects for detection" at *R-modes in Relativistic Stars*, ITP, University of California-Santa Barbara. August 2000.

8. Contributed talk. "Point splitting regularization of radiation reaction forces" at *Third Capra Meeting on Radiation Reaction*, California Institute of Technology. June 2000.

7. Invited talk. "The internal structure of black holes" at *Gravitational Waves and Black Holes*, Yukawa Institute, Kyoto Japan. July 1999.

6. Invited talk. "Sounds of the Universe: what might we hear via gravitational waves?" at *The Dark Ages:* $5 < z < 1000$, CIAR Cosmology Program, Newfoundland, Canada. May 1998.

5. Chair of parallel session on "Critical phenomena in gravitational collapse" at *Marcel Grossman 8*, Jerusalem, Israel. June 1997.

4. Contributed talk. "Detection of periodic sources of gravitational waves with LIGO" at *Gravitational Waves*, Aspen, Colorado. January 1997.

3. Contributed talk. "Algorithms for the detection of continuous wave sources with LIGO" at *Gravitational Waves*, Aspen, Colorado. January 1996.

2. Invited talk. "Singularities in self-similar scalar field collapse" at *Workshop on Gravitational Collapse*, IUCAA, June, India. December 1995.

1. Invited talk. "Singularities in self-similar scalar field collapse" at *Mathematical Relativity*, Schrodinger Institute, Vienna, Austria. June 1995.

Conference organization

12. Scientific Organizing Committee, *Gravitational-wave Physics and Astronomy Workshop*, Milwaukee. January 2011.

11. Scientific Organizing Committee. *Numerical relativity meets data analysis*, KITP, Santa Barbara. January 2008.

10. Scientific Organizing Committee. *12th Gravitational Wave Data Analysis Workshop*, Massachusetts Institute of Technology. December 2007.

9. Scientific Organizing Committee. *11th Gravitational Wave Data Analysis Workshop*, Potsdam, Germany. December 2006.

8. Scientific Organizing Committee. *Numerical Relativity meets Data Analysis*, Massachusetts Institute of Technology. November 2006.

7. Scientific Organizing Committee. *8th Gravitational Wave Data Analysis Workshop*, University of Wisconsin-Milwaukee. December 2003.

6. Scientific Organizing Committee. *Gravitational Wave Phenomenology Workshop*, Center for Gravitational Wave Phenomenology, Penn State University. November 2003.

5. Scientific Organizing Committee. *Workshop on Radiation Reaction*, Center for Gravitational Wave Phenomenology, Penn State University. November 2002.

4. Scientific Organizing Committee. *Gravitational Wave Phenomenology Workshop*, Center for Gravitational Wave Phenomenology, Penn State University. November 2001.

3. Scientific Organizing Committee. *Gravitational Wave Data Analysis Workshop*, Louisiana State University. December 2000.

2. Organizer. *Black Holes and Gravitational Waves*, Dublin, Ireland. Co-organizer with Adrian C Ottewill. August 1999.

1. Organizer. *Workshop on Binary Black Hole Coalescence*, Caltech. Co-organizer with Scott A Hughes. July 1996.

Seminars and Colloquia

29. Colloquium: *Cosmic Collisions*. Institute for Advanced Studies, Princeton, NJ (October 2019).

28. Colloquium: *Cosmic Collisions*. International Center for Theoretical Sciences, Bangalore, India (July 2019).

27. Colloquium: *Cosmic Collisions*. Department of Astronomy, University of California, Berkeley, CA (October 2019).

26. Colloquium: *Neutron star mergers - from nuclear physics to cosmology*. Tennessee Tech University, Cookeville, TN (October 2018).

25. Colloquium: *A spectacular collision: Observations of a binary neutron star merger*. IUCAA, Pune, India (February 2018).

24. Seminar: *Multimessenger observations of a binary neutron star merger*. Department of Physics and Astronomy, University of Waterloo, ON (November 2017).

23. Colloquium: *The Dawn of Gravitational-wave Astronomy*. Department of Physics, University of Alberta, Edmonton, AB (Decmber 2016).

22. Colloquium: *Observation of Black Holes from a Binary Black Hole Merger*. Department of Physics, Purdue University, IN (April 2016).

21. Seminar: *Learning about Neutron Stars and Black Holes via Gravitational-wave Observations*. Department of Physics, University of Illinois Urbana-Champaign, IL (April 2014).

20. Colloquium: *Gravitational-wave Astronomy on the cusp*. Department of Physics, University of Illinois Urbana-Champaign, IL (November 2014).

19. Colloquium: *Gravitational-wave Astronomy on the cusp*. Yukawa Institute of Theoretical Physics, Kyoto University, Japan (January 2014).

18. Colloquium: *Gravitational-wave Astronomy*. Perimeter Institute, Ontario, Canada (October 2009).

17. Colloquium: *Ripples in Spacetime: Searching for gravitational waves with LIGO*. Dept of Physics and Astronomy, Florida State University (March 2005).

16. Seminar: *Searching for gravitational waves with LIGO*. Dept of Physics and Astronomy, University of Florida - Gainesville (October 2004).

15. Colloquium: *Ripples in spacetime: searching for gravitational waves with LIGO*. Dept. of Physics and Astronomy, Ohio University (October 2003).

14. Seminar: *Searching for gravitational waves with LIGO*. Dept of Physics, University of Wisconsin - Madison (September 2003).

13. Seminar: *Searching for gravitational waves with LIGO*. Canadian Institute for Theoretical Astrophysics, University of Toronto (April 2003).

12. Seminar: *Black hole binaries in the co-rotating frame: techniques in a toy problem*. Theoretical Astrophysics, California Institute of Technology (July 2002).

11. Colloquium: *Ripples in spacetime: Gravitational-wave astronomy and what it might tell us*. Dept. of Physics and Astronomy, University of North Carolina (October 2001).

10. Colloquium: *Cosmic censorship: what's the problem?*. Physics Department, Drexel University (May 2000).

9. Seminar: *Gravitational-wave astronomy: a new challenge for theorists*. Dept. of Physics and Astronomy, University of Illinois (May 2000).

8. Seminar: *Gravitational-wave astronomy: a new challenge for theorists*. Dept of Physics, University of Chicago (April 2000).

7. Seminar: *Gravitational-wave astronomy: a new challenge for theorists*. Center for Gravitational Physics, Pennsylvania State University (April 2000).

6. Colloquium: *Ripples in spacetime: gravitational wave astronomy and what it might tell us*. Dept of Physics, University of Alberta (September 1998).

5. Seminar: *Cosmic censorship: what's the problem?*. Dept of Physics, University of Wisconsin-Milwaukee (April 1998).

4. Colloquium: *Cosmic Censorship: what's the problem?*. Dept of Physics, University of Montana at Bozeman (March 1998).

3. Seminar: *Numerical relativity in a co-rotating frame*. Dept of Applied Mathematics, Southampton University (December 1997).

2. Seminar: *Cosmic censorship and critical phenomena*. Dept of Physics, University of California-Santa Barbara (December 1997).

1. Seminar: *Gravitational waves from binary black holes*. Binary Black Hole Grand Challenge meeting, Los Alamos (October 1997).

Public Lectures, outreach, etc:

13. Public lecture. *Cosmic Collisions* at Vigyam Samagan, Bangalore, India (July 2019).

12. Public lecture. *Whispers from the Universe. Waves, Holes and Stars* at Science Bag, University of Wisconsin, Milwaukee, WI (Apr 2019).

11. Osher Distinguished Speaker. *The discovery of gravitational waves* at University of Wisconsin, Milwaukee, WI (October 2018).

10. Public lecture. *When black holes collide. Gravitational waves and the discovery of the century* at Center for Gravitation, Cosmology and Astrophysics, Milwaukee, WI (October 2017).

9. Public lecture. *Measuring Gravity Waves with LIGO* at UW Space Place, Madison, WI (November 2016). https://to.pbs.org/2sJ6njK

8. Public lecture. *Whispers from the Universe* at TEDx UWMilwaukee, WI (September 2014). https://youtu.be/oxpJGyn_HJU

7. Public lecture. *History of black holes*, Astrobreak, UWM Planetarium (April 2013).

6. Public lecture. *Ripples in spacetime: Einstein's outstanding prediction*, Edgewood College, Madison, Wisconsin (Mar 2005).

5. Interview and quoted in *Dear Albert: You Were Right* by Steven Potter, Shepherd Express (2 January 2003).

4. Interview and quoted in *Tuning in to Einstein* by Charles W. Petit, US News and World Report (14 January 2002).

3. Public lecture. *Ripples in spacetime: Gravitational-wave astronomy and what it might tell us*, to Milwaukee Astronomical Society (October 2000).

2. Public lecture. *Ripples in spacetime: Gravitational-wave astronomy and what it might tell us*, to Physics Club of Milwaukee (May 2000).

1. Educational posters. Development of educational poster set describing gravitational waves. These posters were displayed at the *American Physical Society* centennial meeting. They are also displayed in the Physics Dept. at UWM, at the LIGO laboratories, and at a number of other universities around the country (1999).

Publications:

[1] B. P. Abbott et al. 'Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015-2017 LIGO Data'. In: ApJ 879.1, 10 (July 2019), p. 10. DOI: 10.3847/1538-4357/ab20cb. arXiv: 1902.08507 [astro-ph.HE].

[2] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data'. In: Phys. Rev. D 100.2, 024004 (July 2019), p. 024004. DOI: 10.1103/PhysRevD.100.024004. arXiv: 1903.01901 [astro-ph.HE].

[3] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run'. In: Phys. Rev. D 99.10, 104033 (May 2019), p. 104033. DOI: 10.1103/PhysRevD.99.104033. arXiv: 1903.12015 [gr-qc].

[4] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run'. In: Phys. Rev. D 100.2, 024017 (July 2019), p. 024017. DOI: 10.1103/PhysRevD.100.024017. arXiv: 1904.08976 [astro-ph.CO].

[5] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo'. In: ApJ 882.2, L24 (Sept. 2019), p. L24. DOI: 10.3847/2041-8213/ab3800. arXiv: 1811.12940 [astro-ph.HE].

[6] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Constraining the p -Mode-g -Mode Tidal Instability with GW170817'. In: Phys. Rev. Lett. 122.6, 061104 (Feb. 2019), p. 061104. DOI: 10.1103/PhysRevLett.122.061104. arXiv: 1808.08676 [astro-ph.HE].

[7] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs'. In: Phys. Rev. D 100.6, 062001 (Sept. 2019), p. 062001. DOI: 10.1103/PhysRevD.100.062001. arXiv: 1903.08844 [gr-qc].

[8] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Erratum: "Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015-2017 LIGO Data" (<A href="http://doi.org/10.3847/1538-4357/ab20cb">2019, ApJ, 879, 10</A>)'. In: ApJ 882.1, 73 (Sept. 2019), p. 73. DOI: 10.3847/1538-4357/ab3231.

[9] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs'. In: *Physical Review X* 9.3, 031040 (July 2019), p. 031040. DOI: 10.1103/PhysRevX.9.031040. arXiv: 1811.12907 [astro-ph.HE].

[10] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run'. In: ApJ 875.2, 161 (Apr. 2019), p. 161. DOI: 10.3847/1538-4357/ab0e8f. arXiv: 1901.03310 [astro-ph.HE].

[11] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run'. In: Phys. Rev. D 99.12, 122002 (June 2019), p. 122002. DOI: 10.1103/PhysRevD.99.122002. arXiv: 1902.08442 [gr-qc].

[12] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Properties of the Binary Neutron Star Merger GW170817'. In: *Physical Review X* 9.1, 011001 (Jan. 2019), p. 011001. DOI: 10.1103/PhysRevX.9.011001. arXiv: 1805.11579 [gr-qc].

[13] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs'. In: ApJ 883.2, 149 (Oct. 2019), p. 149. DOI: 10.3847/1538-4357/ab3c2d.

[14] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817'. In: ApJ 875.2, 160 (Apr. 2019), p. 160. DOI: 10.3847/1538-4357/ab0f3d. arXiv: 1810.02581 [gr-qc].

[15] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model'. In: Phys. Rev. D 100.12, 122002 (Dec. 2019), p. 122002. DOI: 10.1103/PhysRevD.100.122002.

[16] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo'. In: ApJ 886.1, 75 (Nov. 2019), p. 75. DOI: 10.3847/1538-4357/ab4b48. arXiv: 1907.01443 [astro-ph.HE].

[17] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network'. In: Phys. Rev. D 100.6, 064064 (Sept. 2019), p. 064064. DOI: 10.1103/PhysRevD.100.064064. arXiv: 1907.09384 [astro-ph.HE].

[18] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Subsolar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run'. In: Phys. Rev. Lett. 123.16, 161102 (Oct. 2019), p. 161102. DOI: 10.1103/PhysRevLett.123.161102.

[19] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for the isotropic stochastic background using data from Advanced LIGO's second observing run'. In: Phys. Rev. D 100.6, 061101 (Sept. 2019), p. 061101. DOI: 10.1103/PhysRevD.100.061101. arXiv: 1903.02886 [gr-qc].

[20] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run'. In: ApJ 874.2, 163 (Apr. 2019), p. 163. DOI: 10.3847/1538-4357/ab0e15. arXiv: 1902.01557 [astro-ph.HE].

[21] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO'. In: ApJ 875.2, 122 (Apr. 2019), p. 122. DOI: 10.3847/1538-4357/ab113b. arXiv: 1812.11656 [astro-ph.HE].

[22] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Tests of General Relativity with GW170817'. In: Phys. Rev. Lett. 123.1, 011102 (July 2019), p. 011102. DOI: 10.1103/PhysRevLett.123.011102. arXiv: 1811.00364 [gr-qc].

[23] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1'. In: Phys. Rev. D 100.10, 104036 (Nov. 2019), p. 104036. DOI: 10.1103/PhysRevD.100.104036. arXiv: 1903.04467 [gr-qc].

[24] A. Albert, M. André, M. Anghinolfi et al. 'Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube'. In: ApJ 870.2, 134 (Jan. 2019), p. 134. DOI: 10.3847/1538-4357/aaf21d. arXiv: 1810.10693 [astro-ph.HE].

[25] E. Burns et al. 'A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run'. In: ApJ 871.1, 90 (Jan. 2019), p. 90. DOI: 10.3847/1538-4357/aaf726. arXiv: 1810.02764 [astro-ph.HE].

[26] Deep Chatterjee et al. 'Toward Rate Estimation for Transient Surveys. I. Assessing Transient Detectability and Volume Sensitivity for iPTF'. In: ApJ 881.2, 128 (Aug. 2019), p. 128. DOI: 10.3847/1538-4357/ab2b9c. arXiv: 1906.09309 [astro-ph.IM].

[27] David O. Cook, Mansi M. Kasliwal, Angela Van Sistine et al. 'Census of the Local Universe (CLU) Narrowband Survey. I. Galaxy Catalogs from Preliminary Fields'. In: ApJ 880.1, 7 (July 2019), p. 7. DOI: 10.3847/1538-4357/ab2131. arXiv: 1710.05016 [astro-ph.GA].

[28] M. Fishbach, R. Gray, I. Magaña Hernandez et al. 'A Standard Siren Measurement of the Hubble Constant from GW170817 without the Electromagnetic Counterpart'. In: ApJ 871.1, L13 (Jan. 2019), p. L13. DOI: 10.3847/2041-8213/aaf96e. arXiv: 1807.05667 [astro-ph.CO].

[29] Matthew J. Graham, S. R. Kulkarni, Eric C. Bellm et al. 'The Zwicky Transient Facility: Science Objectives'. In: PASP 131.1001 (July 2019), p. 078001. DOI: 10.1088/1538-3873/ab006c. arXiv: 1902.01945 [astro-ph.IM].

[30] M. Soares-Santos, A. Palmese, W. Hartley et al. 'First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary-Black-hole Merger GW170814'. In: ApJ 876.1, L7 (May 2019), p. L7. DOI: 10.3847/2041-8213/ab14f1. arXiv: 1901.01540 [astro-ph.CO].

[31] B. P. Abbott et al. 'All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run'. In: *Classical and Quantum Gravity* 35.6, 065009 (Mar. 2018), p. 065009. DOI: 10.1088/1361-6382/aaab76. arXiv: 1711.06843 [gr-qc].

[32] B. P. Abbott et al. 'Effects of data quality vetoes on a search for compact binary coalescences in Advanced LIGO's first observing run'. In: *Classical and Quantum Gravity* 35.6, 065010 (Mar. 2018), p. 065010. DOI: 10.1088/1361-6382/aaaafa. arXiv: 1710.02185 [gr-qc].

[33] B. P. Abbott et al. 'Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA'. In: *Living Reviews in Relativity* 21.1, 3 (Apr. 2018), p. 3. DOI: 10.1007/s41114-018-0012-9. arXiv: 1304.0670 [gr-qc].

[34] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Constraints on cosmic strings using data from the first Advanced LIGO observing run'. In: Phys. Rev. D 97.10, 102002 (May 2018), p. 102002. DOI: 10.1103/PhysRevD.97.102002. arXiv: 1712.01168 [gr-qc].

[35] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'First Search for Nontensorial Gravitational Waves from Known Pulsars'. In: Phys. Rev. Lett. 120.3, 031104 (Jan. 2018), p. 031104. DOI: 10.1103/PhysRevLett.120.031104. arXiv: 1709.09203 [gr-qc].

[36] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Full band all-sky search for periodic gravitational waves in the O1 LIGO data'. In: Phys. Rev. D 97.10, 102003 (May 2018), p. 102003. DOI: 10.1103/PhysRevD.97.102003. arXiv: 1802.05241 [gr-qc].

[37] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences'. In: Phys. Rev. Lett. 120.9, 091101 (Mar. 2018), p. 091101. DOI: 10.1103/PhysRevLett.120.091101. arXiv: 1710.05837 [gr-qc].

[38] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'GW170817: Measurements of Neutron Star Radii and Equation of State'. In: Phys. Rev. Lett. 121.16, 161101 (Oct. 2018), p. 161101. DOI: 10.1103/PhysRevLett.121.161101. arXiv: 1805.11581 [gr-qc].

[39] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run'. In: Phys. Rev. Lett. 121.23, 231103 (Dec. 2018), p. 231103. DOI: 10.1103/PhysRevLett.121.231103. arXiv: 1808.04771 [astro-ph.CO].

[40] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background'. In: Phys. Rev. Lett. 120.20, 201102 (May 2018), p. 201102. DOI: 10.1103/PhysRevLett.120.201102. arXiv: 1802.10194 [gr-qc].

[41] Anna Y. Q. Ho et al. 'iPTF Archival Search for Fast Optical Transients'. In: ApJ 854.1, L13 (Feb. 2018), p. L13. DOI: 10.3847/2041-8213/aaaa62. arXiv: 1712.00949 [astro-ph.HE].

[42] B. P. Abbott et al. 'A gravitational-wave standard siren measurement of the Hubble constant'. In: Nature 551.7678 (Nov. 2017), pp. 85–88. DOI: 10.1038/nature24471. arXiv: 1710.05835 [astro-ph.CO].

[43] B. P. Abbott et al. 'All-sky search for short gravitational-wave bursts in the first Advanced LIGO run'. In: Phys. Rev. D 95.4, 042003 (Feb. 2017), p. 042003. DOI: 10.1103/PhysRevD.95.042003. arXiv: 1611.02972 [gr-qc].

[44] B. P. Abbott et al. 'Calibration of the Advanced LIGO detectors for the discovery of the binary black-hole merger GW150914'. In: Phys. Rev. D 95.6, 062003 (Mar. 2017), p. 062003. DOI: 10.1103/PhysRevD.95.062003. arXiv: 1602.03845 [gr-qc].

[45] B. P. Abbott et al. 'Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run'. In: Phys. Rev. Lett. 118.12, 121102 (Mar. 2017), p. 121102. DOI: 10.1103/PhysRevLett.118.121102. arXiv: 1612.02030 [gr-qc].

[46] B. P. Abbott et al. 'Effects of waveform model systematics on the interpretation of GW150914'. In: *Classical and Quantum Gravity* 34.10, 104002 (May 2017), p. 104002. DOI: 10.1088/1361-6382/aa6854. arXiv: 1611.07531 [gr-qc].

[47] B. P. Abbott et al. 'Erratum: "First Search for Gravitational Waves from Known Pulsars with Advanced LIGO" (<A href="https://doi.org/10.3847/1538-4357/aa677f">2017, ApJ, 839, 12</A>)'. In: ApJ 851.1, 71 (Dec. 2017), p. 71. DOI: 10.3847/1538-4357/aa9aee.

[48] B. P. Abbott et al. 'Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817'. In: ApJ 850.2, L39 (Dec. 2017), p. L39. DOI: 10.3847/2041-8213/aa9478. arXiv: 1710.05836 [astro-ph.HE].

[49] B. P. Abbott et al. 'Exploring the sensitivity of next generation gravitational wave detectors'. In: *Classical and Quantum Gravity* 34.4, 044001 (Feb. 2017), p. 044001. DOI: 10.1088/1361-6382/aa51f4. arXiv: 1607.08697 [astro-ph.IM].

[50] B. P. Abbott et al. 'First Search for Gravitational Waves from Known Pulsars with Advanced LIGO'. In: ApJ 839.1, 12 (Apr. 2017), p. 12. DOI: 10.3847/1538-4357/aa677f. arXiv: 1701.07709 [astro-ph.HE].

[51] B. P. Abbott et al. 'Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A'. In: ApJ 848.2, L13 (Oct. 2017), p. L13. DOI: 10.3847/2041-8213/aa920c. arXiv: 1710.05834 [astro-ph.HE].

[52] B. P. Abbott et al. 'GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2'. In: Phys. Rev. Lett. 118.22, 221101 (June 2017), p. 221101. DOI: 10.1103/PhysRevLett.118.221101. arXiv: 1706.01812 [gr-qc].

[53] B. P. Abbott et al. 'GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence'. In: Phys. Rev. Lett. 119.14, 141101 (Oct. 2017), p. 141101. DOI: 10.1103/PhysRevLett.119.141101. arXiv: 1709.09660 [gr-qc].

[54] B. P. Abbott et al. 'GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral'. In: Phys. Rev. Lett. 119.16, 161101 (Oct. 2017), p. 161101. DOI: 10.1103/PhysRevLett.119.161101. arXiv: 1710.05832 [gr-qc].

[55] B. P. Abbott et al. 'Multi-messenger Observations of a Binary Neutron Star Merger'. In: ApJ 848.2, L12 (Oct. 2017), p. L12. DOI: 10.3847/2041-8213/aa91c9. arXiv: 1710.05833 [astro-ph.HE].

[56] B. P. Abbott et al. 'On the Progenitor of Binary Neutron Star Merger GW170817'. In: ApJ 850.2, L40 (Dec. 2017), p. L40. DOI: 10.3847/2041-8213/aa93fc. arXiv: 1710.05838 [astro-ph.HE].

[57] B. P. Abbott et al. 'Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544'. In: Phys. Rev. D 95.8, 082005 (Apr. 2017), p. 082005. DOI: 10.1103/PhysRevD.95.082005. arXiv: 1607.02216 [gr-qc].

[58] B. P. Abbott et al. 'Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B'. In: ApJ 841.2, 89 (June 2017), p. 89. DOI: 10.3847/1538-4357/aa6c47. arXiv: 1611.07947 [astro-ph.HE].

[59] B. P. Abbott et al. 'Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model'. In: Phys. Rev. D 95.12, 122003 (June 2017), p. 122003. DOI: 10.1103/PhysRevD.95.122003. arXiv: 1704.03719 [gr-qc].

[60] B. P. Abbott et al. 'Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO'. In: Phys. Rev. D 96.2, 022001 (July 2017), p. 022001. DOI: 10.1103/PhysRevD.96.022001. arXiv: 1704.04628 [gr-qc].

[61] B. P. Abbott et al. 'Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data'. In: ApJ 847.1, 47 (Sept. 2017), p. 47. DOI: 10.3847/1538-4357/aa86f0. arXiv: 1706.03119 [astro-ph.HE].

[62] B. P. Abbott et al. 'Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run'. In: Phys. Rev. Lett. 118.12, 121101 (Mar. 2017), p. 121101. DOI: 10.1103/PhysRevLett.118.121101. arXiv: 1612.02029 [gr-qc].

[63] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'All-sky search for periodic gravitational waves in the O1 LIGO data'. In: Phys. Rev. D 96.6, 062002 (Sept. 2017), p. 062002. DOI: 10.1103/PhysRevD.96.062002. arXiv: 1707.02667 [gr-qc].

[64] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'First low-frequency Einstein@Home all-sky search for continuous gravitational waves in Advanced LIGO data'. In: Phys. Rev. D 96.12, 122004 (Dec. 2017), p. 122004. DOI: 10.1103/PhysRevD.96.122004. arXiv: 1707.02669 [gr-qc].

[65] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data'. In: Phys. Rev. D 96.12, 122006 (Dec. 2017), p. 122006. DOI: 10.1103/PhysRevD.96.122006. arXiv: 1710.02327 [gr-qc].

[66] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence'. In: ApJ 851.2, L35 (Dec. 2017), p. L35. DOI: 10.3847/2041-8213/aa9f0c. arXiv: 1711.05578 [astro-ph.HE].

[67] B. P. Abbott, R. Abbott, T. D. Abbott et al. 'Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817'. In: ApJ 851.1, L16 (Dec. 2017), p. L16. DOI: 10.3847/2041-8213/aa9a35. arXiv: 1710.09320 [astro-ph.HE].

[68] A. Albert et al. 'Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory'. In: ApJ 850.2, L35 (Dec. 2017), p. L35. DOI: 10.3847/2041-8213/aa9aed. arXiv: 1710.05839 [astro-ph.HE].

[69] A. Albert et al. 'Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube'. In: Phys. Rev. D 96.2, 022005 (July 2017), p. 022005. DOI: 10.1103/PhysRevD.96.022005. arXiv: 1703.06298 [astro-ph.HE].

[70] Shaon Ghosh et al. 'Hunting Electromagnetic Counterparts of Gravitational-wave Events Using the Zwicky Transient Facility'. In: PASP 129.981 (Nov. 2017), p. 114503. DOI: 10.1088/1538-3873/aa884f. arXiv: 1708.06723 [astro-ph.IM].

[71] M. M. Kasliwal et al. 'Illuminating gravitational waves: A concordant picture of photons from a neutron star merger'. In: *Science* 358.6370 (Dec. 2017), pp. 1559–1565. DOI: 10.1126/science.aap9455. arXiv: 1710.05436 [astro-ph.HE].

[72] Cody Messick et al. 'Analysis framework for the prompt discovery of compact binary mergers in gravitational-wave data'. In: Phys. Rev. D 95.4, 042001 (Feb. 2017), p. 042001. DOI: 10.1103/PhysRevD.95.042001. arXiv: 1604.04324 [astro-ph.IM].

[73] J. Aasi et al. 'First low frequency all-sky search for continuous gravitational wave signals'. In: Phys. Rev. D 93.4, 042007 (Feb. 2016), p. 042007. DOI: 10.1103/PhysRevD.93.042007. arXiv: 1510.03621 [astro-ph.IM].

[74] J. Aasi et al. 'Search of the Orion spur for continuous gravitational waves using a loosely coherent algorithm on data from LIGO interferometers'. In: Phys. Rev. D 93.4, 042006 (Feb. 2016), p. 042006. DOI: 10.1103/PhysRevD.93.042006. arXiv: 1510.03474 [gr-qc].

[75] B. P. Abbott et al. 'All-sky search for long-duration gravitational wave transients with initial LIGO'. In: Phys. Rev. D 93.4, 042005 (Feb. 2016), p. 042005. DOI: 10.1103/PhysRevD.93.042005. arXiv: 1511.04398 [gr-qc].

[76] B. P. Abbott et al. 'Astrophysical Implications of the Binary Black-hole Merger GW150914'. In: ApJ 818.2, L22 (Feb. 2016), p. L22. DOI: 10.3847/2041-8205/818/2/L22. arXiv: 1602.03846 [astro-ph.HE].

[77] B. P. Abbott et al. 'Binary Black Hole Mergers in the First Advanced LIGO Observing Run'. In: *Physical Review X* 6.4, 041015 (Oct. 2016), p. 041015. DOI: 10.1103/PhysRevX.6.041015. arXiv: 1606.04856 [gr-qc].

[78] B. P. Abbott et al. 'Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914'. In: *Classical and Quantum Gravity* 33.13, 134001 (July 2016), p. 134001. DOI: 10.1088/0264-9381/33/13/134001. arXiv: 1602.03844 [gr-qc].

[79] B. P. Abbott et al. 'Comprehensive all-sky search for periodic gravitational waves in the sixth science run LIGO data'. In: Phys. Rev. D 94.4, 042002 (Aug. 2016), p. 042002. DOI: 10.1103/PhysRevD.94.042002. arXiv: 1605.03233 [gr-qc].

[80] B. P. Abbott et al. 'Directly comparing GW150914 with numerical solutions of Einstein's equations for binary black hole coalescence'. In: Phys. Rev. D 94.6, 064035 (Sept. 2016), p. 064035. DOI: 10.1103/PhysRevD.94.064035. arXiv: 1606.01262 [gr-qc].

[81] B. P. Abbott et al. 'First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors'. In: Phys. Rev. D 94.10, 102001 (Nov. 2016), p. 102001. DOI: 10.1103/PhysRevD.94.102001. arXiv: 1605.01785 [gr-qc].

[82] B. P. Abbott et al. 'GW150914: First results from the search for binary black hole coalescence with Advanced LIGO'. In: Phys. Rev. D 93.12, 122003 (June 2016), p. 122003. DOI: 10.1103/PhysRevD.93.122003. arXiv: 1602.03839 [gr-qc].

[83] B. P. Abbott et al. 'GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes'. In: Phys. Rev. Lett. 116.13, 131102 (Apr. 2016), p. 131102. DOI: 10.1103/PhysRevLett.116.131102. arXiv: 1602.03847 [gr-qc].

[84] B. P. Abbott et al. 'GW150914: The Advanced LIGO Detectors in the Era of First Discoveries'. In: Phys. Rev. Lett. 116.13, 131103 (Apr. 2016), p. 131103. DOI: 10.1103/PhysRevLett.116.131103. arXiv: 1602.03838 [gr-qc].

[85] B. P. Abbott et al. 'GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence'. In: Phys. Rev. Lett. 116.24, 241103 (June 2016), p. 241103. DOI: 10.1103/PhysRevLett.116.241103. arXiv: 1606.04855 [gr-qc].

[86] B. P. Abbott et al. 'Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model'. In: *Physical Review X* 6.4, 041014 (Oct. 2016), p. 041014. DOI: 10.1103/PhysRevX.6.041014. arXiv: 1606.01210 [gr-qc].

[87] B. P. Abbott et al. 'Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914'. In: ApJ 826.1, L13 (July 2016), p. L13. DOI: 10.3847/2041-8205/826/1/L13. arXiv: 1602.08492 [astro-ph.HE].

[88] B. P. Abbott et al. 'Observation of Gravitational Waves from a Binary Black Hole Merger'. In: Phys. Rev. Lett. 116.6, 061102 (Feb. 2016), p. 061102. DOI: 10.1103/PhysRevLett.116.061102. arXiv: 1602.03837 [gr-qc].

[89] B. P. Abbott et al. 'Observing gravitational-wave transient GW150914 with minimal assumptions'. In: Phys. Rev. D 93.12, 122004 (June 2016), p. 122004. DOI: 10.1103/PhysRevD.93.122004. arXiv: 1602.03843 [gr-qc].

[90] B. P. Abbott et al. 'Properties of the Binary Black Hole Merger GW150914'. In: Phys. Rev. Lett. 116.24, 241102 (June 2016), p. 241102. DOI: 10.1103/PhysRevLett.116.241102. arXiv: 1602.03840 [gr-qc].

[91] B. P. Abbott et al. 'Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo'. In: *Living Reviews in Relativity* 19.1, 1 (Feb. 2016), p. 1. DOI: 10.1007/lrr-2016-1.

[92] B. P. Abbott et al. 'Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project'. In: Phys. Rev. D 94.10, 102002 (Nov. 2016), p. 102002. DOI: 10.1103/PhysRevD.94.102002. arXiv: 1606.09619 [gr-qc].

[93] B. P. Abbott et al. 'Search for transient gravitational waves in coincidence with short-duration radio transients during 2007-2013'. In: Phys. Rev. D 93.12, 122008 (June 2016), p. 122008. DOI: 10.1103/PhysRevD.93.122008. arXiv: 1605.01707 [astro-ph.HE].

[94] B. P. Abbott et al. 'Supplement: "Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914" (2016, ApJL, 826, L13)'. In: ApJS 225.1, 8 (July 2016), p. 8. DOI: 10.3847/0067-0049/225/1/8. arXiv: 1604.07864 [astro-ph.HE].

[95] B. P. Abbott et al. 'Supplement: "The Rate of Binary Black Hole Mergers Inferred from Advanced LIGO Observations Surrounding GW150914" (2016, ApJL, 833, L1)'. In: ApJS 227.2, 14 (Dec. 2016), p. 14. DOI: 10.3847/0067-0049/227/2/14. arXiv: 1606.03939 [astro-ph.HE].

[96] B. P. Abbott et al. 'Tests of General Relativity with GW150914'. In: Phys. Rev. Lett. 116.22, 221101 (June 2016), p. 221101. DOI: 10.1103/PhysRevLett.116.221101. arXiv: 1602.03841 [gr-qc].

[97] B. P. Abbott et al. 'The Rate of Binary Black Hole Mergers Inferred from Advanced LIGO Observations Surrounding GW150914'. In: ApJ 833.1, L1 (Dec. 2016), p. L1. DOI: 10.3847/2041-8205/833/1/L1. arXiv: 1602.03842 [astro-ph.HE].

[98] B. P. Abbott et al. 'Upper Limits on the Rates of Binary Neutron Star and Neutron Star-Black Hole Mergers from Advanced LIGO's First Observing Run'. In: ApJ 832.2, L21 (Dec. 2016), p. L21. DOI: 10.3847/2041-8205/832/2/L21. arXiv: 1607.07456 [astro-ph.HE].

[99] S. Adrián-Martınez et al. 'High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube'. In: Phys. Rev. D 93.12, 122010 (June 2016), p. 122010. DOI: 10.1103/PhysRevD.93.122010. arXiv: 1602.05411 [astro-ph.HE].

[100] J. Aasi et al. 'Characterization of the LIGO detectors during their sixth science run'. In: *Classical and Quantum Gravity* 32.11, 115012 (June 2015), p. 115012. DOI: 10.1088/0264-9381/32/11/115012. arXiv: 1410.7764 [gr-qc].

[101] J. Aasi et al. 'Directed search for gravitational waves from Scorpius X-1 with initial LIGO data'. In: Phys. Rev. D 91.6, 062008 (Mar. 2015), p. 062008. DOI: 10.1103/PhysRevD.91.062008. arXiv: 1412.0605 [gr-qc].

[102] J. Aasi et al. 'Narrow-band search of continuous gravitational-wave signals from Crab and Vela pulsars in Virgo VSR4 data'. In: Phys. Rev. D 91.2, 022004 (Jan. 2015), p. 022004. DOI: 10.1103/PhysRevD.91.022004. arXiv: 1410.8310 [astro-ph.IM].

[103] J. Aasi et al. 'Searches for Continuous Gravitational Waves from Nine Young Supernova Remnants'. In: ApJ 813.1, 39 (Nov. 2015), p. 39. DOI: 10.1088/0004-637X/813/1/39. arXiv: 1412.5942 [astro-ph.HE].

[104] J. Aasi et al. 'Searching for stochastic gravitational waves using data from the two colocated LIGO Hanford detectors'. In: Phys. Rev. D 91.2, 022003 (Jan. 2015), p. 022003. DOI: 10.1103/PhysRevD.91.022003. arXiv: 1410.6211 [gr-qc].

[105] LIGO Scientific Collaboration et al. 'Advanced LIGO'. In: *Classical and Quantum Gravity* 32.7, 074001 (Apr. 2015), p. 074001. DOI: 10.1088/0264-9381/32/7/074001. arXiv: 1411.4547 [gr-qc].

[106] C. Pankow et al. 'Novel scheme for rapid parallel parameter estimation of gravitational waves from compact binary coalescences'. In: Phys. Rev. D 92.2, 023002 (July 2015), p. 023002. DOI: 10.1103/PhysRevD.92.023002. arXiv: 1502.04370 [gr-qc].

[107] M. G. Aartsen et al. 'Multimessenger search for sources of gravitational waves and high-energy neutrinos: Initial results for LIGO-Virgo and IceCube'. In: Phys. Rev. D 90.10, 102002 (Nov. 2014), p. 102002. DOI: 10.1103/PhysRevD.90.102002. arXiv: 1407.1042 [astro-ph.HE].

[108] J. Aasi et al. 'Application of a Hough search for continuous gravitational waves on data from the fifth LIGO science run'. In: *Classical and Quantum Gravity* 31.8, 085014 (Apr. 2014), p. 085014. DOI: 10.1088/0264-9381/31/8/085014. arXiv: 1311.2409 [gr-qc].

[109] J. Aasi et al. 'Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors'. In: Phys. Rev. Lett. 112.13, 131101 (Apr. 2014), p. 131101. DOI: 10.1103/PhysRevLett.112.131101. arXiv: 1310.2384 [gr-qc].

[110] J. Aasi et al. 'First all-sky search for continuous gravitational waves from unknown sources in binary systems'. In: Phys. Rev. D 90.6, 062010 (Sept. 2014), p. 062010. DOI: 10.1103/PhysRevD.90.062010. arXiv: 1405.7904 [gr-qc].

[111] J. Aasi et al. 'First Searches for Optical Counterparts to Gravitational-wave Candidate Events'. In: ApJS 211.1, 7 (Mar. 2014), p. 7. DOI: 10.1088/0067-0049/211/1/7. arXiv: 1310.2314 [astro-ph.IM].

[112] J. Aasi et al. 'Gravitational Waves from Known Pulsars: Results from the Initial Detector Era'. In: ApJ 785.2, 119 (Apr. 2014), p. 119. DOI: 10.1088/0004-637X/785/2/119. arXiv: 1309.4027 [astro-ph.HE].

[113] J. Aasi et al. 'Implementation of an F-statistic all-sky search for continuous gravitational waves in Virgo VSR1 data'. In: *Classical and Quantum Gravity* 31.16, 165014 (Aug. 2014), p. 165014. DOI: 10.1088/0264-9381/31/16/165014. arXiv: 1402.4974 [gr-qc].

[114] J. Aasi et al. 'Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009-2010 LIGO and Virgo Data'. In: Phys. Rev. Lett. 113.23, 231101 (Dec. 2014), p. 231101. DOI: 10.1103/PhysRevLett.113.231101. arXiv: 1406.4556 [gr-qc].

[115] J. Aasi et al. 'Methods and results of a search for gravitational waves associated with gamma-ray bursts using the GEO 600, LIGO, and Virgo detectors'. In: Phys. Rev. D 89.12, 122004 (June 2014), p. 122004. DOI: 10.1103/PhysRevD.89.122004. arXiv: 1405.1053 [astro-ph.HE].

[116] J. Aasi et al. 'Search for gravitational radiation from intermediate mass black hole binaries in data from the second LIGO-Virgo joint science run'. In: Phys. Rev. D 89.12, 122003 (June 2014), p. 122003. DOI: 10.1103/PhysRevD.89.122003. arXiv: 1404.2199 [gr-qc].

[117] J. Aasi et al. 'Search for gravitational wave ringdowns from perturbed intermediate mass black holes in LIGO-Virgo data from 2005-2010'. In: Phys. Rev. D 89.10, 102006 (May 2014), p. 102006. DOI: 10.1103/PhysRevD.89.102006. arXiv: 1403.5306 [gr-qc].

[118] J. Aasi et al. 'Search for Gravitational Waves Associated with γ-ray Bursts Detected by the Interplanetary Network'. In: Phys. Rev. Lett. 113.1, 011102 (July 2014), p. 011102. DOI: 10.1103/PhysRevLett.113.011102. arXiv: 1403.6639 [astro-ph.HE].

[119] J. Aasi et al. 'The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations'. In: *Classical and Quantum Gravity* 31.11, 115004 (June 2014), p. 115004. DOI: 10.1088/0264-9381/31/11/115004. arXiv: 1401.0939 [gr-qc].

[120] Benjamin D. Lackey et al. 'Extracting equation of state parameters from black hole-neutron star mergers: Aligned-spin black holes and a preliminary waveform model'. In: Phys. Rev. D 89.4, 043009 (Feb. 2014), p. 043009. DOI: 10.1103/PhysRevD.89.043009. arXiv: 1303.6298 [gr-qc].

[121] J. Aasi et al. 'Directed search for continuous gravitational waves from the Galactic center'. In: Phys. Rev. D 88.10, 102002 (Nov. 2013), p. 102002. DOI: 10.1103/PhysRevD.88.102002. arXiv: 1309.6221 [gr-qc].

[122] J. Aasi et al. 'Einstein@Home all-sky search for periodic gravitational waves in LIGO S5 data'. In: Phys. Rev. D 87.4, 042001 (Feb. 2013), p. 042001. DOI: 10.1103/PhysRevD.87.042001. arXiv: 1207.7176 [gr-qc].

[123] J. Aasi et al. 'Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light'. In: *Nature Photonics* 7.8 (Aug. 2013), pp. 613–619. DOI: 10.1038/nphoton.2013.177. arXiv: 1310.0383 [quant-ph].

[124] J. Aasi et al. 'Parameter estimation for compact binary coalescence signals with the first generation gravitational-wave detector network'. In: Phys. Rev. D 88.6, 062001 (Sept. 2013), p. 062001. DOI: 10.1103/PhysRevD.88.062001. arXiv: 1304.1775 [gr-qc].

[125] J. Aasi et al. 'Search for gravitational waves from binary black hole inspiral, merger, and ringdown in LIGO-Virgo data from 2009-2010'. In: Phys. Rev. D 87.2, 022002 (Jan. 2013), p. 022002. DOI: 10.1103/PhysRevD.87.022002. arXiv: 1209.6533 [gr-qc].

[126] J. Aasi et al. 'Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts'. In: Phys. Rev. D 88.12, 122004 (Dec. 2013), p. 122004. DOI: 10.1103/PhysRevD.88.122004. arXiv: 1309.6160 [astro-ph.HE].

[127] S. Adrián-Martınez et al. 'A first search for coincident gravitational waves and high energy neutrinos using LIGO, Virgo and ANTARES data from 2007'. In: J. Cosmology Astropart. Phys. 2013.6, 008 (June 2013), p. 008. DOI: 10.1088/1475-7516/2013/06/008. arXiv: 1205.3018 [astro-ph.HE].

[128] S. Babak et al. 'Searching for gravitational waves from binary coalescence'. In: Phys. Rev. D 87.2, 024033 (Jan. 2013), p. 024033. DOI: 10.1103/PhysRevD.87.024033. arXiv: 1208.3491 [gr-qc].

[129] I. Bartos, P. Brady and S. Márka. 'How gravitational-wave observations can shape the gamma-ray burst paradigm'. In: *Classical and Quantum Gravity* 30.12, 123001 (June 2013), p. 123001. DOI: 10.1088/0264-9381/30/12/123001. arXiv: 1212.2289 [astro-ph.CO].

[130] Rahul Biswas et al. 'Corrigendum: The loudest event statistic: general formulation, properties and applications'. In: *Classical and Quantum Gravity* 30.7, 079502 (Apr. 2013), p. 079502. DOI: 10.1088/0264-9381/30/7/079502.

[131] J. Aasi et al. 'The characterization of Virgo data and its impact on gravitational-wave searches'. In: *Classical and Quantum Gravity* 29.15, 155002 (Aug. 2012), p. 155002. DOI: 10.1088/0264-9381/29/15/155002. arXiv: 1203.5613 [gr-qc].

[132] J. Abadie et al. 'All-sky search for gravitational-wave bursts in the second joint LIGO-Virgo run'. In: Phys. Rev. D 85.12, 122007 (June 2012), p. 122007. DOI: 10.1103/PhysRevD.85.122007. arXiv: 1202.2788 [gr-qc].

[133] J. Abadie et al. 'All-sky search for periodic gravitational waves in the full S5 LIGO data'. In: Phys. Rev. D 85.2, 022001 (Jan. 2012), p. 022001. DOI: 10.1103/PhysRevD.85.022001. arXiv: 1110.0208 [gr-qc].

[134] J. Abadie et al. 'Erratum: Search for gravitational waves from binary black hole inspiral, merger, and ringdown [Phys. Rev. D 83, 122005 (2011)]'. In: Phys. Rev. D 86.6, 069903 (Sept. 2012), p. 069903. DOI: 10.1103/PhysRevD.86.069903.

[135] J. Abadie et al. 'First low-latency LIGO+Virgo search for binary inspirals and their electromagnetic counterparts'. In: A&A 541, A155 (May 2012), A155. DOI: 10.1051/0004-6361/201218860. arXiv: 1112.6005 [astro-ph.CO].

[136] J. Abadie et al. 'Implications for the Origin of GRB 051103 from LIGO Observations'. In: ApJ 755.1, 2 (Aug. 2012), p. 2. DOI: 10.1088/0004-637X/755/1/2. arXiv: 1201.4413 [astro-ph.HE].

[137] J. Abadie et al. 'Publisher's Note: All-sky search for gravitational-wave bursts in the first joint LIGO-GEO-Virgo run [Phys. Rev. D 81, 102001 (2010)]'. In: Phys. Rev. D 85.8, 089905 (Apr. 2012), p. 089905. DOI: 10.1103/PhysRevD.85.089905.

[138] J. Abadie et al. 'Publisher's Note: Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar [Phys. Rev. D 83, 042001 (2011)]'. In: Phys. Rev. D 85.8, 089902 (Apr. 2012), p. 089902. DOI: 10.1103/PhysRevD.85.089902.

[139] J. Abadie et al. 'Publisher's Note: Search for gravitational waves from binary black hole inspiral, merger, and ringdown [Phys. Rev. D 83, 122005 (2011)]'. In: Phys. Rev. D 85.8, 089904 (Apr. 2012), p. 089904. DOI: 10.1103/PhysRevD.85.089904.

[140] J. Abadie et al. 'Publisher's Note: Search for gravitational waves from compact binary coalescence in LIGO and Virgo data from S5 and VSR1 [Phys. Rev. D 82, 102001 (2010)]'. In: Phys. Rev. D 85.8, 089903 (Apr. 2012), p. 089903. DOI: 10.1103/PhysRevD.85.089903.

[141] J. Abadie et al. 'Search for Gravitational Waves Associated with Gamma-Ray Bursts during LIGO Science Run 6 and Virgo Science Runs 2 and 3'. In: ApJ 760.1, 12 (Nov. 2012), p. 12. DOI: 10.1088/0004-637X/760/1/12. arXiv: 1205.2216 [astro-ph.HE].

[142] J. Abadie et al. 'Search for gravitational waves from intermediate mass binary black holes'. In: Phys. Rev. D 85.10, 102004 (May 2012), p. 102004. DOI: 10.1103/PhysRevD.85.102004. arXiv: 1201.5999 [gr-qc].

[143] J. Abadie et al. 'Search for gravitational waves from low mass compact binary coalescence in LIGO's sixth science run and Virgo's science runs 2 and 3'. In: Phys. Rev. D 85.8, 082002 (Apr. 2012), p. 082002. DOI: 10.1103/PhysRevD.85.082002. arXiv: 1111.7314 [gr-qc].

[144] J. Abadie et al. 'Upper limits on a stochastic gravitational-wave background using LIGO and Virgo interferometers at 600-1000 Hz'. In: Phys. Rev. D 85.12, 122001 (June 2012), p. 122001. DOI: 10.1103/PhysRevD.85.122001. arXiv: 1112.5004 [gr-qc].

[145] Bruce Allen et al. 'FINDCHIRP: An algorithm for detection of gravitational waves from inspiraling compact binaries'. In: Phys. Rev. D 85.12, 122006 (June 2012), p. 122006. DOI: 10.1103/PhysRevD.85.122006. arXiv: gr-qc/0509116 [gr-qc].

[146] Rahul Biswas et al. 'Detecting transient gravitational waves in non-Gaussian noise with partially redundant analysis methods'. In: Phys. Rev. D 85.12, 122009 (June 2012), p. 122009. DOI: 10.1103/PhysRevD.85.122009. arXiv: 1201.2964 [gr-qc].

[147] Rahul Biswas et al. 'Likelihood-ratio ranking of gravitational-wave candidates in a non-Gaussian background'. In: Phys. Rev. D 85.12, 122008 (June 2012), p. 122008. DOI: 10.1103/PhysRevD.85.122008. arXiv: 1201.2959 [gr-qc].

[148] P. A. Evans et al. 'Swift Follow-up Observations of Candidate Gravitational-wave Transient Events'. In: ApJS 203.2, 28 (Dec. 2012), p. 28. DOI: 10.1088/0067-0049/203/2/28. arXiv: 1205.1124 [astro-ph.HE].

[149] Benjamin D. Lackey et al. 'Extracting equation of state parameters from black hole-neutron star mergers: Nonspinning black holes'. In: Phys. Rev. D 85.4, 044061 (Feb. 2012), p. 044061. DOI: 10.1103/PhysRevD.85.044061. arXiv: 1109.3402 [astro-ph.HE].

[150] LIGO Scientific Collaboration et al. 'Implementation and testing of the first prompt search for gravitational wave transients with electromagnetic counterparts'. In: A&A 539, A124 (Apr. 2012), A124. DOI: 10.1051/0004-6361/201118219. arXiv: 1109.3498 [astro-ph.IM].

[151] J. Abadie et al. 'Beating the Spin-down Limit on Gravitational Wave Emission from the Vela Pulsar'. In: ApJ 737.2, 93 (Aug. 2011), p. 93. DOI: 10.1088/0004-637X/737/2/93. arXiv: 1104.2712 [astro-ph.HE].

[152] J. Abadie et al. 'Directional Limits on Persistent Gravitational Waves Using LIGO S5 Science Data'. In: Phys. Rev. Lett. 107.27, 271102 (Dec. 2011), p. 271102. DOI: 10.1103/PhysRevLett.107.271102. arXiv: 1109.1809 [astro-ph.CO].

[153] J. Abadie et al. 'Publisher's Note: Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar [Phys. Rev. D 83, 042001 (2011)]'. In: Phys. Rev. D 83.6, 069902 (Mar. 2011), p. 069902. DOI: 10.1103/PhysRevD.83.069902.

[154] J. Abadie et al. 'Search for Gravitational Wave Bursts from Six Magnetars'. In: ApJ 734.2, L35 (June 2011), p. L35. DOI: 10.1088/2041-8205/734/2/L35. arXiv: 1011.4079 [astro-ph.HE].

[155] J. Abadie et al. 'Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar'. In: Phys. Rev. D 83.4, 042001 (Feb. 2011), p. 042001. DOI: 10.1103/PhysRevD.83.042001. arXiv: 1011.1357 [gr-qc].

[156] J. Abadie et al. 'Search for gravitational waves from binary black hole inspiral, merger, and ringdown'. In: Phys. Rev. D 83.12, 122005 (June 2011), p. 122005. DOI: 10.1103/PhysRevD.83.122005. arXiv: 1102.3781 [gr-qc].

[157] Ligo Scientific Collaboration et al. 'A gravitational wave observatory operating beyond the quantum shot-noise limit'. In: *Nature Physics* 7.12 (Dec. 2011), pp. 962–965. DOI: 10.1038/nphys2083. arXiv: 1109.2295 [quant-ph].

[158] J. Abadie et al. 'All-sky search for gravitational-wave bursts in the first joint LIGO-GEO-Virgo run'. In: Phys. Rev. D 81.10, 102001 (May 2010), p. 102001. DOI: 10.1103/PhysRevD.81.102001. arXiv: 1002.1036 [gr-qc].

[159] J. Abadie et al. 'Calibration of the LIGO gravitational wave detectors in the fifth science run'. In: *Nuclear Instruments and Methods in Physics Research A* 624.1 (Dec. 2010), pp. 223–240. DOI: 10.1016/j.nima.2010.07.089. arXiv: 1007.3973 [gr-qc].

[160] J. Abadie et al. 'First Search for Gravitational Waves from the Youngest Known Neutron Star'. In: ApJ 722.2 (Oct. 2010), pp. 1504–1513. DOI: 10.1088/0004-637X/722/2/1504. arXiv: 1006.2535 [gr-qc].

[161] J. Abadie et al. 'Search for gravitational waves from compact binary coalescence in LIGO and Virgo data from S5 and VSR1'. In: Phys. Rev. D 82.10, 102001 (Nov. 2010), p. 102001. DOI: 10.1103/PhysRevD.82.102001. arXiv: 1005.4655 [gr-qc].

[162] J. Abadie et al. 'Search for Gravitational-wave Inspiral Signals Associated with Short Gamma-ray Bursts During LIGO's Fifth and Virgo's First Science Run'. In: ApJ 715.2 (June 2010), pp. 1453–1461. DOI: 10.1088/0004-637X/715/2/1453. arXiv: 1001.0165 [astro-ph.HE].

[163] J. Abadie et al. 'TOPICAL REVIEW: Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors'. In: *Classical and Quantum Gravity* 27.17, 173001 (Sept. 2010), p. 173001. DOI: 10.1088/0264-9381/27/17/173001. arXiv: 1003.2480 [astro-ph.HE].

[164] B. P. Abbott et al. 'Search For Gravitational-wave Bursts Associated with Gamma-ray Bursts using Data from LIGO Science Run 5 and Virgo Science Run 1'. In: ApJ 715.2 (June 2010), pp. 1438–1452. DOI: 10.1088/0004-637X/715/2/1438. arXiv: 0908.3824 [astro-ph.HE].

[165] B. P. Abbott et al. 'Searches for Gravitational Waves from Known Pulsars with Science Run 5 LIGO Data'. In: ApJ 713.1 (Apr. 2010), pp. 671–685. DOI: 10.1088/0004-637X/713/1/671. arXiv: 0909.3583 [astro-ph.HE].

[166] B. P. Abbott et al. 'An upper limit on the stochastic gravitational-wave background of cosmological origin'. In: Nature 460.7258 (Aug. 2009), pp. 990–994. DOI: 10.1038/nature08278. arXiv: 0910.5772 [astro-ph.CO].

[167] B. P. Abbott et al. 'Einstein@Home search for periodic gravitational waves in early S5 LIGO data'. In: Phys. Rev. D 80.4, 042003 (Aug. 2009), p. 042003. DOI: 10.1103/PhysRevD.80.042003. arXiv: 0905.1705 [gr-qc].

[168] B. P. Abbott et al. 'First LIGO search for gravitational wave bursts from cosmic (super)strings'. In: Phys. Rev. D 80.6, 062002 (Sept. 2009), p. 062002. DOI: 10.1103/PhysRevD.80.062002. arXiv: 0904.4718 [astro-ph.CO].

[169] B. P. Abbott et al. 'Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data'. In: Phys. Rev. D 80.6, 062001 (Sept. 2009), p. 062001. DOI: 10.1103/PhysRevD.80.062001. arXiv: 0905.1654 [gr-qc].

[170] B. P. Abbott et al. 'Search for gravitational waves from low mass compact binary coalescence in 186 days of LIGO's fifth science run'. In: Phys. Rev. D 80.4, 047101 (Aug. 2009), p. 047101. DOI: 10.1103/PhysRevD.80.047101. arXiv: 0905.3710 [gr-qc].

[171] B. P. Abbott et al. 'Search for gravitational-wave bursts in the first year of the fifth LIGO science run'. In: Phys. Rev. D 80.10, 102001 (Nov. 2009), p. 102001. DOI: 10.1103/PhysRevD.80.102001. arXiv: 0905.0020 [gr-qc].

[172] B. P. Abbott et al. 'Search for high frequency gravitational-wave bursts in the first calendar year of LIGO's fifth science run'. In: Phys. Rev. D 80.10, 102002 (Nov. 2009), p. 102002. DOI: 10.1103/PhysRevD.80.102002. arXiv: 0904.4910 [gr-qc].

[173] B. P. Abbott et al. 'Stacked Search for Gravitational Waves from the 2006 SGR 1900+14 Storm'. In: ApJ 701.2 (Aug. 2009), pp. L68–L74. DOI: 10.1088/0004-637X/701/2/L68. arXiv: 0905.0005 [astro-ph.HE].

[174] B. P. Abbott et al. 'All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data'. In: Phys. Rev. Lett. 102.11, 111102 (Mar. 2009), p. 111102. DOI: 10.1103/PhysRevLett.102.111102. arXiv: 0810.0283 [gr-qc].

[175] B. P. Abbott et al. 'LIGO: the Laser Interferometer Gravitational-Wave Observatory'. In: *Reports on Progress in Physics* 72.7, 076901 (July 2009), p. 076901. DOI: 10.1088/0034-4885/72/7/076901. arXiv: 0711.3041 [gr-qc].

[176] B. P. Abbott et al. 'Search for gravitational waves from low mass binary coalescences in the first year of LIGO's S5 data'. In: Phys. Rev. D 79.12, 122001 (June 2009), p. 122001. DOI: 10.1103/PhysRevD.79.122001. arXiv: 0901.0302 [gr-qc].

[177] B. Abbott et al. 'ERRATUM: "Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar" <A href="bib_query\?2008ApJ...683L..45A">(2008, ApJ, 683, L45)</A>'. In: ApJ 706.1 (Nov. 2009), pp. L203–L204. DOI: 10.1088/0004-637X/706/1/L203.

[178] B. Abbott et al. 'Erratum: All-sky search for periodic gravitational waves in LIGO S4 data [Phys. Rev. D 77, 022001 (2008)]'. In: Phys. Rev. D 80.12, 129904 (Dec. 2009), p. 129904. DOI: 10.1103/PhysRevD.80.129904.

[179] B. Abbott et al. 'Einstein@Home search for periodic gravitational waves in LIGO S4 data'. In: Phys. Rev. D 79.2, 022001 (Jan. 2009), p. 022001. DOI: 10.1103/PhysRevD.79.022001. arXiv: 0804.1747 [gr-qc].

[180] B. Abbott et al. 'Observation of a kilogram-scale oscillator near its quantum ground state'. In: *New Journal of Physics* 11.7, 073032 (July 2009), p. 073032. DOI: 10.1088/1367-2630/11/7/073032.

[181] Benjamin Aylott et al. 'Testing gravitational-wave searches with numerical relativity waveforms: results from the first Numerical INJection Analysis (NINJA) project'. In: *Classical and Quantum Gravity* 26.16, 165008 (Aug. 2009), p. 165008. DOI: 10.1088/0264-9381/26/16/165008. arXiv: 0901.4399 [gr-qc].

[182] Rahul Biswas et al. 'The loudest event statistic: general formulation, properties and applications'. In: *Classical and Quantum Gravity* 26.17, 175009 (Sept. 2009), p. 175009. DOI: 10.1088/0264-9381/26/17/175009. arXiv: 0710.0465 [gr-qc].

[183] Laura Cadonati et al. 'Status of NINJA: the Numerical INJection Analysis project'. In: *Classical and Quantum Gravity* 26.11, 114008 (June 2009), p. 114008. DOI: 10.1088/0264-9381/26/11/114008. arXiv: 0905.4227 [gr-qc].

[184] B. Abbott et al. 'All-sky search for periodic gravitational waves in LIGO S4 data'. In: Phys. Rev. D 77.2, 022001 (Jan. 2008), p. 022001. DOI: 10.1103/PhysRevD.77.022001. arXiv: 0708.3818 [gr-qc].

[185] B. Abbott et al. 'Astrophysically triggered searches for gravitational waves: status and prospects'. In: *Classical and Quantum Gravity* 25.11, 114051 (June 2008), p. 114051. DOI: 10.1088/0264-9381/25/11/114051. arXiv: 0802.4320 [gr-qc].

[186] B. Abbott et al. 'Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar'. In: ApJ 683.1 (Aug. 2008), p. L45. DOI: 10.1086/591526. arXiv: 0805.4758 [astro-ph].

[187] B. Abbott et al. 'ERRATUM: Search for gravitational-wave bursts in LIGO data from the fourth science run'. In: *Classical and Quantum Gravity* 25.3, 039801 (Feb. 2008), p. 039801. DOI: 10.1088/0264-9381/25/3/039801.

[188] B. Abbott et al. 'First joint search for gravitational-wave bursts in LIGO and GEO 600 data'. In: *Classical and Quantum Gravity* 25.24, 245008 (Dec. 2008), p. 245008. DOI: 10.1088/0264-9381/25/24/245008. arXiv: 0807.2834 [gr-qc].

[189] B. Abbott et al. 'Implications for the Origin of GRB 070201 from LIGO Observations'. In: ApJ 681.2 (July 2008), pp. 1419–1430. DOI: 10.1086/587954. arXiv: 0711.1163 [astro-ph].

[190] B. Abbott et al. 'Publisher's Note: All-sky search for periodic gravitational waves in LIGO S4 data [Phys. Rev. D 77, 022001 (2008)]'. In: Phys. Rev. D 77.6, 069902 (Mar. 2008), p. 069902. DOI: 10.1103/PhysRevD.77.069902.

[191] B. Abbott et al. 'Publisher's Note: First cross-correlation analysis of interferometric and resonant-bar gravitational-wave data for stochastic backgrounds [Phys. Rev. D 76, 022001 (2007)]'. In: Phys. Rev. D 77.6, 069904 (Mar. 2008), p. 069904. DOI: 10.1103/PhysRevD.77.069904.

[192] B. Abbott et al. 'Publisher's Note: Upper limit map of a background of gravitational waves [Phys. Rev. D 76, 082003 (2007)]'. In: Phys. Rev. D 77.6, 069903 (Mar. 2008), p. 069903. DOI: 10.1103/PhysRevD.77.069903.

[193] B. Abbott et al. 'Publisher's Note: Upper limits on gravitational wave emission from 78 radio pulsars [Phys. Rev. D 76, 042001 (2007)]'. In: Phys. Rev. D 77.6, 069905 (Mar. 2008), p. 069905. DOI: 10.1103/PhysRevD.77.069905.

[194] B. Abbott et al. 'Search for gravitational waves associated with 39 gamma-ray bursts using data from the second, third, and fourth LIGO runs'. In: Phys. Rev. D 77.6, 062004 (Mar. 2008), p. 062004. DOI: 10.1103/PhysRevD.77.062004. arXiv: 0709.0766 [gr-qc].

[195] B. Abbott et al. 'Search for gravitational waves from binary inspirals in S3 and S4 LIGO data'. In: Phys. Rev. D 77.6, 062002 (Mar. 2008), p. 062002. DOI: 10.1103/PhysRevD.77.062002. arXiv: 0704.3368 [gr-qc].

[196] B. Abbott et al. 'Search for Gravitational-Wave Bursts from Soft Gamma Repeaters'. In: Phys. Rev. Lett. 101.21, 211102 (Nov. 2008), p. 211102. DOI: 10.1103/PhysRevLett.101.211102. arXiv: 0808.2050 [astro-ph].

[197] B. Abbott et al. 'Search of S3 LIGO data for gravitational wave signals from spinning black hole and neutron star binary inspirals'. In: Phys. Rev. D 78.4, 042002 (Aug. 2008), p. 042002. DOI: 10.1103/PhysRevD.78.042002. arXiv: 0712.2050 [gr-qc].

[198] L. Baggio et al. 'A joint search for gravitational wave bursts with AURIGA and LIGO'. In: *Classical and Quantum Gravity* 25.9, 095004 (May 2008), p. 095004. DOI: 10.1088/0264-9381/25/9/095004. arXiv: 0710.0497 [gr-qc].

[199] Thomas Baumgarte et al. 'Learning about compact binary merger: The interplay between numerical relativity and gravitational-wave astronomy'. In: Phys. Rev. D 77.8, 084009 (Apr. 2008), p. 084009. DOI: 10.1103/PhysRevD.77.084009. arXiv: gr-qc/0612100 [gr-qc].

[200] Patrick R. Brady and Stephen Fairhurst. 'Interpreting the results of searches for gravitational waves from coalescing binaries'. In: *Classical and Quantum Gravity* 25.10, 105002 (May 2008), p. 105002. DOI: 10.1088/0264-9381/25/10/105002. arXiv: 0707.2410 [gr-qc].

[201] Ravi Kumar Kopparapu et al. 'Host Galaxies Catalog Used in LIGO Searches for Compact Binary Coalescence Events'. In: ApJ 675.2 (Mar. 2008), pp. 1459–1467. DOI: 10.1086/527348. arXiv: 0706.1283 [astro-ph].

[202] B. Abbott et al. 'First cross-correlation analysis of interferometric and resonant-bar gravitational-wave data for stochastic backgrounds'. In: Phys. Rev. D 76.2, 022001 (July 2007), p. 022001. DOI: 10.1103/PhysRevD.76.022001. arXiv: gr-qc/0703068 [gr-qc].

[203] B. Abbott et al. 'Publisher's Note: First cross-correlation analysis of interferometric and resonant-bar gravitational-wave data for stochastic backgrounds [Phys. Rev. DPRVDAQ0556-2821 76, 022001 (2007)]'. In: Phys. Rev. D 76.2, 029905 (July 2007), p. 029905. DOI: 10.1103/PhysRevD.76.029905.

[204] B. Abbott et al. 'Search for gravitational wave radiation associated with the pulsating tail of the SGR 1806-20 hyperflare of 27 December 2004 using LIGO'. In: Phys. Rev. D 76.6, 062003 (Sept. 2007), p. 062003. DOI: 10.1103/PhysRevD.76.062003. arXiv: astro-ph/0703419 [astro-ph].

[205] B. Abbott et al. 'Search for gravitational-wave bursts in LIGO data from the fourth science run'. In: *Classical and Quantum Gravity* 24.22 (Nov. 2007), pp. 5343–5369. DOI: 10.1088/0264-9381/24/22/002. arXiv: 0704.0943 [gr-qc].

[206] B. Abbott et al. 'Searches for periodic gravitational waves from unknown isolated sources and Scorpius X-1: Results from the second LIGO science run'. In: Phys. Rev. D 76.8, 082001 (Oct. 2007), p. 082001. DOI: 10.1103/PhysRevD.76.082001. arXiv: gr-qc/0605028 [gr-qc].

[207] B. Abbott et al. 'Searching for a Stochastic Background of Gravitational Waves with the Laser Interferometer Gravitational-Wave Observatory'. In: ApJ 659.2 (Apr. 2007), pp. 918–930. DOI: 10.1086/511329. arXiv: astro-ph/0608606 [astro-ph].

[208] B. Abbott et al. 'Upper limit map of a background of gravitational waves'. In: Phys. Rev. D 76.8, 082003 (Oct. 2007), p. 082003. DOI: 10.1103/PhysRevD.76.082003. arXiv: astro-ph/0703234 [astro-ph].

[209] B. Abbott et al. 'Upper limits on gravitational wave emission from 78 radio pulsars'. In: Phys. Rev. D 76.4, 042001 (Aug. 2007), p. 042001. DOI: 10.1103/PhysRevD.76.042001. arXiv: gr-qc/0702039 [gr-qc].

[210] B. Abbott et al. 'Joint LIGO and TAMA300 search for gravitational waves from inspiralling neutron star binaries'. In: Phys. Rev. D 73.10, 102002 (May 2006), p. 102002. DOI: 10.1103/PhysRevD.73.102002. arXiv: gr-qc/0512078 [gr-qc].

[211] B. Abbott et al. 'Search for gravitational waves from binary black hole inspirals in LIGO data'. In: Phys. Rev. D 73.6, 062001 (Mar. 2006), p. 062001. DOI: 10.1103/PhysRevD.73.062001. arXiv: gr-qc/0509129 [gr-qc].

[212] B. Abbott et al. 'Search for gravitational-wave bursts in LIGO's third science run'. In: *Classical and Quantum Gravity* 23.8 (Apr. 2006), S29–S39. DOI: 10.1088/0264-9381/23/8/S05. arXiv: gr-qc/0511146 [gr-qc].

[213] B. Abbott et al. 'First all-sky upper limits from LIGO on the strength of periodic gravitational waves using the Hough transform'. In: Phys. Rev. D 72.10, 102004 (Nov. 2005), p. 102004. DOI: 10.1103/PhysRevD.72.102004. arXiv: gr-qc/0508065 [gr-qc].

[214] B. Abbott et al. 'Limits on Gravitational-Wave Emission from Selected Pulsars Using LIGO Data'. In: Phys. Rev. Lett. 94.18, 181103 (May 2005), p. 181103. DOI: 10.1103/PhysRevLett.94.181103. arXiv: gr-qc/0410007 [gr-qc].

[215] B. Abbott et al. 'Search for gravitational waves associated with the gamma ray burst GRB030329 using the LIGO detectors'. In: Phys. Rev. D 72.4, 042002 (Aug. 2005), p. 042002. DOI: 10.1103/PhysRevD.72.042002. arXiv: gr-qc/0501068 [gr-qc].

[216] B. Abbott et al. 'Search for gravitational waves from galactic and extra-galactic binary neutron stars'. In: Phys. Rev. D 72.8, 082001 (Oct. 2005), p. 082001. DOI: 10.1103/PhysRevD.72.082001. arXiv: gr-qc/0505041 [gr-qc].

[217] B. Abbott et al. 'Search for gravitational waves from primordial black hole binary coalescences in the galactic halo'. In: Phys. Rev. D 72.8, 082002 (Oct. 2005), p. 082002. DOI: 10.1103/PhysRevD.72.082002. arXiv: gr-qc/0505042 [gr-qc].

[218] B. Abbott et al. 'Upper limits from the LIGO and TAMA detectors on the rate of gravitational-wave bursts'. In: Phys. Rev. D 72.12, 122004 (Dec. 2005), p. 122004. DOI: 10.1103/PhysRevD.72.122004. arXiv: gr-qc/0507081 [gr-qc].

[219] B. Abbott et al. 'Upper Limits on a Stochastic Background of Gravitational Waves'. In: Phys. Rev. Lett. 95.22, 221101 (Nov. 2005), p. 221101. DOI: 10.1103/PhysRevLett.95.221101. arXiv: astro-ph/0507254 [astro-ph].

[220] B. Abbott et al. 'Upper limits on gravitational wave bursts in LIGO's second science run'. In: Phys. Rev. D 72.6, 062001 (Sept. 2005), p. 062001. DOI: 10.1103/PhysRevD.72.062001. arXiv: gr-qc/0505029 [gr-qc].

[221] F. Beauville et al. 'A first comparison between LIGO and Virgo inspiral search pipelines'. In: *Classical and Quantum Gravity* 22.18 (Sept. 2005), S1149–S1158. DOI: 10.1088/0264-9381/22/18/S29.

[222] F. Beauville et al. 'A first comparison of search methods for gravitational wave bursts using LIGO and Virgo simulated data'. In: *Classical and Quantum Gravity* 22.18 (Sept. 2005), S1293–S1301. DOI: 10.1088/0264-9381/22/18/S43.

[223] B. Abbott et al. 'Analysis of first LIGO science data for stochastic gravitational waves'. In: Phys. Rev. D 69.12, 122004 (June 2004), p. 122004. DOI: 10.1103/PhysRevD.69.122004. arXiv: gr-qc/0312088 [gr-qc].

[224] B. Abbott et al. 'Analysis of LIGO data for gravitational waves from binary neutron stars'. In: Phys. Rev. D 69.12, 122001 (June 2004), p. 122001. DOI: 10.1103/PhysRevD.69.122001. arXiv: gr-qc/0308069 [gr-qc].

[225] B. Abbott et al. 'Detector description and performance for the first coincidence observations between LIGO and GEO'. In: *Nuclear Instruments and Methods in Physics Research A* 517.1-3 (Jan. 2004), pp. 154–179. DOI: 10.1016/j.nima.2003.11.124. arXiv: gr-qc/0308043 [gr-qc].

[226] B. Abbott et al. 'First upper limits from LIGO on gravitational wave bursts'. In: Phys. Rev. D 69.10, 102001 (May 2004), p. 102001. DOI: 10.1103/PhysRevD.69.102001. arXiv: gr-qc/0312056 [gr-qc].

[227] B. Abbott et al. 'Setting upper limits on the strength of periodic gravitational waves from PSR J1939+2134 using the first science data from the GEO 600 and LIGO detectors'. In: Phys. Rev. D 69.8, 082004 (Apr. 2004), p. 082004. DOI: 10.1103/PhysRevD.69.082004. arXiv: gr-qc/0308050 [gr-qc].

[228] B. Allen et al. 'Upper limits on the strength of periodic gravitational waves from PSR J1939+2134'. In: *Classical and Quantum Gravity* 21.5 (Mar. 2004), S671–S676. DOI: 10.1088/0264-9381/21/5/042. arXiv: gr-qc/0311023 [gr-qc].

[229] Patrick R. Brady, Jolien D. E. Creighton and Alan G. Wiseman. 'Upper limits on gravitational-wave signals based on loudest events'. In: *Classical and Quantum Gravity* 21.20 (Oct. 2004), S1775–S1781. DOI: 10.1088/0264-9381/21/20/020. arXiv: gr-qc/0405044 [gr-qc].

[230] Patrick R. Brady and Saikat Ray-Majumder. 'Incorporating information from source simulations into searches for gravitational-wave bursts'. In: *Classical and Quantum Gravity* 21.20 (Oct. 2004), S1839–S1847. DOI: 10.1088/0264-9381/21/20/027. arXiv: gr-qc/0405036 [gr-qc].

[231] Duncan A. Brown et al. 'Searching for gravitational waves from binary inspirals with LIGO'. In: *Classical and Quantum Gravity* 21.20 (Oct. 2004), S1625–S1633. DOI: 10.1088/0264-9381/21/20/005. arXiv: 0705.1572 [gr-qc].

[232] Patrick J. Sutton et al. 'Plans for the LIGO TAMA joint search for gravitational wave bursts'. In: *Classical and Quantum Gravity* 21.20 (Oct. 2004), S1801–S1807. DOI: 10.1088/0264-9381/21/20/023. arXiv: gr-qc/0412123 [gr-qc].

[233] Patrick R. Brady et al. 'Black-hole threshold solutions in stiff fluid collapse'. In: *Classical and Quantum Gravity* 19.24 (Dec. 2002), pp. 6359–6375. arXiv: gr-qc/0207096 [gr-qc].

[234] Warren G. Anderson et al. 'Excess power statistic for detection of burst sources of gravitational radiation'. In: Phys. Rev. D 63.4, 042003 (Feb. 2001), p. 042003. DOI: 10.1103/PhysRevD.63.042003. arXiv: gr-qc/0008066 [gr-qc].

[235] Warren G. Anderson et al. 'A Power Filter for the Detection of Burst Sources of Gravitational Radiation in Interferometric Detectors'. In: *International Journal of Modern Physics D* 9.3 (Jan. 2000), pp. 303–307. DOI: 10.1142/S0218271800000323. arXiv: gr-qc/0001044 [gr-qc].

[236] Patrick R. Brady and Teviet Creighton. 'Searching for periodic sources with LIGO. II. Hierarchical searches'. In: Phys. Rev. D 61.8, 082001 (Apr. 2000), p. 082001. DOI: 10.1103/PhysRevD.61.082001. arXiv: gr-qc/9812014 [gr-qc].

[237] B. Allen et al. 'Observational Limit on Gravitational Waves from Binary Neutron Stars in the Galaxy'. In: Phys. Rev. Lett. 83.8 (Aug. 1999), pp. 1498–1501. DOI: 10.1103/PhysRevLett.83.1498. arXiv: gr-qc/9903108 [gr-qc].

[238] Patrick R. Brady et al. 'Radiative falloff in Schwarzschild-de Sitter spacetime'. In: Phys. Rev. D 60.6, 064003 (Sept. 1999), p. 064003. DOI: 10.1103/PhysRevD.60.064003. arXiv: gr-qc/9902010 [gr-qc].

[239] P. Brady and J. Dunn. 'Comment on entropy production in nuclear collisions'. In: *European Physical Journal C* 5.2 (Aug. 1998), pp. 357–361. DOI: 10.1007/s100529800853.

[240] Patrick R. Brady, Jolien D. E. Creighton and Kip S. Thorne. 'Computing the merger of black-hole binaries: The IBBH problem'. In: Phys. Rev. D 58.6, 061501 (Sept. 1998), p. 061501. DOI: 10.1103/PhysRevD.58.061501. arXiv: gr-qc/9804057 [gr-qc].

[241] Patrick R. Brady, Serge Droz and Sharon M. Morsink. 'Late-time singularity inside nonspherical black holes'. In: Phys. Rev. D 58.8, 084034 (Oct. 1998), p. 084034. DOI: 10.1103/PhysRevD.58.084034. arXiv: gr-qc/9805008 [gr-qc].

[242] Patrick R. Brady, Ian G. Moss and Robert C. Myers. 'Cosmic Censorship: As Strong As Ever'. In: Phys. Rev. Lett. 80.16 (Apr. 1998), pp. 3432–3435. DOI: 10.1103/PhysRevLett.80.3432. arXiv: gr-qc/9801032 [gr-qc].

[243] Patrick R. Brady and Adrian C. Ottewill. 'Quantum corrections to critical phenomena in gravitational collapse'. In: Phys. Rev. D 58.2, 024006 (July 1998), p. 024006. DOI: 10.1103/PhysRevD.58.024006. arXiv: gr-qc/9804058 [gr-qc].

[244] Patrick R. Brady et al. 'Searching for periodic sources with LIGO'. In: Phys. Rev. D 57.4 (Feb. 1998), pp. 2101–2116. DOI: 10.1103/PhysRevD.57.2101. arXiv: gr-qc/9702050 [gr-qc].

[245] Patrick R. Brady, Chris M. Chambers and Sérgio M. C. V. Gonçalves. 'Phases of massive scalar field collapse'. In: Phys. Rev. D 56.10 (Nov. 1997), R6057–R6061. DOI: 10.1103/PhysRevD.56.R6057. arXiv: gr-qc/9709014 [gr-qc].

[246] Patrick R. Brady and Scott A. Hughes. 'Central Density of a Neutron Star is Unaffected by a Binary Companion at Linear Order in μ/R'. In: Phys. Rev. Lett. 79.7 (Aug. 1997), pp. 1186–1188. DOI: 10.1103/PhysRevLett.79.1186. arXiv: gr-qc/9704019 [gr-qc].

[247] Patrick R. Brady et al. 'Telling tails in the presence of a cosmological constant'. In: Phys. Rev. D 55.12 (June 1997), pp. 7538–7545. DOI: 10.1103/PhysRevD.55.7538. arXiv: gr-qc/9611056 [gr-qc].

[248] P. R. Brady et al. 'Covariant double-null dynamics: 2 + 2-splitting of the Einstein equations'. In: *Classical and Quantum Gravity* 13.8 (Aug. 1996), pp. 2211–2230. DOI: 10.1088/0264-9381/13/8/015. arXiv: gr-qc/9510040 [gr-qc].

[249] Patrick R. Brady. 'Self-similar scalar field collapse: Naked singularities and critical behavior'. In: Phys. Rev. D 51.8 (Apr. 1995), pp. 4168–4176. DOI: 10.1103/PhysRevD.51.4168. arXiv: gr-qc/9409035 [gr-qc].

[250] Patrick R. Brady and Chris M. Chambers. 'Nonlinear instability of Kerr-type Cauchy horizons'. In: Phys. Rev. D 51.8 (Apr. 1995), pp. 4177–4186. DOI: 10.1103/PhysRevD.51.4177. arXiv: gr-qc/9501025 [gr-qc].

[251] Patrick R. Brady and John D. Smith. 'Black Hole Singularities: A Numerical Approach'. In: Phys. Rev. Lett. 75.7 (Aug. 1995), pp. 1256–1259. DOI: 10.1103/PhysRevLett.75.1256. arXiv: gr-qc/9506067 [gr-qc].

[252] Roberto Balbinot and Patrick R. Brady. 'Inside two-dimensional black holes'. In: *Classical and Quantum Gravity* 11.7 (July 1994), pp. 1763–1773. DOI: 10.1088/0264-9381/11/7/013.

[253] Patrick R. Brady. 'Analytic example of critical behaviour in scalar field collapse'. In: *Classical and Quantum Gravity* 11.5 (May 1994), pp. 1255–1260. DOI: 10.1088/0264-9381/11/5/012.

[254] W. G. Anderson, P. R. Brady and R. Camporesi. 'Vacuum polarization and the black hole singularity'. In: *Classical and Quantum Gravity* 10.3 (Mar. 1993), pp. 497–503. DOI: 10.1088/0264-9381/10/3/009. arXiv: gr-qc/9211016 [gr-qc].

[255] Warren G. Anderson et al. 'Quantum effects in black hole interiors'. In: Phys. Rev. Lett. 70.8 (Feb. 1993), pp. 1041–1044. DOI: 10.1103/PhysRevLett.70.1041. arXiv: gr-qc/9210013 [gr-qc].

[256] Claude Barrabès, Patrick R. Brady and Eric Poisson. 'Death of white holes'. In: Phys. Rev. D 47.6 (Mar. 1993), pp. 2383–2387. DOI: 10.1103/PhysRevD.47.2383.

[257] Patrick R. Brady, Darıo Núñez and Sukanya Sinha. 'Cauchy horizon singularity without mass inflation'. In: Phys. Rev. D 47.10 (May 1993), pp. 4239–4243. DOI: 10.1103/PhysRevD.47.4239. arXiv: gr-qc/9211026 [gr-qc].

[258] P. R. Brady and E. Poisson. 'Cauchy horizon instability for Reissner-Nordstrom black holes in de Sitter space'. In: *Classical and Quantum Gravity* 9.1 (Jan. 1992), pp. 121–125. DOI: 10.1088/0264-9381/9/1/011.

[259] Patrick R. Brady. 'On the stability of tension stars'. In: MNRAS 255 (Apr. 1992), pp. 379–381. DOI: 10.1093/mnras/255.3.379.

[260] R. Balbinot et al. 'How singular are black hole interiors?' In: *Physics Letters A* 161.3 (Dec. 1991), pp. 223–226. DOI: 10.1016/0375-9601(91)90007-U.

[261] Patrick R. Brady, Jorma Louko and Eric Poisson. 'Stability of a shell around a black hole'. In: Phys. Rev. D 44.6 (Sept. 1991), pp. 1891–1894. DOI: 10.1103/PhysRevD.44.1891.