

# List of Publications

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## Refereed Publications

I am an author of all the publications authored by the LIGO Scientific Collaboration (LSC) up to the present; these are 56 observational results and instrument papers, and 65 proceedings papers. The complete list can be found in <https://www.lsc-group.phys.uwm.edu/ppcomm/Papers.html>

The LSC publications I include below are a selection of publications in which I had a significant role.

46. *Calibration of the LIGO Gravitational Wave Detectors in the Fifth Science Run*, J. Abadie et al. (LIGO Scientific Collaboration), Nucl. Instrum. Meth. A624 (2010) 223.
45. *Predictions for the Rates of Compact Binary Coalescences Observable by Ground-based Gravitational-wave Detectors*, J. Abadie et al. (The LIGO Scientific Collaboration and The VIRGO Collaboration), Class. Quantum Grav. 27 (2010) 173001
44. *Methods for reducing false alarms in searches for compact binary coalescences in LIGO data*, J Slutsky, L Blackburn, D A Brown, L Cadonati, J Cain, M Cavagli, S Chatterji, N Christensen, M Coughlin, S Desai, G Gonzalez, T Isogai, E Katsavounidis, B Rankins, T Reed, K Riles, P Shawhan, J R Smith, N Zotov and J Zweizig, Class. Quantum Grav. 27 (2010) 165023
43. *Accurate calibration of test mass displacement in the LIGO interferometers*, E Goetz, R L Savage Jr, J Garofoli, G Gonzalez, E Hirose, P Kalmus, K Kawabe, J Kissel, M Landry, B O'Reilly, X Siemens, A Stuver and M Sung, Class. Quantum Grav. (2010) 27 084024
42. *Precise calibration of LIGO test mass actuators using photon radiation pressure*, E Goetz, P Kalmus, S Erickson, R L Savage Jr, G Gonzalez, K Kawabe, M Landry, S Marka, B O'Reilly, K Riles, D Sigg and P Willems, Class. Quantum Grav. 26 (2009 ) 245011
41. *Search for Gravitational Waves from Low Mass Binary Coalescences in the First Year of LIGO's S5 Data*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 79 (2009) 122001
40. *Search for gravitational-wave bursts in the first year of the fifth LIGO science run*, B. Abbott et al. (LIGO Scientific Collaboration), Phys Rev D 80 (2009) 102001.
39. *Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 80 (2009) 062001.
38. *Search for Gravitational Waves from Low Mass Compact Binary Coalescence in 186 Days of LIGO's fifth Science Run*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 80 (2009) 047101

37. *LIGO: The Laser Interferometer Gravitational-Wave Observatory*, B. Abbott et al. (LIGO Scientific Collaboration), Rep. Prog. Phys. 72 (2009) 07690.
36. *The LSC glitch group: monitoring noise transients during the fifth LIGO science run* L Blackburn, L Cadonati, S Caride, S Caudill, S Chatterji, N Christensen, J Dalrymple, S Desai, A Di Credico, G Ely, J Garofoli, L Goggin, G Gonzalez, R Gouaty, C Gray, A Gretarsson, D Hoak, T Isogai, E Katsavounidis, J Kissel, S Klimenko, R A Mercer, S Mohapatra, S Mukherjee, F Raab, K Riles, P Saulson, R Schofield, P Shawhan, J Slutsky, J R Smith, R Stone, C Vorvick, M Zanolin, N Zotov and J Zweizig, (2008) Class. Quantum Grav. 25 184004
35. *Search of S3 LIGO data for gravitational wave signals from spinning black hole and neutron star binary inspirals*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 78 (2008) 042002
34. *Implications for the Origin of GRB 070201 from LIGO Observations*, B. Abbott et al. (LIGO Scientific Collaboration), Hurley, Astrophys. J. 681 (2008) 1419
33. *Search for gravitational waves from binary inspirals in S3 and S4 LIGO data*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 77 (2008) 062002
32. *Search for Gravitational Waves Associated with 39 Gamma-Ray Bursts Using data from the Second, Third, and Fourth LIGO Runs*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 77 (2008) 062004
31. *Host Galaxies Catalog Used in LIGO Searches for Compact Binary Coalescence Events*, R K Kopparapu, CHanna, V Kalogera, R O'Shaughnessy, G González, P R Brady, and S Fairhurst, The Astrophysical Journal, 675:14591467, 2008 March 10.
30. *Search for gravitational-wave bursts in LIGO data from the fourth science run*, B. Abbott et al. (LIGO Scientific Collaboration), Class. Quantum Grav. 24 (2007) 5343-5369.
29. *Upper Limits on Gravitational Wave Emission from 78 Radio Pulsars*, B. Abbott et al. (LIGO Scientific Collaboration), M. Kramer, A. G. Lyne, Phys. Rev. D 76, 042001 (2007).
28. *Searching for a Stochastic Background of Gravitational Waves with LIGO*, B. Abbott et al. (LIGO Scientific Collaboration), Astrophysical Journal 659, 918 (2007).
27. *Search for gravitational-wave bursts in LIGO's third science run*, B. Abbott et al. (LIGO Scientific Collaboration), Class. Quantum Grav. 23 No 8 (21 April 2006) S29-S39
26. *Joint LIGO and TAMA300 search for gravitational waves from inspiralling neutron star binaries*, B. Abbott et al. (LIGO Scientific Collaboration) and T. Akutsu et al. (TAMA Collaboration), Phys. Rev. D 73, 102002 (2006)
25. *Search for gravitational waves from binary black hole inspirals in LIGO data*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 73, 062001 (2006)
24. *Search for Gravitational Waves from primordial black hole binary coalescences in the galactic halo* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D. 72, 082002 ( 2005)
23. *Search for Gravitational Waves from galactic and extra-galactic binary neutron stars* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D. 72, 082001 (2005)
22. *Upper Limits on Gravitational Wave Bursts in LIGO's Second Science Run* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 72, 062001 (2005)

21. *Status of LIGO data analysis* G González (for the LIGO Scientific Collaboration), *Class. Quantum Grav.* 21 (2004) S1575-S1583.
20. *Vetoed for inspiral triggers in LIGO Data* N Christensen, P Shawhan, G González (for the LIGO Scientific Collaboration), *Class. Quantum Grav.* 21 No 20 (21 October 2004) S1747-S1755.
19. *Searching for gravitational waves from binary inspirals with LIGO* Duncan A Brown, Stanislav Babak, Patrick R Brady, Nelson Christensen, Thomas Cokelaer, Jolien D E Creighton, Stephen Fairhurst, Gabriela González, Eirini Messaritaki, B S Sathyaprakash, Peter Shawhan and Natalia Zotov *Class. Quantum Grav.* 21 No 20 (21 October 2004) S1625-S1633.
18. *Analysis of LIGO data for gravitational waves from binary neutron stars*, The LIGO Scientific Collaboration: B. Abbott, et al; *Phys. Rev. D* 69, 122001 (2004)
17. *First upper limits from LIGO on gravitational wave bursts*, The LIGO Scientific Collaboration: B. Abbott et al.; *Phys. Rev. D* 69, 102001 (2004)
16. *Detector Description and Performance for the First Coincidence Observations between LIGO and GEO*, The LIGO Scientific Collaboration: B. Abbott et al., *Nuclear Inst. and Methods in Physics Research A*, Vol. 517/1-3, pp. 154-179 (2004)
15. *Search for inspiralling neutron stars in LIGO S1 data* Gabriela González (for the LIGO Scientific Collaboration) *Class. Quantum Grav.* 21 No 5 (7 March 2004) S691-S696
14. *Calibration of the LIGO detectors for the First LIGO Science Run* R Adhikari, G González, M Landry and B O'Reilly *Class. Quantum Grav.* 20 No 17 (7 September 2003) S903-S914
13. *An improved Phase Noise Interferometer Prototype for Gravitational Wave Detectors*, B. Lantz, E. Daw, P. Fritschel. G. González, H. Rong, *J. Opt. Soc. Amer. A* **19**(1)91 - 100, January 2002.
12. *Readout and Control of a Power-Recycled Interferometric Gravitational-Wave Antenna*, Peter Fritschel, Rolf Bork, Gabriela González, Nergis Mavalvala, Dale Ouimette, Haisheng Rong, Daniel Sigg, Michael Zucker, *Appl. Opt.* **40** 4988 - 4998 (2001).
11. *Suspensions thermal noise in the LIGO gravitational wave detector*, Gabriela González, *Classical and Quantum Gravity* **17**(21),4409 (7 November 2000) (gr-qc/0006053).
10. *Alignment of an interferometric gravitational wave detector*, P Fritschel, G González, N Mavalvala, D Shoemaker, D Sigg, M Zucker, *Applied Optics* **37**(28),6734 (1 October 1998)
9. *High Power Interferometric Phase Measurement Limited by Quantum Noise and Application to Detection of Gravitational Waves* P. Fritschel, G. González, B. Lantz, P. Saha, and M. Zucker *Phys. Rev. Lett.* **80**(15) 3181-3184 (13 April 1998)
8. *Brownian Motion of a Torsion Pendulum damped by Internal Friction* G.I. González and P.R. Saulson, *Phys. Lett. A* 201, 12-18 (1995).
7. *Brownian motion of a mass suspended by an anelastic wire* G.I. González and P.R. Saulson, *J. Acoust. Soc. Am.* **96**, 207-212 (1994).
6. *Classical Analysis of Bianchi I and II Cosmologies with the New Variables*, G.I. González and R.S. Tate, *Class. Quan. Grav.*, **12**, 1287-1303 (1995).
5. *BRST analysis of 2+1 gravity* G. González, J.Pullin. *Physical Review D* **42**, 3395-3400 (1990).

4. *Non stationary one soliton solutions of the vacuum Einstein equations with Alekseev's Inverse Scattering Technique* A. Dagotto, R. Gleiser, G. González, J. Pullin *Physics Letters A* **146**,15-20 (1990).
3. *Completeness and singularities in some inhomogeneous cosmologies* M. Díaz, R. Gleiser, G. González, J. Pullin *Physical Review D* **40**,1033 (1989).
2. *A note on Einstein-Maxwell solitons and vacuum to electrovac solutions transforms* R. Gleiser, G. González, J. Pullin *Astrophysics and Space Science* **149**,369 (1988).
1. *Higher order poles in the Belinskii-Zakharov Inverse Scattering Method* R. Gleiser, G. González, J. Pullin *Physics Letters A* **130**, 206 (1988).

## Theses

- “Thermal Noise in a Torsion Pendulum damped by Internal Friction”, Ph.D. thesis, Syracuse University, March 1995. (Advisor: Peter R. Saulson.)
- “Cosmologías solitónicas” (Solitonic cosmologies), Córdoba University Press, (thesis work presented at FaMAF, Córdoba University to obtain the title of “Licenciada” in Physics) (1987). (Advisor: Mario Díaz.)