

List of Publications

Gabriela González

Lic., Córdoba University (Argentina), 1988

Ph.D., Syracuse University, 1995

March 13, 2008

Refereed Publications

Many of the publications listed below are authored by The LIGO Scientific Collaboration (B. Abbott et al.). The complete list of authors (and an updated list of LSC publications) can be found in www.ligo.org. LSC Publications where I had a significant role are marked with an asterisk (*).

49. **Implications for the Origin of GRB 070201 from LIGO Observations*, B. Abbott et al. (LIGO Scientific Collaboration), Hurley, to appear in ApJ, arXiv:0711.1163
48. **Search for gravitational waves from binary inspirals in S3 and S4 LIGO data*, B. Abbott et al. (LIGO Scientific Collaboration), to appear in Phys. Rev. D, arXiv:0704.3368
47. *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), to appear in Phys. Rev. D, arXiv:0709.0766
46. *A Joint Search for Gravitational Wave Bursts with AURIGA and LIGO*, B. Abbott et al. (LIGO Scientific Collaboration), and AURIGA Collaboration, To appear in Class Quant Grav, arXiv:0710.0497
45. *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, ApJ March 20, 2008, v676
44. *All-sky LIGO Search for Periodic Gravitational Waves in LIGO S4 Data*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 77 (2008) 022001.
43. *Searching for Stochastic Background of Gravitational Waves with LIGO*, B. Abbott et al. (LIGO Scientific Collaboration), ApJ 659 (2007) 918
42. *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.
41. *Coherent searches for periodic gravitational waves from unknown isolated sources and Scorpius X-1: results from the second LIGO science run*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 76 (2007) 082001.
40. *Upper limit map of a background of gravitational waves*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 76 (2007) 082003 .

39. *Search for gravitational wave radiation associated with the pulsating tail of the SGR 1806-20 hyperflare of December 27, 2004 using LIGO*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 76, 062003 (2007).
38. *First Cross-Correlation Analysis of Interferometric and Resonant-Bar Gravitational-Wave Data for Stochastic Backgrounds*, B. Abbott et al. (LIGO Scientific Collaboration), and ALLEGRO, Phys. Rev. D 76 (2007) 022001.
37. *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).
36. *Searching for a Stochastic Background of Gravitational Waves with LIGO*, B. Abbott et al. (LIGO Scientific Collaboration), Astrophysical Journal 659, 918 (2007).
35. *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
34. * *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)
33. * *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)
32. *Upper Limits from LIGO and TAMA Detectors on the Rate of Gravitational Wave Bursts* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D. 72, 122004 (2005)
31. *Upper Limits on a Stochastic Background of Gravitational Waves* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. Lett. 95, 221101 (2005)
30. * *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)
29. * *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)
28. *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)
27. *A Search for Gravitational Waves Associated with the Gamma Ray Burst GRB030329 Using the LIGO Detectors*, B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 72, 042002 (2005)
26. *Limits on Gravitational-Wave Emission from Selected Pulsars Using LIGO Data* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. Lett. 94, 181103 (2005)
25. *First All-sky Upper Limits from LIGO on the Strength of Periodic Gravitational Waves Using the Hough Transform* B. Abbott et al. (LIGO Scientific Collaboration), Phys. Rev. D 72, 102004 (2005)
24. *Analysis of first LIGO science data for stochastic gravitational waves* B. Abbott et al. (LIGO Scientific Collaboration) Phys. Rev. D 69, 122004 (2004)
23. *Status of LIGO data analysis* G González (for the LIGO Scientific Collaboration), Class. Quantum Grav. 21 (2004) S1575-S1583.

22. *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.
21. *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.
20. * *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)
19. *First upper limits from LIGO on gravitational wave bursts*, The LIGO Scientific Collaboration: B. Abbott et al.; *Phys. Rev. D* 69, 102001 (2004)
18. *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*, The LIGO Scientific Collaboration: B. Abbott, et al; *Phys.Rev. D*69, 082004 (2004)
17. *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)
16. *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
15. *Testing the LIGO inspiral analysis with hardware injections* Duncan A Brown (for the LIGO Scientific Collaboration) *Class. Quantum Grav.* 21 No 5 (7 March 2004) S797-S800
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).

Other publications

9. *Gravitational Wave Detectors: a new window to the Universe* Gabriela González, for the LIGO Scientific Collaboration, "Solar, Stellar and Galactic Connections between Particle Physics and Astrophysics" , Astrophysics and Space Science Proceedings, A. Carramunana, F. D. Guzmán, and T. Amtos eds, (Springer, The Netherlands, 2007); Proceedings of the IV Mexican School of Astrophysics, Morelia, Michoacán, July 18-23, 2005.
8. *Gravitational wave detectors: New eyes for physics and astronomy* Gabriela González, for the LIGO Scientific Collaboration, PRAMANA Journal of Physics, **63**(4),663-672, Oct 2004.
7. *Limiting noises in gravitational wave detectors: guidance from their statistical properties.* G. González, SPIE -The International Society for Optical Engineering- V. 5111 J. McConnell, Editor, Proceedings of the conference "Fluctuations and Noise in Photonics and Quantum Optics", June 2003.
6. *Gravitational Wave Detectors: A report from LIGO-land*, G. González, proceedings of New Developments in Gravity Conference, Chalkidiki, Greece, June 2002, World Scientific (2003).
5. *Angular Noise in Gravitational Wave Detectors*, Gabriela González, in Ninth Marcel Grossmann Proceedings, V. Gurzadyan, R. Jantzen and R. Ruffini, eds. World Scientific, p1833 (Dec 2002). Meeting held in Rome, Italy, July 2000.
4. *Development of a Double Pendulum for Gravitational Wave Detectors*, M. Beilby, G. González, M. Duffy, A. Stuver, J. Poker, in GRAVITATIONAL WAVES: Third Edoardo Amaldi Conference, S. Meshkov, ed., California Institute of Technology, Pasadena, California, AIP Conference Proceedings 523, June 2000 (gr-qc/9911027).
3. *Toward gravitational wave detection*, L.S. Finn, G. González, J. Hough, M.F. Huq, S. Mohanty, J. Romano, S. Rowan, P.R. Saulson, K.A. Strain in GRAVITATIONAL WAVES: Third Edoardo Amaldi Conference, S. Meshkov, ed., California Institute of Technology, Pasadena, California, AIP Conference Proceedings 523, June 2000 (gr-qc/9911001).
2. "Gravitational Wave Detection/Observation: Ground-based Interferometric Detectors" and "Space-based Interferometric Detectors", session summaries in Gravitation and Relativity: at the turn of the Millenium, Proceedings of GR15 International Conference on General Relativity and Gravitation, Pune, 1997 (IUCAA, Pune, India, 1998).

1. “Recent research with the LIGO Phase Noise Interferometer.” P. Fritschel, G. Gonzalez, B. Lantz, H. Rong, P. Saha, D. Shoemaker, R. Weiss, M. Zucker (MIT), S. Whitcomb (Caltech, Kellogg Lab). Nov 1996. Proceedings of the TAMA International Workshop on Gravitational Wave Detection held at National Women’s Education Centre, Saitama, Japan on November 12-14, 1996. *Gravitational Wave Detection*, Tsubono K, Fujimoto M., Kuroda K., eds., Universal Academy Press, Inc., Frontiers Science Series No. 20, 137-146 (1997).

Theses

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