

EDUCATION

Cambridge, Massachusetts
Sept. 2016 - Present

Massachusetts Institute of Technology (MIT)
Ph.D. Candidate in Mechanical Engineering, LIGO Laboratory
Major (minor): Optics, Controls and Machine Design (Aerospace Engineering)

Jouy-en-Josas, France
May 2015 – Aug. 2015

École des hautes Études Commerciales de Paris (HEC-Paris)
Certificate in Innovation Management in Aviation and Aerospace

Toulouse, France
Sept. 2014 – Sept. 2015

Paul-Sabatier University (UPS)
Master in Research (M2R), Aeronautical Mechanics

Toulouse, France
Sept. 2013 – Dec. 2015

National Higher French Institute of Aeronautics and Space (ISAE-SUPAERO)
Master of Science, Aerospace Engineering
Major (minor): Structures and Aeronautical Systems (Satellite design)

Barcelona, Spain
Sept. 2009 – Dec. 2015

Polytechnic University of Catalonia (UPC-ETSEIB)
Bachelor & Master of Science, Mechanical Engineering

MAIN RESEARCH PROJECTS

Cambridge, Massachusetts
May. 2020 - Present

FTIR Spectrometer for Virus Detection, LIGO Laboratory (MIT)
Research Assistant with Prof. Matthew Evans and Prof. Nergis Mavalvala
Design of a low-cost compact Fourier-transform spectrometer that leverages machine learning for virus detection.

- Preliminary study and validation of the multivariate analysis methodology on samples from SARS-CoV-2 patients.

Cambridge, Massachusetts
Aug. 2018 - Present

Compact Modular Quantum Source, LIGO Laboratory (MIT)
Research Assistant with Prof. Matthew Evans and Prof. Nergis Mavalvala
Design of a low loss compact source of squeezed light that is delivered as an output by the means of a high coupling efficiency fiber optic.

- Preliminary design and prototype of the source of squeezed vacuum states.

Cambridge, Massachusetts
Aug. 2015 – Aug. 2018

Vibration Isolation System for the OPO Instrument, LIGO Laboratory (MIT)
Research Assistant with Dr. Fabrice Matichard
Design of an actively damped vibration isolation system to provide seismic isolation to the in-vacuum optical parametric oscillator for the advanced LIGO project.

- Design, testing of prototype from Preliminary to Final Design Reviews.
- Testing and installation of two final units at the aLIGO observatories.

PUBLICATIONS

Selected publications

Fernández Galiana, Á., McCuller, L., Kissel, J., Barsotti, L., Miller, J., Tse, M., ... & Matichard, F. (2020). **Advanced LIGO squeezer platform for backscattered light and optical loss reduction.** *Classical and Quantum Gravity*, 37(21).

Fernández-Galiana, A., Arnbak, J., Evans, M. & Mavalvala, N. (2020). **Implementation of length control of an optical cavity using second-order transverse modes.** *Proceedings of the 2020 American Society for Precision Engineering Spring Topical Meeting (pp. 105-109).* *The American Society for Precision Engineering, Raleigh, NC, USA.*

Butters, B.* , Fernández-Galiana, A.* , Wollin, D.* , Traverso, G., Slocum, A. & Petrozza, J. (2021). **A novel deployable six-tooth grasper for laparoscopic myomectomy.** *Working for submission to Journal of Medical Devices.*

CONFERENCES

Cambridge, Massachusetts
May. 2020

2020 American Association of Precision Engineering (ASPE) Spring Topical Meeting

- Speaker at the Controls and Mechatronics session.

Las Vegas, Nevada
Nov. 2018

33th American Association of Precision Engineering (ASPE) Annual Meeting

- Speaker at the Controls and Mechatronics session and poster in poster session.

Sonoma, California
Mar. 2018

LIGO VIRGO Collaboration (LVC) Meeting

- Speaker at suspension working group session.

TEACHING EXPERIENCE

Cambridge, Massachusetts
Sept. 2018 - Present

Edgerton Center Student Machine Shop (MIT)

Edgerton shop assistant and instructor

- Instructor of the machining course to MIT graduate and undergraduate students.
- Assistant during the shop opening hours.

Cambridge, Massachusetts
Jun. 2019 - Jul. 2019

Kaufman Teaching Certificate Program

Massachusetts Institute of Technology

Barcelona, Spain
Sept. 2011 - Jun. 2015

Centro de Estudios Universitarios Superiores (CEUS)

Teacher - Mechanics, Calculus, CAD, Structures, Statistics, and Thermodynamics

- Support classes for groups of ≈ 20 ETSEIB and Institut Químic de Sarrià (IQS) students.

Barcelona, Spain
Feb. 2010 - Jun. 2013

Centro de Estudios Empresariales (CEEM)

Teacher - Mathematics and Accounting

- Support classes groups of ≈ 15 Business School (University of Barcelona) students.

AWARDS & PRIZES

2019 MIT

Co-winner of 2019 Assitive Technology Hackathon (ATHack)

2017 Fundación Princesa
de Asturias

Princesa de Asturias for Scientific and Technical Research laureate as part of the LIGO Scientific Collaboration

2010-2013 ETSEIB

ETSEIB academic record award, awarded three times

OTHER PROJECTS

Cambridge, Massachusetts
Jun. 2020 - Present

Miniature Fiber-based Stimulated Raman Scattering System, MIT+ Lincoln Lab

Design of passive dampers for the high-Q LIGO quadruple suspensions

- Presented at the Lincoln Laboratory Advanced Concepts Committee November 2020.

Cambridge, Massachusetts
Aug. 2018 - Present

BirdClaw: A Laparoscopic Grasper for Myomectomy Surgery, MechE MIT

Design of passive dampers for the high-Q LIGO quadruple suspensions

- Working on provisional patent and journal publication.

Cambridge, Massachusetts
Aug. 2018 - Present

Violin Mode Damper for the aLIGO Test Mass, LIGO Laboratory (MIT)

Design of passive dampers for the high-Q LIGO quadruple suspensions

Toulouse, France
Oct. 2013 - Jun. 2015

EntrySat Mechanical Design, DEOS department (ISAE-SUPAERO)

Cubesat for definition of atmospheric re-entry conditions

OTHER SKILLS

Languages: Spanish, Catalan (native) -- English, French (fluent) -- Greek (beginner)

Programming: MATLAB, Python, Java, C, Mathematica

Software: SolidWorks, Fusion360, CATIA, ANSYS, COMSOL, MasterCAM, Zemax

Skills: Machining (CNC mill and lathe), Welding (MIG and TIG)

Leadership: President of SPAIN@MIT (association of Spanish students of MIT)

Hobbies: Scuba-diving (PADI Open Water), Taekwondo (1st DAN black belt), Private Pilot (Passed theoretical examination, working towards practical)

SUPPLEMENTAL MATERIAL: LIST OF PUBLICATIONS

SELECTED PUBLICATIONS

Fernández Galiana, Á., McCuller, L., Kissel, J., Barsotti, L., Miller, J., Tse, M., ... & Matichard, F. (2020). **Advanced LIGO squeezer platform for backscattered light and optical loss reduction.** *Classical and Quantum Gravity*, 37(21),

Tse, M., Yu, H., Kijbunchoo, N., Fernandez-Galiana, A., Dupej, P., Barsotti, L., ... & Evans, M. (2019). **Quantum-enhanced advanced LIGO detectors in the era of gravitational-wave astronomy.** *Physical Review Letters*, 123(23), 231107.

CONFERENCE PAPERS

Fernández-Galiana, A., Arnbak, J., Evans, M. & Mavalvala, N. (2020). **Implementation of length control of an optical cavity using second-order transverse modes.** *Proceedings of the 2020 American Society for Precision Engineering Spring Topical Meeting (pp. 105-109).* The American Society for Precision Engineering, Raleigh, NC, USA

Fernández-Galiana, A. & Matichard F. (2018). **A multipurpose tabletop active vibration isolation system for Ultra High Vacuum (UHV) optical experiments.** *Proceedings of the 33rd annual meeting of the American Society for Precision Engineering (pp. 456-461).* The American Society for Precision Engineering, Raleigh, NC, USA

WORKING PAPERS

Butters, B. *, Fernández-Galiana, A. *, Wollin, D. *, Traverso, G., Slocum, A. & Petrozza, J. (2021). **A novel deployable six-tooth grasper for laparoscopic myomectomy.** *Working for submission to Journal of Medical Devices.*

Kitane, D., Loukman, S., Marchoudi, N., Fernández-Galiana, A., Bertsimas, D., ... & Fekkak, J. (2021). **A simple and fast spectroscopy-based technique for Covid-19 diagnosis.** *Working paper.*

Blevins, M. *, Fernandez-Galiana, A. * Hooper, M. * & Boriskina, S. * (2021). **Roadmap on universal photonic biosensors for real-time detection of emerging pathogens.** *Working paper.*

Fernandez-Galiana, A., Yu, H., Knyazev, E., Evans, M. and Mavalvala, N. (2021). **The compact squeezer: A compact source of squeezed vacuum states.** *Working paper.*

Fernandez-Galiana, A., Evans, M. and Mavalvala, N. (2021). **VFTIR: Study of a low-cost Fourier-transform infrared spectrometer for viral detection.** *Working paper.*

NON-PEER REVIEWED PAPERS

Armengol Urpi, A. *, Fernandez-Galiana, A. *, Johnson, H. *, Kantareddy, SNR* & Wang, Z. * (2019). **Non-invasive material characterization using systemID with temperature modulated Raman spectroscopy.** *MIT Journal of Advanced Instrumentation and Measurement - Available upon request.*

Fernandez-Galiana, A., Gangeux, D. & Garcia, R. (2015). **EntrySat satellite mechanics.** *ISAE-Supaero Internal Journal - Available upon request.*

OTHER SELECTED PUBLICATIONS

- Kijbunchoo, N., McRae, T. G., Sigg, D., Dwyer, S., Yu, H., McCuller, L., ... & McClelland, D. E. (2020). **Low phase noise squeezed vacuum for future generation gravitational wave detectors.** *Classical and Quantum Gravity*, *37*(18), 185014.
- McCuller, L., Whittle, C., Ganapathy, D., Komori, K., Tse, M., Fernandez-Galiana, A., ... & Mason, K. (2020). **Frequency-Dependent Squeezing for Advanced LIGO.** *Physical Review Letters*, *124*(17), 171102.
- LIGO Scientific Collaboration (LSC) (2017). **GW170817: observation of gravitational waves from a binary neutron star inspiral.** *Physical Review Letters*, *119*(16), 161101.
- Yu, H., McCuller, L., Tse, M., Barsotti, L., Mavalvala, N. & Detector group of The LIGO Scientific Collaboration (2020). **Quantum correlations between the light and kilogram-mass mirrors of LIGO.** *Nature*, *583* (43-47)..
- Martynov, D. V., Frolov, V. V., Kandhasamy, S., Izumi, K., Miao, H., Mavalvala, N., ... & Abbott, T. D. (2017). **Quantum correlation measurements in interferometric gravitational-wave detectors.** *Physical Review A*. *95*(4), 043831.
- Walker, M., Abbott, T. D., Aston, S. M., González, G., Macleod, D. M., McIver, J., ... & Anderson, S. B. (2017). **Effects of transients in LIGO suspensions on searches for gravitational waves.** *Review of Scientific Instruments*, *88*(12), 124501.
- LIGO Scientific Collaboration (LSC) (2017). **GW170104: observation of a 50-solar-mass binary black hole coalescence at redshift 0.2.** *Physical Review Letters*, *118*(22), 221101.
- Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., Adams, C., ... & Agatsuma, K. (2020). **GW190814: gravitational waves from the coalescence of a 23 solar mass black hole with a 2.6 solar mass compact object.** *The Astrophysical Journal Letters*, *896*(2), L44.

OTHER PUBLICATIONS

- Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., Adams, A., ... & Agathos, M. (2020). **Gravitational-wave constraints on the equatorial ellipticity of millisecond pulsars.** *The Astrophysical Journal Letters*, *902*(1), L21.
- Buikema, A., Cahillane, C., Mansell, G. L., Blair, C. D., Abbott, R., Adams, C., ... & Areeda, J. S. (2020). **Sensitivity and performance of the advanced LIGO detectors in the third observing run.** *Physical Review D*, *102*(6), 062003.
- Soni, S., Austin, C., Effler, A., Schofield, R. M. S., Gonzalez, G., Frolov, V. V., ... & Abbott, R. (2020). **Reducing scattered light in LIGO's third observing run.** *arXiv preprint arXiv:2007.14876*.
- Schwartz, E., Pele, A., Warner, J., Lantz, B., Betzwieser, J., Dooley, K. L., ... & Adams, C. (2020). **Improving the Robustness of the Advanced LIGO Detectors to Earthquakes.** *arXiv preprint arXiv:2007.12847*.
- LIGO Scientific Collaboration, & Virgo Collaboration. (2020). **GW190412: Observation of a Binary-Black-Hole Coalescence with Asymmetric Masses.** *arXiv preprint arXiv:2004.08342*.
- Hamburg, R., Fletcher, C., Burns, E., Goldstein, A., Bissaldi, E., Briggs, M. S., ... & Lesage, S. (2020). **A joint Fermi-GBM and LIGO/Virgo analysis of compact binary mergers from the first and second gravitational-wave observing runs.** *The Astrophysical Journal*, *893*(2), 100.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agatsuma, K. (2020). **Optically targeted search for gravitational waves emitted by core-collapse supernovae during the first and second observing runs of advanced LIGO and advanced Virgo.** *Physical Review D*, *101*(8), 084002.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2020). **GW190425: Observation of a compact binary coalescence with total mass $\sim 3.4 M_{\odot}$.** *The Astrophysical Journal Letters*, *892*(1), L3.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agatsuma, K. (2020). **A guide to LIGO–Virgo detector noise and extraction of transient gravitational-wave signals.** *Classical and Quantum Gravity*, *37*(5), 055002.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agatsuma, K. (2020). **Model comparison from LIGO–Virgo data on GW170817's binary components and consequences for the merger remnant.** *Classical and Quantum Gravity*, *37*(4), 045006.

- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Search for gravitational-wave signals associated with gamma-ray bursts during the second observing run of Advanced LIGO and Advanced Virgo.** *The Astrophysical Journal*, 886(1), 75.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1.** *Physical Review D*, 100(10), 104036.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Search for Subsolar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run.** *Physical review letters*, 123(16), 161102.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Affeldt, C. (2019). **Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network.** *Physical Review D*, 100(6), 064064.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Search for eccentric binary black hole mergers with Advanced LIGO and Advanced Virgo during their first and second observing runs.** *The Astrophysical Journal*, 883(2), 149.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Binary black hole population properties inferred from the first and second observing runs of advanced LIGO and advanced Virgo.** *The Astrophysical Journal Letters*, 882(2), L24.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs.** *Physical Review D*, 100(6), 062001.
- Scientific, L. I. G. O., Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., ... & Agathos, M. (2019). **Search for the isotropic stochastic background using data from Advanced LIGO's second observing run.** *Physical Review D*, 100(6), 061101.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **GWTC-1: a gravitational-wave transient catalog of compact binary mergers observed by LIGO and Virgo during the first and second observing runs.** *Physical Review X*, 9(3), 031040.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run.** *Physical Review D*, 100(2), 024017.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data.** *Physical Review D*, 100(2), 024004.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2019). **Tests of general relativity with GW170817.** *Physical review letters*, 123(1), 011102.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run.** *Physical Review D*, 99(12), 122002.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Searches for gravitational waves from known pulsars at two harmonics in 2015–2017 LIGO data.** *The Astrophysical Journal*, 879(1), 10.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run.** *Physical Review D*, 99(10), 104033.
- Soares-Santos, M., Palmese, A., Hartley, W., Annis, J., Garcia-Bellido, J., Lahav, O., ... & Pereira, M. E. S. (2019). **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.** *The Astrophysical Journal Letters*, 876(1), L7.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2019). **Search for gravitational waves from a long-lived remnant of the binary neutron star merger GW170817.** *The Astrophysical Journal*, 875(2), 160.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Low-latency gravitational-wave alerts for multimessenger astronomy during the second advanced LIGO and virgo observing run.** *The Astrophysical Journal*, 875(2), 161.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Searches for continuous gravitational waves from 15 supernova remnants and Fomalhaut b with advanced LIGO.** *The Astrophysical Journal*, 875(2), 122.

- LIGO Scientific Collaboration. (2019). **Gravitational wave astronomy with LIGO and similar detectors in the next decade.** arXiv preprint arXiv:1904.03187.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abraham, S., Acernese, F., Ackley, K., ... & Agathos, M. (2019). **Search for transient gravitational-wave signals associated with magnetar bursts during Advanced LIGO's second observing run.** *The Astrophysical Journal*, *874*(2), 163.
- Reitze, D., Abbott, R., Adams, C., Adhikari, R., Aggarwal, N., Anand, S., ... & Araya, M. (2019). **The US program in ground-based gravitational wave science: contribution from the LIGO laboratory.** *arXiv preprint arXiv:1903.04615*.
- Driggers, J. C., Vitale, S., Lundgren, A. P., Evans, M., Kawabe, K., Dwyer, S. E., ... & Fritschel, P. (2019). **Improving astrophysical parameter estimation via offline noise subtraction for Advanced LIGO.** *Physical Review D*, *99*(4), 042001.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2019). **Constraining the p-mode-g-mode tidal instability with GW170817.** *Physical review letters*, *122*(6), 061104.
- Burns, E., Goldstein, A., Hui, C. M., Blackburn, L., Briggs, M. S., Connaughton, V., ... & Bissaldi, E. (2019). **A Fermi gamma-ray burst monitor search for electromagnetic signals coincident with gravitational-wave candidates in advanced LIGO's first observing run.** *The Astrophysical Journal*, *871*(1), 90.
- Albert, A., André, M., Anghinolfi, M., Ardid, M., Aubert, J. J., Aublin, J., ... & Belhorma, B. (2019). **Search for multimessenger sources of gravitational waves and high-energy neutrinos with advanced LIGO during its first observing run, ANTARES, and IceCube.** *The Astrophysical Journal*, *870*(2), 134.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2019). **Properties of the binary neutron star merger GW170817.** *Physical Review X*, *9*(1), 011001.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **Search for Substellar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run.** *Physical review letters*, *121*(23), 231103.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abernathy, M. R., Acernese, F., Ackley, K., ... & Adya, V. B. (2018). **Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA.** *Living Reviews in Relativity*, *21*(1), 3.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **GW170817: Measurements of neutron star radii and equation of state.** *Physical review letters*, *121*(16), 161101.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **GW170814: a three-detector observation of gravitational waves from a binary black hole coalescence.** *Physical review letters*, *119*(14), 141101.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **Search for tensor, vector, and scalar polarizations in the stochastic gravitational-wave background.** *Physical review letters*, *120*(20), 201102.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **Full band all-sky search for periodic gravitational waves in the O1 LIGO data.** *Physical Review D*, *97*(10), 102003.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **Constraints on cosmic strings using data from the first Advanced LIGO observing run.** *Physical Review D*, *97*(10), 102002.
- Covas, P. B., Effler, A., Goetz, E., Meyers, P. M., Neunzert, A., Oliver, M., ... & Astone, P. (2018). **Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO.** *Physical Review D*, *97*(8), 082002.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **GW170817: implications for the stochastic gravitational-wave background from compact binary coalescences.** *Physical review letters*, *120*(9), 091101.
- Abbott, B. P., Abbott, R., Abbott, T. D., Abernathy, M. R., Acernese, F., Ackley, K., ... & Adya, V. B. (2018). **All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run.** *Classical and quantum gravity*, *35*(6), 065009.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2018). **First search for nontensorial gravitational waves from known pulsars.** *Physical review letters*, *120*(3), 031104.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data.** *Physical Review D*, *96*(12), 122006.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **GW170608: Observation of a 19 solar-mass binary black hole coalescence.** *The Astrophysical Journal Letters*, *851*(2), L35.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **First low-frequency Einstein@ Home all-sky search for continuous gravitational waves in Advanced LIGO data.** *Physical Review D*, *96*(12), 122004.

- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **Search for post-merger gravitational waves from the remnant of the binary neutron star merger GW170817.** *The Astrophysical Journal Letters*, 851(1), L16.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **On the progenitor of binary neutron star merger GW170817.** *The Astrophysical Journal Letters*, 850(2), L40.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **Estimating the contribution of dynamical ejecta in the kilonova associated with GW170817.** *The Astrophysical Journal Letters*, 850(2), L39.
- LIGO Scientific Collaboration, Virgo Collaboration, 1M2H Collaboration, Dark Energy Camera GW-EM Collaboration, DES Collaboration, DLT40 Collaboration, ... & MASTER Collaboration. (2017). **A gravitational-wave standard siren measurement of the Hubble constant.** *Nature*, 551(7678), 85-88.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **Gravitational waves and gamma-rays from a binary neutron star merger: GW170817 and GRB 170817A.** *The Astrophysical Journal Letters*, 848(2), L13.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **GW170814: a three-detector observation of gravitational waves from a binary black hole coalescence.** *Physical review letters*, 119(14), 141101.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **Upper limits on gravitational waves from Scorpius X-1 from a model-based cross-correlation search in advanced LIGO data.** *The Astrophysical Journal*, 847(1), 47.
- Abbott, B. P., Abbott, R., Abbott, T. D., Acernese, F., Ackley, K., Adams, C., ... & Affeldt, C. (2017). **All-sky search for periodic gravitational waves in the O1 LIGO data.** *Physical Review D*, 96(6), 062002.
- Albert, A., André, M., Anghinolfi, M., Anton, G., Ardid, M., Aubert, J. J., ... & Bertin, V. (2017). **Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube.** *Physical Review D*, 96(2), 022005.
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