Antonio Marquina

List of Publications by Citations

136 papers	**21,172** citations	**50** h-index	**140** g-index
140 ext. papers	**27,979** ext. citations	**5** avg, IF	**5.54** L-index

#	Paper	IF	Citations
136	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. *Physical Review Letters*, **2017**, 119, 161101	7.4	4272
135	Multi-messenger Observations of a Binary Neutron Star Merger. *Astrophysical Journal Letters*, **2017**, 848, L12	7.9	1935
134	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. *Astrophysical Journal Letters*, **2017**, 848, L13	7.9	1614
133	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. *Physical Review Letters*, **2017**, 119, 141101	7.4	1270
132	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*, **2019**, 9,	9.1	1169
131	GW170817: Measurements of Neutron Star Radii and Equation of State. *Physical Review Letters*, **2018**, 121, 161101	7.4	867
130	GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence. *Astrophysical Journal Letters*, **2017**, 851, L35	7.9	809
129	GW190425: Observation of a Compact Binary Coalescence with Total Mass ~ 3.4 M ?. *Astrophysical Journal Letters*, **2020**, 892, L3	7.9	591
128	GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object. *Astrophysical Journal Letters*, **2020**, 896, L44	7.9	571
127	High-Order Total Variation-Based Image Restoration. *SIAM Journal of Scientific Computing*, **2000**, 22, 503-516	2.6	499
126	Properties of the Binary Neutron Star Merger GW170817. *Physical Review X*, **2019**, 9,	9.1	423
125	GW190521: A Binary Black Hole Merger with a Total Mass of 150 $M_{?}$. *Physical Review Letters*, **2020**, 125, 101102	7.4	420
124	A gravitational-wave standard siren measurement of the Hubble constant. *Nature*, **2017**, 551, 85-88	50.4	413
123	Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo. *Astrophysical Journal Letters*, **2019**, 882, L24	7.9	381
122	Image Super-Resolution by TV-Regularization and Bregman Iteration. *Journal of Scientific Computing*, **2008**, 37, 367-382	2.3	340
121	GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run. *Physical Review X*, **2021**, 11,	9.1	311
120	Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1. *Physical Review D*, **2019**, 100,	4.9	258

119	Properties and Astrophysical Implications of the 150 M ? Binary Black Hole Merger GW190521. *Astrophysical Journal Letters*, **2020**, 900, L13	7.9	207
118	Tests of General Relativity with GW170817. *Physical Review Letters*, **2019**, 123, 011102	7.4	204
117	Capturing Shock Reflections: An Improved Flux Formula. *Journal of Computational Physics*, **1996**, 125, 42-58	4.1	201
116	Population Properties of Compact Objects from the Second LIGO Virgo Gravitational-Wave Transient Catalog. *Astrophysical Journal Letters*, **2021**, 913, L7	7.9	194
115	Morphology and Dynamics of Relativistic Jets. *Astrophysical Journal*, **1997**, 479, 151-163	4.7	181
114	Explicit Algorithms for a New Time Dependent Model Based on Level Set Motion for Nonlinear Deblurring and Noise Removal. *SIAM Journal of Scientific Computing*, **2000**, 22, 387-405	2.6	173
113	Recurrence relations for rational cubic methods II: The Chebyshev method. *Computing (Vienna/New York)*, **1990**, 45, 355-367	2.2	145
112	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. *Living Reviews in Relativity*, **2020**, 23, 3	32.5	144
111	Recurrence relations for rational cubic methods I: The Halley method. *Computing (Vienna/New York)* , **1990**, 44, 169-184	2.2	142
110	Observation of Gravitational Waves from Two Neutron Star Black Hole Coalescences. *Astrophysical Journal Letters*, **2021**, 915, L5	7.9	142
109	Increasing the Astrophysical Reach of the Advanced Virgo Detector via the Application of Squeezed Vacuum States of Light. *Physical Review Letters*, **2019**, 123, 231108	7.4	134
108	Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817. *Astrophysical Journal Letters*, **2017**, 851, L16	7.9	133
107	Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817. *Astrophysical Journal Letters*, **2017**, 850, L39	7.9	127
106	GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences. *Physical Review Letters*, **2018**, 120, 091101	7.4	120
105	Search for the isotropic stochastic background using data from Advanced LIGO s second observing run. *Physical Review D*, **2019**, 100,	4.9	117
104	Local Piecewise Hyperbolic Reconstruction of Numerical Fluxes for Nonlinear Scalar Conservation Laws. *SIAM Journal of Scientific Computing*, **1994**, 15, 892-915	2.6	111
103	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. *Astrophysical Journal Letters*, **2017**, 850, L35	7.9	104
102	A Flux-Split Algorithm Applied to Relativistic Flows. *Journal of Computational Physics*, **1998**, 146, 58-81	4.1	99

101	A flux-split algorithm applied to conservative models for multicomponent compressible flows. *Journal of Computational Physics*, **2003**, 185, 120-138	4.1	92
100	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. *Astrophysical Journal Letters*, **2019**, 876, L7	7.9	91
99	All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data. *Physical Review D*, **2019**, 100,	4.9	81
98	Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog. *Physical Review D*, **2021**, 103,	4.9	81
97	Power ENO methods: a fifth-order accurate Weighted Power ENO method. *Journal of Computational Physics*, **2004**, 194, 632-658	4.1	80
96	An Isobaric Fix for the Overheating Problem in Multimaterial Compressible Flows. *Journal of Computational Physics*, **1999**, 148, 545-578	4.1	80
95	A guide to LIGO Virgo detector noise and extraction of transient gravitational-wave signals. *Classical and Quantum Gravity*, **2020**, 37, 055002	3.3	78
94	A Standard Siren Measurement of the Hubble Constant from GW170817 without the Electromagnetic Counterpart. *Astrophysical Journal Letters*, **2019**, 871, L13	7.9	77
93	Neurochemical correlates of rapid treatment response to electroconvulsive therapy in patients with major depression. *Journal of Psychiatry and Neuroscience*, **2017**, 42, 6-16	4.5	77
92	Model comparison from LIGO Virgo data on GW170817 s binary components and consequences for the merger remnant. *Classical and Quantum Gravity*, **2020**, 37, 045006	3.3	69
91	Search for Subsolar Mass Ultracompact Binaries in Advanced LIGO's Second Observing Run. *Physical Review Letters*, **2019**, 123, 161102	7.4	68
90	Blind deconvolution using TV regularization and Bregman iteration. *International Journal of Imaging Systems and Technology*, **2005**, 15, 74-83	2.5	64
89	Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015 2017 LIGO Data. *Astrophysical Journal*, **2019**, 879, 10	4.7	63
88	Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817. *Astrophysical Journal*, **2019**, 875, 160	4.7	60
87	Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background. *Physical Review Letters*, **2018**, 120, 201102	7.4	60
86	On the Progenitor of Binary Neutron Star Merger GW170817. *Astrophysical Journal Letters*, **2017**, 850, L40	7.9	50
85	Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run. *Astrophysical Journal*, **2019**, 875, 161	4.7	49
84	Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run. *Physical Review Letters*, **2018**, 121, 231103	7.4	49

83	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. *Astrophysical Journal*, **2021**, 909, 218	4.7	46
82	Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO. *Astrophysical Journal*, **2019**, 875, 122	4.7	45
81	Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run. *Physical Review D*, **2019**, 99,	4.9	43
80	All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run. *Physical Review D*, **2019**, 100,	4.9	39
79	Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network. *Physical Review D*, **2019**, 100,	4.9	39
78	First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data. *Physical Review D*, **2017**, 96,	4.9	39
77	Full band all-sky search for periodic gravitational waves in the O1 LIGO data. *Physical Review D*, **2018**, 97,	4.9	37
76	Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs. *Astrophysical Journal*, **2019**, 883, 149	4.7	36
75	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*, **2020**, 101,	4.9	36
74	Calibration of advanced Virgo and reconstruction of the gravitational wave signal h (t) during the observing run O2. *Classical and Quantum Gravity*, **2018**, 35, 205004	3.3	35
73	Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run. *Physical Review D*, **2021**, 104,	4.9	33
72	Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs. *Physical Review D*, **2019**, 100,	4.9	31
71	Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model. *Physical Review D*, **2019**, 100,	4.9	31
70	Approximate Osher-Solomon schemes for hyperbolic systems. *Applied Mathematics and Computation*, **2016**, 272, 347-368	2.7	26
69	Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube. *Astrophysical Journal*, **2019**, 870, 134	4.7	23
68	Neutron star collapse and gravitational waves with a non-convex equation of state. *Monthly Notices of the Royal Astronomical Society*, **2019**, 484, 4980-5008	4.3	22
67	A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run. *Astrophysical Journal*, **2019**, 871, 90	4.7	22
66	Constraining the p-Mode-g-Mode Tidal Instability with GW170817. *Physical Review Letters*, **2019**, 122, 061104	7.4	22

65	A Class of Incomplete Riemann Solvers Based on Uniform Rational Approximations to the Absolute Value Function. *Journal of Scientific Computing*, **2014**, 60, 363-389	2.3	21
64	Nonlinear Inverse Scale Space Methods for Total Variation Blind Deconvolution. *SIAM Journal on Imaging Sciences*, **2009**, 2, 64-83	1.9	21
63	Constraints on Cosmic Strings Using Data from the Third Advanced LIGO-Virgo Observing Run. *Physical Review Letters*, **2021**, 126, 241102	7.4	21
62	Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo. *Astrophysical Journal*, **2019**, 886, 75	4.7	21
61	Denoising of gravitational wave signals via dictionary learning algorithms. *Physical Review D*, **2016**, 94,	4.9	18
60	All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run. *Physical Review D*, **2019**, 99,	4.9	17
59	Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run. *Astrophysical Journal*, **2019**, 874, 163	4.7	17
58	Quantum Backaction on kg-Scale Mirrors: Observation of Radiation Pressure Noise in the Advanced Virgo Detector. *Physical Review Letters*, **2020**, 125, 131101	7.4	17
57	Capturing shock waves in inelastic granular gases. *Journal of Computational Physics*, **2005**, 209, 787-795	4.1	16
56	Total-variation-based methods for gravitational wave denoising. *Physical Review D*, **2014**, 90,	4.9	15
55	All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data. *Physical Review D*, **2021**, 104,	4.9	15
54	All-sky search in early O3 LIGO data for continuous gravitational-wave signals from unknown neutron stars in binary systems. *Physical Review D*, **2021**, 103,	4.9	15
53	Barrelledness conditions on C 0 (E). *Archiv Der Mathematik*, **1978**, 31, 589-596	0.4	13
52	Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910. *Astrophysical Journal Letters*, **2021**, 913, L27	7.9	13
51	A New Time Dependent Model Based on Level Set Motion for Nonlinear Deblurring and Noise Removal. *Lecture Notes in Computer Science*, **1999**, 429-434	0.9	13
50	MRI RESOLUTION ENHANCEMENT USING TOTAL VARIATION REGULARIZATION **2009**, 2009, 161-164	1.5	12
49	Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs. *Physical Review D*, **2021**, 104,	4.9	12
48	Diffusion front capturing schemes for a class of Fokker‐Planck equations: Application to the relativistic heat equation. *Journal of Computational Physics*, **2010**, 229, 2659-2674	4.1	11

47	A local spectral inversion of a linearized TV model for denoising and deblurring. *IEEE Transactions on Image Processing*, **2003**, 12, 808-16	8.7	11
46	Application of dictionary learning to denoise LIGO's blip noise transients. *Physical Review D*, **2020**, 102,	4.9	11
45	Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo. *Astrophysical Journal*, **2021**, 921, 80	4.7	10
44	Total-variation methods for gravitational-wave denoising: Performance tests on Advanced LIGO data. *Physical Review D*, **2018**, 98,	4.9	10
43	Classification of gravitational-wave glitches via dictionary learning. *Classical and Quantum Gravity*, **2019**, 36, 075005	3.3	9
42	A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs. *Astrophysical Journal*, **2020**, 893, 100	4.7	9
41	Advanced Virgo Status. *Journal of Physics: Conference Series*, **2020**, 1342, 012010	0.3	8
40	Anomalous wave structure in magnetized materials described by non-convex equations of state. *Physics of Fluids*, **2014**, 26, 016101	4.4	8
39	Constraints from LIGO O3 Data on Gravitational-wave Emission Due to R-modes in the Glitching Pulsar PSR J0537-6910. *Astrophysical Journal*, **2021**, 922, 71	4.7	8
38	Equilibrium real gas computations using Marquina's scheme. *International Journal for Numerical Methods in Fluids*, **2003**, 41, 275-301	1.9	7
37	The advanced Virgo longitudinal control system for the O2 observing run. *Astroparticle Physics*, **2020**, 116, 102386	2.4	7
36	Variational multiframe restoration of images degraded by noisy (stochastic) blur kernels. *Journal of Computational and Applied Mathematics*, **2013**, 240, 123-134	2.4	6
35	The convergence of the perturbed Newton method and its application for ill-conditioned problems. *Applied Mathematics and Computation*, **2011**, 218, 2988-3001	2.7	6
34	Capturing blast waves in granular flow. *Computers and Fluids*, **2007**, 36, 1364-1372	2.8	6
33	Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO-Virgo Run O3a. *Astrophysical Journal*, **2021**, 915, 86	4.7	6
32	Shooting Methods for One-Dimensional Diffusion-Absorption Problems. *SIAM Journal on Numerical Analysis*, **1994**, 31, 572-589	2.4	5
31	Jacobian-free approximate solvers for hyperbolic systems: Application to relativistic magnetohydrodynamics. *Computer Physics Communications*, **2017**, 219, 108-120	4.2	4
30	Denoising of MR spectroscopy signals using total variation and iterative Gauss-Seidel gradient updates **2015**,		4

29	Multiframe image restoration in the presence of noisy blur kernel **2009**,		4
28	All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. *Physical Review D*, **2021**, 104,	4.9	4
27	Status of Advanced Virgo. *EPJ Web of Conferences*, **2018**, 182, 02003	0.3	4
26	Anomalous dynamics triggered by a non-convex equation of state in relativistic flows. *Monthly Notices of the Royal Astronomical Society*, **2018**, 476, 1100-1110	4.3	4
25	Search for Lensing Signatures in the Gravitational-Wave Observations from the First Half of LIGO Virgo's Third Observing Run. *Astrophysical Journal*, **2021**, 923, 14	4.7	4
24	Wavelength selection of rippling patterns in myxobacteria. *Physical Review E*, **2016**, 93, 012412	2.4	3
23	FAST EDGE-FILTERED IMAGE UPSAMPLING. *Proceedings International Conference on Image Processing*, **2011**, 1165-1168	1.6	3
22	A note on the Bregmanized Total Variation and dual forms **2009**,		3
21	A note on the closed graph theorem. *Archiv Der Mathematik*, **1977**, 28, 82-85	0.4	3
20	Edge-Enhanced Image Reconstruction Using (TV) Total Variation and Bregman Refinement. *Lecture Notes in Computer Science*, **2009**, 389-400	0.9	3
19	Fronts propagating with signal dependent speed in limited diffusion and related Hamilton Jacobi formulations. *Applied Numerical Mathematics*, **2013**, 73, 48-62	2.5	2
18	Shooting methods for 1D steady-state free boundary problems. *Computers and Mathematics With Applications*, **1993**, 25, 39-46	2.7	2
17	Geometric Series in Incomplete Normed Algebras. *American Mathematical Monthly*, **1984**, 91, 49	0.3	2
16	Calibration of advanced Virgo and reconstruction of the detector strain h(t) during the observing run O3. *Classical and Quantum Gravity*, **2022**, 39, 045006	3.3	2
15	Capturing Composite Waves in Non-convex Special Relativistic Hydrodynamics. *Journal of Scientific Computing*, **2019**, 81, 2132-2161	2.3	1
14	On the Numerical Approximation of the Length of (Implicit) Level Curves. *Journal of Scientific Computing*, **2008**, 35, 99-113	2.3	1
13	On quasibarrelled spaces. *Manuscripta Mathematica*, **1974**, 12, 387-398	0.5	1
12	All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run. *Physical Review D*, **2021**, 104,	4.9	1

List of Publications

11	Afternotes on PHM: Harmonic ENO Methods **2003**, 717-725		1
10	Split Bregman Method for Gravitational Wave Denoising. *Thirty Years of Astronomical Discovery With UKIRT*, **2015**, 289-294	0.3	1
9	A time evolution model for total-variation based blind deconvolution. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 1042301-1042302	0.2	
8	Shock-capturing schemes: high accuracy versus total-variation boundedness. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 1024101-1024102	0.2	
7	Computation of travelling wave solutions of scalar conservation laws with a stiff source term. *Computers and Fluids*, **2003**, 32, 1161-1178	2.8	
6	The Numerical Simulation of Relativistic Fluid Flow with Strong Shocks **2001**, 577-594		
5	Computing Strong Shocks in Ultrarelativistic Flows: A Robust Alternative **1999**, 243-251		
4	Approximate Osher-Solomon Schemes for Hyperbolic Systems. *SEMA SIMAI Springer Series*, **2016**, 1-16	0.2	
3	New Types of Jacobian-Free Approximate Riemann Solvers for Hyperbolic Systems. *Springer Proceedings in Mathematics and Statistics*, **2017**, 23-31	0.2	
2	Incomplete Riemann Solvers Based on Functional Approximations to the Absolute Value Function. *SEMA SIMAI Springer Series*, **2021**, 3-27	0.2	
1	Jacobian-Free Incomplete Riemann Solvers. *Springer Proceedings in Mathematics and Statistics*, **2018**, 295-307	0.2	