Tim Dietrich

List of Publications by Year
in descending order

88	5,934	71102 41	71685 76
papers	citations	h-index	g-index

88	88	88	4239
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. Living Reviews in Relativity, 2020, 23, 3.	26.7	447
2	A MHz-repetition-rate hard X-ray free-electron laser driven by a superconducting linear accelerator. Nature Photonics, 2020, 14, 391-397.	31.4	315
3	Increasing the Astrophysical Reach of the Advanced Virgo Detector via the Application of Squeezed Vacuum States of Light. Physical Review Letters, 2019, 123, 231108.	7.8	254
4	Multimessenger constraints on the neutron-star equation of state and the Hubble constant. Science, 2020, 370, 1450-1453.	12.6	239
5	Multipolar effective-one-body waveforms for precessing binary black holes: Construction and validation. Physical Review D, 2020, 102, .	4.7	182
6	Modeling the Complete Gravitational Wave Spectrum of Neutron Star Mergers. Physical Review Letters, 2015, 115, 091101.	7.8	174
7	Time-domain effective-one-body gravitational waveforms for coalescing compact binaries with nonprecessing spins, tides, and self-spin effects. Physical Review D, 2018, 98, .	4.7	168
8	Modeling the Dynamics of Tidally Interacting Binary Neutron Stars up to the Merger. Physical Review Letters, 2015, 114, 161103.	7.8	167
9	Closed-form tidal approximants for binary neutron star gravitational waveforms constructed from high-resolution numerical relativity simulations. Physical Review D, 2017, 96, .	4.7	166
10	Multimessenger Bayesian parameter inference of a binary neutron star merger. Monthly Notices of the Royal Astronomical Society: Letters, 2019, 489, L91-L96.	3.3	163
11	Constraints on the neutron star equation of state from AT2017gfo using radiative transfer simulations. Monthly Notices of the Royal Astronomical Society, 2018, 480, 3871-3878.	4.4	157
12	A Standard Siren Measurement of the Hubble Constant from GW170817 without the Electromagnetic Counterpart. Astrophysical Journal Letters, 2019, 871, L13.	8.3	145
13	Matter imprints in waveform models for neutron star binaries: Tidal and self-spin effects. Physical Review D, 2019, 99, .	4.7	144
14	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. Astrophysical Journal, 2021, 909, 218.	4.5	144
15	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the mass ratio. Physical Review D, 2017, 95, .	4.7	138
16	Improving the NRTidal model for binary neutron star systems. Physical Review D, 2019, 100, .	4.7	119
17	Modeling dynamical ejecta from binary neutron star mergers and implications for electromagnetic counterparts. Classical and Quantum Gravity, 2017, 34, 105014.	4.0	117
18	Constraining neutron-star matter with microscopic and macroscopic collisions. Nature, 2022, 606, 276-280.	27.8	112

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19	Numerical relativity simulations of neutron star merger remnants using conservative mesh refinement. Physical Review D, 2015, 91, .	4.7	105
20	Mergers of binary neutron stars with realistic spin. Physical Review D, 2014, 89, .	4.7	99
21	Quasiuniversal Properties of Neutron Star Mergers. Physical Review Letters, 2014, 112, .	7.8	93
22	Binary neutron stars with generic spin, eccentricity, mass ratio, and compactness: Quasi-equilibrium sequences and first evolutions. Physical Review D, 2015, 92, .	4.7	85
23	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the starsâ€™ rotation. Physical Review D, 2017, 95, .	4.7	81
24	<tt>CoRe</tt> database of binary neutron star merger waveforms. Classical and Quantum Gravity, 2018, 35, 24LT01.	4.0	81
25	On the Nature of GW190814 and Its Impact on the Understanding of Supranuclear Matter. Astrophysical Journal Letters, 2021, 908, L1.	8.3	80
26	Gravitational-Wave Luminosity of Binary Neutron Stars Mergers. Physical Review Letters, 2018, 120, 111101.	7.8	76
27	Nuclear Physics Multimessenger Astrophysics Constraints on the Neutron Star Equation of State: Adding NICERâ€™s PSR J0740+6620 Measurement. Astrophysical Journal, 2021, 922, 14.	4.5	75
28	Implications of the search for optical counterparts during the first six months of the Advanced LIGOâ€™s and Advanced Virgoâ€™s third observing run: possible limits on the ejecta mass and binary properties. Monthly Notices of the Royal Astronomical Society, 2020, 492, 863-876.	4.4	71
29	Discovery and confirmation of the shortest gamma-ray burst from a collapsar. Nature Astronomy, 2021, 5, 917-927.	10.1	69
30	Interpreting binary neutron star mergers: describing the binary neutron star dynamics, modelling gravitational waveforms, and analyzing detections. General Relativity and Gravitation, 2021, 53, 1.	2.0	67
31	GRANDMA observations of advanced LIGOâ€™s and advanced Virgoâ€™s third observational campaign. Monthly Notices of the Royal Astronomical Society, 2020, 497, 5518-5539.	4.4	63
32	Modeling the gravitational wave signature of neutron star black hole coalescences. Physical Review D, 2020, 101, .	4.7	61
33	Gravitational waveforms from binary neutron star mergers with high-order weighted-essentially-nonoscillatory schemes in numerical relativity. Physical Review D, 2016, 94, .	4.7	58
34	A luminosity distribution for kilonovae based on short gamma-ray burst afterglows. Monthly Notices of the Royal Astronomical Society, 2019, 486, 672-690.	4.4	56
35	Data-driven Expectations for Electromagnetic Counterpart Searches Based on LIGO/Virgo Public Alerts. Astrophysical Journal, 2022, 924, 54.	4.5	56
36	Modeling the postmerger gravitational wave signal and extracting binary properties from future binary neutron star detections. Physical Review D, 2019, 100, .	4.7	53

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37	The first six months of the Advanced LIGOâ€™s and Advanced Virgoâ€™s third observing run with GRANDMA. Monthly Notices of the Royal Astronomical Society, 2020, 492, 3904-3927.	4.4	53
38	Aligned-spin neutron-starâ€“black-hole waveform model based on the effective-one-body approach and numerical-relativity simulations. Physical Review D, 2020, 102, .	4.7	51
39	Comprehensive comparison of numerical relativity and effective-one-body results to inform improvements in waveform models for binary neutron star systems. Physical Review D, 2017, 95, .	4.7	47
40	Relevance of tidal effects and post-merger dynamics for binary neutron star parameter estimation. Physical Review D, 2018, 98, .	4.7	46
41	Fast-transient Searches in Real Time with ZTFReST: Identification of Three Optically Discovered Gamma-Ray Burst Afterglows and New Constraints on the Kilonova Rate. Astrophysical Journal, 2021, 918, 63.	4.5	42
42	Simulations of inspiraling and merging double neutron stars using the Spectral Einstein Code. Physical Review D, 2016, 93, .	4.7	39
43	Implications of the search for optical counterparts during the second part of the Advanced LIGOâ€™s and Advanced Virgoâ€™s third observing run: lessons learned for future follow-up observations. Monthly Notices of the Royal Astronomical Society, 2020, 497, 1181-1196.	4.4	39
44	Axion star collisions with black holes and neutron stars in full 3D numerical relativity. Physical Review D, 2018, 98, .	4.7	38
45	Can a black holeâ€“neutron star merger explain GW170817, AT2017gfo, and GRB170817A?. Physical Review D, 2019, 100, .	4.7	38
46	Waveform systematics for binary neutron star gravitational wave signals: Effects of the point-particle baseline and tidal descriptions. Physical Review D, 2018, 98, .	4.7	37
47	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of large eccentricities. Physical Review D, 2018, 98, .	4.7	36
48	Quantum Backaction on Kg-Scale Mirrors: Observation of Radiation Pressure Noise in the Advanced Virgo Detector. Physical Review Letters, 2020, 125, 131101.	7.8	35
49	Measuring the Hubble constant with a sample of kilonovae. Nature Communications, 2020, 11, 4129.	12.8	35
50	Spin effects on neutron star fundamental-mode dynamical tides: Phenomenology and comparison to numerical simulations. Physical Review Research, 2021, 3, .	3.6	35
51	Standardizing kilonovae and their use as standard candles to measure the Hubble constant. Physical Review Research, 2020, 2, .	3.6	35
52	The Challenges Ahead for Multimessenger Analyses of Gravitational Waves and Kilonova: A Case Study on GW190425. Astrophysical Journal, 2021, 922, 269.	4.5	35
53	Comparing inclination-dependent analyses of kilonova transients. Monthly Notices of the Royal Astronomical Society, 2021, 502, 3057-3065.	4.4	34
54	Collapse of nonlinear gravitational waves in moving-puncture coordinates. Physical Review D, 2013, 88, .	4.7	33

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55	Toward Rapid Transient Identification and Characterization of Kilonovae. Astrophysical Journal, 2017, 849, 12.	4.5	33
56	Solving 3D relativistic hydrodynamical problems with weighted essentially nonoscillatory discontinuous Galerkin methods. Physical Review D, 2016, 94, .	4.7	29
57	Numerical relativity simulations of precessing binary neutron star mergers. Physical Review D, 2018, 97, .	4.7	29
58	Neutron starâ€“axion star collisions in the light of multimessenger astronomy. Monthly Notices of the Royal Astronomical Society, 2019, 483, 908-914.	4.4	29
59	Distinguishing high-mass binary neutron stars from binary black holes with second- and third-generation gravitational wave observatories. Physical Review D, 2020, 101, .	4.7	27
60	Lensed or not lensed: determining lensing magnifications for binary neutron star mergers from a single detection. Monthly Notices of the Royal Astronomical Society, 2020, 495, 3740-3750.	4.4	26
61	Biases in parameter estimation from overlapping gravitational-wave signals in the third-generation detector era. Physical Review D, 2021, 104, .	4.7	25
62	Constructing binary neutron star initial data with high spins, high compactnesses, and high mass ratios. Physical Review D, 2019, 100, .	4.7	23
63	Waveform systematics for binary neutron star gravitational wave signals: Effects of spin, precession, and the observation of electromagnetic counterparts. Physical Review D, 2019, 100, .	4.7	23
64	Rotating neutron stars with nonbarotropic thermal profile. Physical Review D, 2019, 100, .	4.7	22
65	Simulations of rotating neutron star collapse with the puncture gauge: End state and gravitational waveforms. Physical Review D, 2015, 91, .	4.7	21
66	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. Progress of Theoretical and Experimental Physics, 2022, 2022, .	6.6	20
67	Full 3D numerical relativity simulations of neutron starâ€“boson star collisions with BAM. Classical and Quantum Gravity, 2019, 36, 025002.	4.0	19
68	Parameter estimation for strong phase transitions in supranuclear matter using gravitational-wave astronomy. Physical Review Research, 2020, 2, .	3.6	19
69	Mapping the Universe Expansion: Enabling Percent-level Measurements of the Hubble Constant with a Single Binary Neutron-star Merger Detection. Astrophysical Journal Letters, 2021, 912, L10.	8.3	17
70	Simulating Binary Neutron Stars with Hybrid Equation of States: Gravitational Waves, Electromagnetic Signatures and Challenges for Numerical Relativity. Particles, 2019, 2, 365-384.	1.7	16
71	Axisymmetric models for neutron star merger remnants with realistic thermal and rotational profiles. Physical Review D, 2021, 103, .	4.7	16
72	Optimizing serendipitous detections of kilonovae: cadence and filter selection. Monthly Notices of the Royal Astronomical Society, 2021, 504, 2822-2831.	4.4	16

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73	Cooling binary neutron star remnants via nucleon-nucleon-axion bremsstrahlung. Physical Review D, 2019, 100, .	4.7	15
74	Multi-Messenger Constraints on the Hubble Constant through Combination of Gravitational Waves, Gamma-Ray Bursts and Kilonovae from Neutron Star Mergers. Universe, 2022, 8, 289.	2.5	13
75	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the spin orientation. Physical Review D, 2020, 102, .	4.7	12
76	Optimizing Cadences with Realistic Light-curve Filtering for Serendipitous Kilonova Discovery with Vera Rubin Observatory. Astrophysical Journal, Supplement Series, 2022, 258, 5.	7.7	12
77	Quantifying modeling uncertainties when combining multiple gravitational-wave detections from binary neutron star sources. Physical Review D, 2022, 105, .	4.7	12
78	Disc formation in the collapse of supramassive neutron stars. Monthly Notices of the Royal Astronomical Society, 2018, 480, 5272-5285.	4.4	11
79	The advanced Virgo longitudinal control system for the O2 observing run. Astroparticle Physics, 2020, 116, 102386.	4.3	9
80	Increasing the accuracy of binary neutron star simulations with an improved vacuum treatment. Physical Review D, 2020, 102, .	4.7	9
81	Predicting electromagnetic counterparts using low-latency gravitational-wave data products. Monthly Notices of the Royal Astronomical Society, 2021, 505, 4235-4248.	4.4	9
82	Spinning black hole in the puncture method: Numerical experiments. Journal of Physics: Conference Series, 2014, 490, 012155.	0.4	7
83	High-Resolution Numerical Relativity Simulations of Spinning Binary Neutron Star Mergers. , 2018, , .		6
84	Constructing Love-Q relations with gravitational wave detections. Physical Review D, 2020, 101, .	4.7	6
85	Black hole-neutron star simulations with the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="sans-serif">BAM</mml:mi></mml:math> code: First tests and simulations. Physical Review D, 2021, 104, .	4.7	5
86	The use of hypermodels to understand binary neutron star collisions. Nature Astronomy, 2022, 6, 961-967.	10.1	5
87	Incorporating a Radiative Hydrodynamics Scheme in the Numerical-Relativity Code BAM. Universe, 2022, 8, 370.	2.5	3
88	High-accuracy simulations of highly spinning binary neutron star systems. Physical Review D, 2022, 105, .	4.7	2