

# Tim Dietrich

## List of Publications by Year in descending order

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Version: 2024-02-01

88  
papers

5,934  
citations

71102

41  
h-index

71685

76  
g-index

88  
all docs

88  
docs citations

88  
times ranked

4239  
citing authors

#	ARTICLE	IF	CITATIONS
1	Data-driven Expectations for Electromagnetic Counterpart Searches Based on LIGO/Virgo Public Alerts. <i>Astrophysical Journal</i> , 2022, 924, 54.	4.5	56
2	Optimizing Cadences with Realistic Light-curve Filtering for Serendipitous Kilonova Discovery with Vera Rubin Observatory. <i>Astrophysical Journal, Supplement Series</i> , 2022, 258, 5.	7.7	12
3	Quantifying modeling uncertainties when combining multiple gravitational-wave detections from binary neutron star sources. <i>Physical Review D</i> , 2022, 105, .	4.7	12
4	High-accuracy simulations of highly spinning binary neutron star systems. <i>Physical Review D</i> , 2022, 105, .	4.7	2
5	First joint observation by the underground gravitational-wave detector KAGRA with GEO 600. <i>Progress of Theoretical and Experimental Physics</i> , 2022, 2022, .	6.6	20
6	Multi-Messenger Constraints on the Hubble Constant through Combination of Gravitational Waves, Gamma-Ray Bursts and Kilonovae from Neutron Star Mergers. <i>Universe</i> , 2022, 8, 289.	2.5	13
7	Constraining neutron-star matter with microscopic and macroscopic collisions. <i>Nature</i> , 2022, 606, 276-280.	27.8	112
8	The use of hypermodels to understand binary neutron star collisions. <i>Nature Astronomy</i> , 2022, 6, 961-967.	10.1	5
9	Incorporating a Radiative Hydrodynamics Scheme in the Numerical-Relativity Code BAM. <i>Universe</i> , 2022, 8, 370.	2.5	3
10	Comparing inclination-dependent analyses of kilonova transients. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 502, 3057-3065.	4.4	34
11	On the Nature of GW190814 and Its Impact on the Understanding of Supranuclear Matter. <i>Astrophysical Journal Letters</i> , 2021, 908, L1.	8.3	80
12	A Gravitational-wave Measurement of the Hubble Constant Following the Second Observing Run of Advanced LIGO and Virgo. <i>Astrophysical Journal</i> , 2021, 909, 218.	4.5	144
13	Axisymmetric models for neutron star merger remnants with realistic thermal and rotational profiles. <i>Physical Review D</i> , 2021, 103, .	4.7	16
14	Interpreting binary neutron star mergers: describing the binary neutron star dynamics, modelling gravitational waveforms, and analyzing detections. <i>General Relativity and Gravitation</i> , 2021, 53, 1.	2.0	67
15	Optimizing serendipitous detections of kilonovae: cadence and filter selection. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 504, 2822-2831.	4.4	16
16	Mapping the Universe Expansion: Enabling Percent-level Measurements of the Hubble Constant with a Single Binary Neutron-star Merger Detection. <i>Astrophysical Journal Letters</i> , 2021, 912, L10.	8.3	17
17	Predicting electromagnetic counterparts using low-latency gravitational-wave data products. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 4235-4248.	4.4	9
18	Discovery and confirmation of the shortest gamma-ray burst from a collapsar. <i>Nature Astronomy</i> , 2021, 5, 917-927.	10.1	69

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19	Biases in parameter estimation from overlapping gravitational-wave signals in the third-generation detector era. <i>Physical Review D</i> , 2021, 104, .	4.7	25
20	Spin effects on neutron star fundamental-mode dynamical tides: Phenomenology and comparison to numerical simulations. <i>Physical Review Research</i> , 2021, 3, .	3.6	35
21	Fast-transient Searches in Real Time with ZTFReST: Identification of Three Optically Discovered Gamma-Ray Burst Afterglows and New Constraints on the Kilonova Rate. <i>Astrophysical Journal</i> , 2021, 918, 63.	4.5	42
22	Black hole-neutron star simulations with the $\text{BAM}$ code: First tests and simulations. <i>Physical Review D</i> , 2021, 104, .	4.7	5
23	Nuclear Physics Multimessenger Astrophysics Constraints on the Neutron Star Equation of State: Adding NICER's PSR J0740+6620 Measurement. <i>Astrophysical Journal</i> , 2021, 922, 14.	4.5	75
24	The Challenges Ahead for Multimessenger Analyses of Gravitational Waves and Kilonova: A Case Study on GW190425. <i>Astrophysical Journal</i> , 2021, 922, 269.	4.5	35
25	The advanced Virgo longitudinal control system for the O2 observing run. <i>Astroparticle Physics</i> , 2020, 116, 102386.	4.3	9
26	The first six months of the Advanced LIGO's and Advanced Virgo's third observing run with GRANDMA. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 492, 3904-3927.	4.4	53
27	Aligned-spin neutron-star "black-hole" waveform model based on the effective-one-body approach and numerical-relativity simulations. <i>Physical Review D</i> , 2020, 102, .	4.7	51
28	GRANDMA observations of advanced LIGO's and advanced Virgo's third observational campaign. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 497, 5518-5539.	4.4	63
29	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. <i>Living Reviews in Relativity</i> , 2020, 23, 3.	26.7	447
30	Implications of the search for optical counterparts during the second part of the Advanced LIGO's and Advanced Virgo's third observing run: lessons learned for future follow-up observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 497, 1181-1196.	4.4	39
31	Quantum Backaction on Kg-Scale Mirrors: Observation of Radiation Pressure Noise in the Advanced Virgo Detector. <i>Physical Review Letters</i> , 2020, 125, 131101.	7.8	35
32	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the spin orientation. <i>Physical Review D</i> , 2020, 102, .	4.7	12
33	Multipolar effective-one-body waveforms for precessing binary black holes: Construction and validation. <i>Physical Review D</i> , 2020, 102, .	4.7	182
34	Measuring the Hubble constant with a sample of kilonovae. <i>Nature Communications</i> , 2020, 11, 4129.	12.8	35
35	Multimessenger constraints on the neutron-star equation of state and the Hubble constant. <i>Science</i> , 2020, 370, 1450-1453.	12.6	239
36	Increasing the accuracy of binary neutron star simulations with an improved vacuum treatment. <i>Physical Review D</i> , 2020, 102, .	4.7	9

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37	A MHz-repetition-rate hard X-ray free-electron laser driven by a superconducting linear accelerator. <i>Nature Photonics</i> , 2020, 14, 391-397.	31.4	315
38	Distinguishing high-mass binary neutron stars from binary black holes with second- and third-generation gravitational wave observatories. <i>Physical Review D</i> , 2020, 101, .	4.7	27
39	Constructing Love-Q relations with gravitational wave detections. <i>Physical Review D</i> , 2020, 101, .	4.7	6
40	Lensed or not lensed: determining lensing magnifications for binary neutron star mergers from a single detection. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 3740-3750.	4.4	26
41	Modeling the gravitational wave signature of neutron star black hole coalescences. <i>Physical Review D</i> , 2020, 101, .	4.7	61
42	Implications of the search for optical counterparts during the first six months of the Advanced LIGO's and Advanced Virgo's third observing run: possible limits on the ejecta mass and binary properties. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 492, 863-876.	4.4	71
43	Standardizing kilonovae and their use as standard candles to measure the Hubble constant. <i>Physical Review Research</i> , 2020, 2, .	3.6	35
44	Parameter estimation for strong phase transitions in supranuclear matter using gravitational-wave astronomy. <i>Physical Review Research</i> , 2020, 2, .	3.6	19
45	Improving the NRTidal model for binary neutron star systems. <i>Physical Review D</i> , 2019, 100, .	4.7	119
46	Can a black hole-neutron star merger explain GW170817, AT2017gfo, and GRB170817A?. <i>Physical Review D</i> , 2019, 100, .	4.7	38
47	Simulating Binary Neutron Stars with Hybrid Equation of States: Gravitational Waves, Electromagnetic Signatures and Challenges for Numerical Relativity. <i>Particles</i> , 2019, 2, 365-384.	1.7	16
48	Multimessenger Bayesian parameter inference of a binary neutron star merger. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2019, 489, L91-L96.	3.3	163
49	A Standard Siren Measurement of the Hubble Constant from GW170817 without the Electromagnetic Counterpart. <i>Astrophysical Journal Letters</i> , 2019, 871, L13.	8.3	145
50	Full 3D numerical relativity simulations of neutron star-boson star collisions with BAM. <i>Classical and Quantum Gravity</i> , 2019, 36, 025002.	4.0	19
51	A luminosity distribution for kilonovae based on short gamma-ray burst afterglows. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 486, 672-690.	4.4	56
52	Neutron star-axion star collisions in the light of multimessenger astronomy. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 483, 908-914.	4.4	29
53	Cooling binary neutron star remnants via nucleon-nucleon-axion bremsstrahlung. <i>Physical Review D</i> , 2019, 100, .	4.7	15
54	Constructing binary neutron star initial data with high spins, high compactnesses, and high mass ratios. <i>Physical Review D</i> , 2019, 100, .	4.7	23

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55	Waveform systematics for binary neutron star gravitational wave signals: Effects of spin, precession, and the observation of electromagnetic counterparts. <i>Physical Review D</i> , 2019, 100, .	4.7	23
56	Modeling the postmerger gravitational wave signal and extracting binary properties from future binary neutron star detections. <i>Physical Review D</i> , 2019, 100, .	4.7	53
57	Increasing the Astrophysical Reach of the Advanced Virgo Detector via the Application of Squeezed Vacuum States of Light. <i>Physical Review Letters</i> , 2019, 123, 231108.	7.8	254
58	Rotating neutron stars with nonbarotropic thermal profile. <i>Physical Review D</i> , 2019, 100, .	4.7	22
59	Matter imprints in waveform models for neutron star binaries: Tidal and self-spin effects. <i>Physical Review D</i> , 2019, 99, .	4.7	144
60	Gravitational-Wave Luminosity of Binary Neutron Stars Mergers. <i>Physical Review Letters</i> , 2018, 120, 111101.	7.8	76
61	Waveform systematics for binary neutron star gravitational wave signals: Effects of the point-particle baseline and tidal descriptions. <i>Physical Review D</i> , 2018, 98, .	4.7	37
62	<tt>CoRe</tt> database of binary neutron star merger waveforms. <i>Classical and Quantum Gravity</i> , 2018, 35, 24LT01.	4.0	81
63	Constraints on the neutron star equation of state from AT2017gfo using radiative transfer simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 3871-3878.	4.4	157
64	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of large eccentricities. <i>Physical Review D</i> , 2018, 98, .	4.7	36
65	Axion star collisions with black holes and neutron stars in full 3D numerical relativity. <i>Physical Review D</i> , 2018, 98, .	4.7	38
66	Time-domain effective-one-body gravitational waveforms for coalescing compact binaries with nonprecessing spins, tides, and self-spin effects. <i>Physical Review D</i> , 2018, 98, .	4.7	168
67	Relevance of tidal effects and post-merger dynamics for binary neutron star parameter estimation. <i>Physical Review D</i> , 2018, 98, .	4.7	46
68	Disc formation in the collapse of supramassive neutron stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 5272-5285.	4.4	11
69	High-Resolution Numerical Relativity Simulations of Spinning Binary Neutron Star Mergers. , 2018, , .		6
70	Numerical relativity simulations of precessing binary neutron star mergers. <i>Physical Review D</i> , 2018, 97, .	4.7	29
71	Modeling dynamical ejecta from binary neutron star mergers and implications for electromagnetic counterparts. <i>Classical and Quantum Gravity</i> , 2017, 34, 105014.	4.0	117
72	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the starsâ€™ rotation. <i>Physical Review D</i> , 2017, 95, .	4.7	81

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73	Gravitational waves and mass ejecta from binary neutron star mergers: Effect of the mass ratio. <i>Physical Review D</i> , 2017, 95, .	4.7	138
74	Closed-form tidal approximants for binary neutron star gravitational waveforms constructed from high-resolution numerical relativity simulations. <i>Physical Review D</i> , 2017, 96, .	4.7	166
75	Comprehensive comparison of numerical relativity and effective-one-body results to inform improvements in waveform models for binary neutron star systems. <i>Physical Review D</i> , 2017, 95, .	4.7	47
76	Toward Rapid Transient Identification and Characterization of Kilonovae. <i>Astrophysical Journal</i> , 2017, 849, 12.	4.5	33
77	Gravitational waveforms from binary neutron star mergers with high-order weighted-essentially-nonscillatory schemes in numerical relativity. <i>Physical Review D</i> , 2016, 94, .	4.7	58
78	Solving 3D relativistic hydrodynamical problems with weighted essentially nonscillatory discontinuous Galerkin methods. <i>Physical Review D</i> , 2016, 94, .	4.7	29
79	Simulations of inspiraling and merging double neutron stars using the Spectral Einstein Code. <i>Physical Review D</i> , 2016, 93, .	4.7	39
80	Numerical relativity simulations of neutron star merger remnants using conservative mesh refinement. <i>Physical Review D</i> , 2015, 91, .	4.7	105
81	Binary neutron stars with generic spin, eccentricity, mass ratio, and compactness: Quasi-equilibrium sequences and first evolutions. <i>Physical Review D</i> , 2015, 92, .	4.7	85
82	Modeling the Complete Gravitational Wave Spectrum of Neutron Star Mergers. <i>Physical Review Letters</i> , 2015, 115, 091101.	7.8	174
83	Simulations of rotating neutron star collapse with the puncture gauge: End state and gravitational waveforms. <i>Physical Review D</i> , 2015, 91, .	4.7	21
84	Modeling the Dynamics of Tidally Interacting Binary Neutron Stars up to the Merger. <i>Physical Review Letters</i> , 2015, 114, 161103.	7.8	167
85	Mergers of binary neutron stars with realistic spin. <i>Physical Review D</i> , 2014, 89, .	4.7	99
86	Quasiuniversal Properties of Neutron Star Mergers. <i>Physical Review Letters</i> , 2014, 112, .	7.8	93
87	Spinning black hole in the puncture method: Numerical experiments. <i>Journal of Physics: Conference Series</i> , 2014, 490, 012155.	0.4	7
88	Collapse of nonlinear gravitational waves in moving-puncture coordinates. <i>Physical Review D</i> , 2013, 88, .	4.7	33