

# Mark Bernard Hindmarsh

## List of Publications by Year in descending order

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120  
papers

6,514  
citations

53660

45  
h-index

64668

79  
g-index

122  
all docs

122  
docs citations

122  
times ranked

2382  
citing authors

#	ARTICLE	IF	CITATIONS
1	Science with the space-based interferometer eLISA. II: gravitational waves from cosmological phase transitions. <i>Journal of Cosmology and Astroparticle Physics</i> , 2016, 2016, 001-001.	1.9	536
2	Detecting gravitational waves from cosmological phase transitions with LISA: an update. <i>Journal of Cosmology and Astroparticle Physics</i> , 2020, 2020, 024-024.	1.9	373
3	Gravitational Waves from the Sound of a First Order Phase Transition. <i>Physical Review Letters</i> , 2014, 112, 041301.	2.9	330
4	Numerical simulations of acoustically generated gravitational waves at a first order phase transition. <i>Physical Review D</i> , 2015, 92, .	1.6	318
5	Shape of the acoustic gravitational wave power spectrum from a first order phase transition. <i>Physical Review D</i> , 2017, 96, .	1.6	235
6	Inverse cascade in decaying three-dimensional magnetohydrodynamic turbulence. <i>Physical Review E</i> , 2001, 64, 056405.	0.8	164
7	Numerical Simulations of String Networks in the Abelian-Higgs Model. <i>Physical Review Letters</i> , 1998, 80, 2277-2280.	2.9	160
8	Existence and stability of semilocal strings. <i>Physical Review Letters</i> , 1992, 68, 1263-1266.	2.9	157
9	Fitting Cosmic Microwave Background Data with Cosmic Strings and Inflation. <i>Physical Review Letters</i> , 2008, 100, 021301.	2.9	157
10	CMB power spectrum contribution from cosmic strings using field-evolution simulations of the Abelian Higgs model. <i>Physical Review D</i> , 2007, 75, .	1.6	150
11	Primordial black holes with an accurate QCD equation of state. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 041-041.	1.9	139
12	Gravitational waves from vacuum first-order phase transitions: From the envelope to the lattice. <i>Physical Review D</i> , 2018, 97, .	1.6	124
13	Ghosts, instabilities, and superluminal propagation in modified gravity models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2006, 2006, 005-005.	1.9	119
14	Challenges and opportunities of gravitational-wave searches at MHz to GHz frequencies. <i>Living Reviews in Relativity</i> , 2021, 24, 1.	8.2	105
15	Signals of Inflationary Models with Cosmic Strings. <i>Progress of Theoretical Physics Supplement</i> , 2011, 190, 197-228.	0.2	103
16	Sound Shell Model for Acoustic Gravitational Wave Production at a First-Order Phase Transition in the Early Universe. <i>Physical Review Letters</i> , 2018, 120, 071301.	2.9	98
17	Gravitational waves from first order cosmological phase transitions in the Sound Shell Model. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 062-062.	1.9	97
18	Abelian Higgs cosmic strings: Small-scale structure and loops. <i>Physical Review D</i> , 2009, 79, .	1.6	94

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19	Scaling and small-scale structure in cosmic string networks. <i>Physical Review D</i> , 1997, 56, 637-646.	1.6	91
20	Semilocal topological defects. <i>Nuclear Physics B</i> , 1993, 392, 461-489.	0.9	90
21	Vorticity, Kinetic Energy, and Suppressed Gravitational-Wave Production in Strong First-Order Phase Transitions. <i>Physical Review Letters</i> , 2020, 125, 021302.	2.9	90
22	Exact Scale-Invariant Background of Gravitational Waves from Cosmic Defects. <i>Physical Review Letters</i> , 2013, 110, 101302.	2.9	89
23	CMB power spectra from cosmic strings: Predictions for the Planck satellite and beyond. <i>Physical Review D</i> , 2010, 82, .	1.6	83
24	Power Spectra of the Cosmic Microwave Background and Density Fluctuations Seeded by Local Cosmic Strings. <i>Physical Review Letters</i> , 1999, 82, 679-682.	2.9	79
25	Scaling from gauge and scalar radiation in Abelian-Higgs string networks. <i>Physical Review D</i> , 2017, 96, .	1.6	77
26	CMB polarization power spectra contributions from a network of cosmic strings. <i>Physical Review D</i> , 2007, 76, .	1.6	73
27	Phase transitions in the early universe. <i>SciPost Physics Lecture Notes</i> , 0, , .	0.0	71
28	Cosmic Microwave Background and Density Fluctuations from Strings plus Inflation. <i>Physical Review Letters</i> , 1999, 82, 2034-2037.	2.9	69
29	Radiation and relaxation of oscillons. <i>Physical Review D</i> , 2012, 85, .	1.6	67
30	Gravitational waves from vacuum first-order phase transitions. II. From thin to thick walls. <i>Physical Review D</i> , 2021, 103, .	1.6	65
31	New CMB constraints for Abelian Higgs cosmic strings. <i>Journal of Cosmology and Astroparticle Physics</i> , 2016, 2016, 042-042.	1.9	64
32	Dark matter of weakly interacting massive particles and the QCD equation of state. <i>Physical Review D</i> , 2005, 71, .	1.6	63
33	Gravitational radiation from kinky infinite strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1990, 251, 28-33.	1.5	61
34	Scaling in numerical simulations of domain walls. <i>Physical Review D</i> , 2003, 68, .	1.6	57
35	Smooth metrics for snapping strings. <i>Physical Review D</i> , 1995, 52, 5598-5604.	1.6	56
36	Magnetic fields from phase transitions. <i>Physical Review D</i> , 1998, 58, .	1.6	56



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55	Correlations in cosmic string networks. <i>Physical Review D</i> , 1997, 55, 573-581.	1.6	34
56	Cosmic microwave background constraints for global strings and global monopoles. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 026-026.	1.9	34
57	Thermodynamics of Cosmic String Densities in U(1) Scalar Field Theory. <i>Physical Review Letters</i> , 1998, 80, 908-911.	2.9	32
58	Simulations of Cold Electroweak Baryogenesis: finite time quenches. <i>Journal of High Energy Physics</i> , 2007, 2007, 034-034.	1.6	30
59	Unsuccessful cosmology with modified gravity models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2007, 2007, 028-028.	1.9	30
60	Energy-momentum correlations for Abelian Higgs cosmic strings. <i>Physical Review D</i> , 2016, 93, .	1.6	29
61	Observational prospects for phase transitions at LISA: Fisher matrix analysis. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 039.	1.9	29
62	Degeneracy between primordial tensor modes and cosmic strings in future CMB data from the Planck satellite. <i>Physical Review D</i> , 2008, 77, .	1.6	28
63	Detecting and distinguishing topological defects in future data from the CMBPol satellite. <i>Physical Review D</i> , 2011, 83, .	1.6	28
64	Constraining topological defects with temperature and polarization anisotropies. <i>Physical Review D</i> , 2014, 90, .	1.6	28
65	Bound states and instabilities of vortices. <i>Physical Review D</i> , 1995, 52, 4621-4632.	1.6	27
66	Approach to scaling in axion string networks. <i>Physical Review D</i> , 2021, 103, .	1.6	27
67	Instabilities of electroweak strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 363, 58-64.	1.5	25
68	Renormalization group improvement of scalar field inflation. <i>Physical Review D</i> , 2012, 85, .	1.6	25
69	Irreducible background of gravitational waves from a cosmic defect network: Update and comparison of numerical techniques. <i>Physical Review D</i> , 2020, 102, .	1.6	25
70	Sphalerons in two Higgs doublet theories. <i>Physical Review D</i> , 2001, 64, .	1.6	24
71	New Solutions for Non-Abelian Cosmic Strings. <i>Physical Review Letters</i> , 2016, 117, 251601.	2.9	22
72	Loop decay in Abelian-Higgs string networks. <i>Physical Review D</i> , 2021, 104, .	1.6	22

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73	The dynamical equivalence of modified gravity revisited. <i>Classical and Quantum Gravity</i> , 2011, 28, 035002.	1.5	21
74	Big-bang nucleosynthesis and gamma-ray constraints on cosmic strings with a large Higgs condensate. <i>Physical Review D</i> , 2015, 91, .	1.6	21
75	Where Are the Hedgehogs in Quenched Nematics?. <i>Physical Review Letters</i> , 1995, 75, 2502-2505.	2.9	20
76	Level set method for the evolution of defect and brane networks. <i>Physical Review D</i> , 2003, 68, .	1.6	20
77	Semiclassical decay of topological defects. <i>Physical Review D</i> , 2008, 77, .	1.6	20
78	Covariant Closed String Coherent States. <i>Physical Review Letters</i> , 2011, 106, 081602.	2.9	19
79	String vertex operators and cosmic strings. <i>Physical Review D</i> , 2011, 84, .	1.6	19
80	Sphalerons with CP-violating Higgs potentials. <i>Physical Review D</i> , 1999, 59, .	1.6	17
81	Numerical simulations of necklaces in SU(2) gauge-Higgs field theory. <i>Physical Review D</i> , 2017, 95, .	1.6	16
82	Type I Abelian Higgs strings: Evolution and cosmic microwave background constraints. <i>Physical Review D</i> , 2019, 99, .	1.6	16
83	Gravitational waves from a holographic phase transition. <i>Journal of High Energy Physics</i> , 2021, 2021, 1.	1.6	16
84	Superconducting cosmic strings with coupled zero modes. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1988, 200, 429-433.	1.5	14
85	Gravitational Waves at Strong Coupling from an Effective Action. <i>Physical Review Letters</i> , 2022, 128, 131101.	2.9	14
86	Universality and critical phenomena in string defect statistics. <i>Physical Review E</i> , 1997, 55, 1120-1149.	0.8	13
87	Generalized semilocal theories and higher Hopf maps. <i>Nuclear Physics B</i> , 1993, 404, 794-804.	0.9	12
88	Kinky brane worlds. <i>Physical Review D</i> , 2003, 68, .	1.6	12
89	Effective actions and bubble nucleation from holography. <i>Physical Review D</i> , 2022, 105, .	1.6	12
90	Gravitational effects of line sources and the zero-width limit. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1990, 251, 498-502.	1.5	11

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91	Superconducting cosmic strings in grand unified models. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1989, 225, 127-132.	1.5	10
92	Axions and the QCD phase transition. <i>Physical Review D</i> , 1992, 45, 1130-1138.	1.6	9
93	Kink-boundary collisions in a two-dimensional scalar field theory. <i>Physical Review D</i> , 2004, 69, .	1.6	9
94	Thermal fluctuations at second-order phase transitions. <i>Nuclear Physics B</i> , 1994, 417, 506-526.	0.9	8
95	Dark matter from decaying topological defects. <i>Journal of Cosmology and Astroparticle Physics</i> , 2014, 2014, 037-037.	1.9	8
96	Strictly anomaly mediated supersymmetry breaking. <i>Physical Review D</i> , 2013, 87, .	1.6	6
97	Improving cosmic string network simulations. <i>Physical Review D</i> , 2014, 90, .	1.6	6
98	Dark matter with topological defects in the Inert Doublet Model. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 048-048.	1.9	6
99	The bispectrum of cosmic string temperature fluctuations including recombination effects. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 030-030.	1.9	6
100	Cosmic electroweak strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 370, 29-36.	1.5	5
101	Large radius Hagedorn regime in string gas cosmology. <i>Physical Review D</i> , 2008, 78, .	1.6	5
102	Anomaly mediation and cosmology. <i>Journal of High Energy Physics</i> , 2011, 2011, 1.	1.6	5
103	The bispectrum of matter perturbations from cosmic strings. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 008-008.	1.9	5
104	Scaling in necklaces of monopoles and semipoles. <i>Physical Review D</i> , 2018, 98, .	1.6	5
105	Inhomogeneous tachyon condensation. <i>Journal of High Energy Physics</i> , 2009, 2009, 050-050.	1.6	4
106	Consistent cosmology with Higgs thermal inflation in a minimal extension of the MSSM. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 021-021.	1.9	4
107	Particle motion in weak relativistic gravitational fields. <i>Physical Review D</i> , 2012, 86, .	1.6	3
108	Thermal suppression of bubble nucleation at first-order phase transitions in the early Universe. <i>Physical Review D</i> , 2022, 106, .	1.6	3

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109	Massless modes on cosmic strings. <i>Physica B: Condensed Matter</i> , 1992, 178, 47-55.	1.3	2
110	Structure formation with strings plus inflation: a new paradigm. , 1999, , .		2
111	Simulations of Cold Electroweak Baryogenesis. <i>Nuclear Physics A</i> , 2007, 785, 102-105.	0.6	2
112	Perturbations and moduli space dynamics of tachyon kinks. <i>Physical Review D</i> , 2008, 77, .	1.6	2
113	Sphalerons and CP-violation. , 1999, , .		0
114	Cosmology with twisted tori. <i>Physical Review D</i> , 2007, 76, .	1.6	0
115	Renormalisation group improved early universe cosmology and transition to classicality. , 2012, , .		0
116	Fitting BICEP2 with defects, primordial gravitational waves and dust. <i>Journal of Physics: Conference Series</i> , 2015, 600, 012025.	0.3	0
117	SPHALERONS WITH TWO HIGGS DOUBLETS. , 2001, , .		0
118	DECAY OF MAGNETIC FIELDS IN THE EARLY UNIVERSE. , 2003, , .		0
119	QCD EQUATION OF STATE AND DARK MATTER. , 2005, , .		0
120	COSMIC STRINGS â€œ DEAD AGAIN?. , 1998, , .		0