

# Mark Bernard Hindmarsh

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

112  
papers

4,770  
citations

42  
h-index

66  
g-index

122  
ext. papers

5,596  
ext. citations

5.5  
avg, IF

6.19  
L-index

#	Paper	IF	Citations
112	Gravitational Waves at Strong Coupling from an Effective Action.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 131101	7.4	1
111	Effective actions and bubble nucleation from holography. <i>Physical Review D</i> , <b>2022</b> , 105,	4.9	2
110	Challenges and opportunities of gravitational-wave searches at MHz to GHz frequencies. <i>Living Reviews in Relativity</i> , <b>2021</b> , 24, 1	32.5	12
109	Observational prospects for phase transitions at LISA: Fisher matrix analysis. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2021</b> , 2021, 039	6.4	6
108	Gravitational waves from a holographic phase transition. <i>Journal of High Energy Physics</i> , <b>2021</b> , 2021, 1	5.4	6
107	Approach to scaling in axion string networks. <i>Physical Review D</i> , <b>2021</b> , 103,	4.9	8
106	Loop decay in Abelian-Higgs string networks. <i>Physical Review D</i> , <b>2021</b> , 104,	4.9	7
105	Gravitational waves from vacuum first-order phase transitions. II. From thin to thick walls. <i>Physical Review D</i> , <b>2021</b> , 103,	4.9	26
104	Irreducible background of gravitational waves from a cosmic defect network: Update and comparison of numerical techniques. <i>Physical Review D</i> , <b>2020</b> , 102,	4.9	15
103	Detecting gravitational waves from cosmological phase transitions with LISA: an update. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2020</b> , 2020, 024-024	6.4	173
102	Vorticity, Kinetic Energy, and Suppressed Gravitational-Wave Production in Strong First-Order Phase Transitions. <i>Physical Review Letters</i> , <b>2020</b> , 125, 021302	7.4	47
101	Scaling Density of Axion Strings. <i>Physical Review Letters</i> , <b>2020</b> , 124, 021301	7.4	23
100	Type I Abelian Higgs strings: Evolution and cosmic microwave background constraints. <i>Physical Review D</i> , <b>2019</b> , 99,	4.9	10
99	Gravitational waves from first order cosmological phase transitions in the Sound Shell Model. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2019</b> , 2019, 062-062	6.4	47
98	Sound Shell Model for Acoustic Gravitational Wave Production at a First-Order Phase Transition in the Early Universe. <i>Physical Review Letters</i> , <b>2018</b> , 120, 071301	7.4	58
97	Gravitational waves from vacuum first-order phase transitions: From the envelope to the lattice. <i>Physical Review D</i> , <b>2018</b> , 97,	4.9	74
96	Scaling in necklaces of monopoles and semipoles. <i>Physical Review D</i> , <b>2018</b> , 98,	4.9	3

95	Primordial black holes with an accurate QCD equation of state. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2018</b> , 2018, 041-041	6.4	78
94	Cosmic microwave background constraints for global strings and global monopoles. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2017</b> , 2017, 026-026	6.4	25
93	Numerical simulations of necklaces in SU(2) gauge-Higgs field theory. <i>Physical Review D</i> , <b>2017</b> , 95,	4.9	12
92	Shape of the acoustic gravitational wave power spectrum from a first order phase transition. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	133
91	Scaling from gauge and scalar radiation in Abelian-Higgs string networks. <i>Physical Review D</i> , <b>2017</b> , 96,	4.9	53
90	Energy-momentum correlations for Abelian Higgs cosmic strings. <i>Physical Review D</i> , <b>2016</b> , 93,	4.9	26
89	New CMB constraints for Abelian Higgs cosmic strings. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2016</b> , 2016, 042-042	6.4	48
88	Science with the space-based interferometer eLISA. II: gravitational waves from cosmological phase transitions. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2016</b> , 2016, 001-001	6.4	352
87	New Solutions for Non-Abelian Cosmic Strings. <i>Physical Review Letters</i> , <b>2016</b> , 117, 251601	7.4	17
86	Big-bang nucleosynthesis and gamma-ray constraints on cosmic strings with a large Higgs condensate. <i>Physical Review D</i> , <b>2015</b> , 91,	4.9	17
85	Numerical simulations of acoustically generated gravitational waves at a first order phase transition. <i>Physical Review D</i> , <b>2015</b> , 92,	4.9	198
84	Dark matter with topological defects in the Inert Doublet Model. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2015</b> , 2015, 048-048	6.4	4
83	The bispectrum of cosmic string temperature fluctuations including recombination effects. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2015</b> , 2015, 030-030	6.4	5
82	Fitting BICEP2 with defects, primordial gravitational waves and dust. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 600, 012025	0.3	
81	The bispectrum of matter perturbations from cosmic strings. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2015</b> , 2015, 008-008	6.4	4
80	Gravitational waves from the sound of a first order phase transition. <i>Physical Review Letters</i> , <b>2014</b> , 112, 041301	7.4	218
79	Can topological defects mimic the BICEP2 B-mode signal?. <i>Physical Review Letters</i> , <b>2014</b> , 112, 171301	7.4	44
78	Dark matter from decaying topological defects. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2014</b> , 2014, 037-037	6.4	7

77	Constraining topological defects with temperature and polarization anisotropies. <i>Physical Review D</i> , <b>2014</b> , 90,	4.9	26
76	Improving cosmic string network simulations. <i>Physical Review D</i> , <b>2014</b> , 90,	4.9	5
75	Exact scale-invariant background of gravitational waves from cosmic defects. <i>Physical Review Letters</i> , <b>2013</b> , 110, 101302	7.4	70
74	Consistent cosmology with Higgs thermal inflation in a minimal extension of the MSSM. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2013</b> , 2013, 021-021	6.4	4
73	Strictly anomaly mediated supersymmetry breaking. <i>Physical Review D</i> , <b>2013</b> , 87,	4.9	6
72	Radiation and relaxation of oscillons. <i>Physical Review D</i> , <b>2012</b> , 85,	4.9	41
71	Particle motion in weak relativistic gravitational fields. <i>Physical Review D</i> , <b>2012</b> , 86,	4.9	3
70	Renormalization group improvement of scalar field inflation. <i>Physical Review D</i> , <b>2012</b> , 85,	4.9	24
69	f(R) gravity from the renormalization group. <i>Physical Review D</i> , <b>2012</b> , 86,	4.9	42
68	Anomaly mediation and cosmology. <i>Journal of High Energy Physics</i> , <b>2011</b> , 2011, 1	5.4	4
67	Detecting and distinguishing topological defects in future data from the CMBPol satellite. <i>Physical Review D</i> , <b>2011</b> , 83,	4.9	27
66	Asymptotically safe cosmology. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2011</b> , 2011, 019-019	6.4	45
65	The dynamical equivalence of modified gravity revisited. <i>Classical and Quantum Gravity</i> , <b>2011</b> , 28, 035002,3	3.3	18
64	Cosmic string parameter constraints and model analysis using small scale Cosmic Microwave Background data. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2011</b> , 2011, 021-021	6.4	49
63	Covariant closed string coherent states. <i>Physical Review Letters</i> , <b>2011</b> , 106, 081602	7.4	12
62	String vertex operators and cosmic strings. <i>Physical Review D</i> , <b>2011</b> , 84,	4.9	10
61	Signals of Inflationary Models with Cosmic Strings. <i>Progress of Theoretical Physics Supplement</i> , <b>2011</b> , 190, 197-228		86
60	CMB temperature trispectrum of cosmic strings. <i>Physical Review D</i> , <b>2010</b> , 81,	4.9	38

59	CMB power spectra from cosmic strings: Predictions for the Planck satellite and beyond. <i>Physical Review D</i> , <b>2010</b> , 82,	4.9	79
58	Inhomogeneous tachyon condensation. <i>Journal of High Energy Physics</i> , <b>2009</b> , 2009, 050-050	5.4	4
57	CMB temperature bispectrum induced by cosmic strings. <i>Physical Review D</i> , <b>2009</b> , 80,	4.9	49
56	Low-cost fermions in classical field simulations. <i>Physical Review D</i> , <b>2009</b> , 79,	4.9	31
55	Abelian Higgs cosmic strings: Small-scale structure and loops. <i>Physical Review D</i> , <b>2009</b> , 79,	4.9	75
54	Fitting cosmic microwave background data with cosmic strings and inflation. <i>Physical Review Letters</i> , <b>2008</b> , 100, 021301	7.4	148
53	Degeneracy between primordial tensor modes and cosmic strings in future CMB data from the Planck satellite. <i>Physical Review D</i> , <b>2008</b> , 77,	4.9	26
52	Oscillons and domain walls. <i>Physical Review D</i> , <b>2008</b> , 77,	4.9	31
51	Large radius Hagedorn regime in string gas cosmology. <i>Physical Review D</i> , <b>2008</b> , 78,	4.9	4
50	Cosmic microwave anisotropies from BPS semilocal strings. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2008</b> , 2008, 010	6.4	46
49	Perturbations and moduli space dynamics of tachyon kinks. <i>Physical Review D</i> , <b>2008</b> , 77,	4.9	2
48	Semiclassical decay of topological defects. <i>Physical Review D</i> , <b>2008</b> , 77,	4.9	16
47	CMB power spectrum contribution from cosmic strings using field-evolution simulations of the Abelian Higgs model. <i>Physical Review D</i> , <b>2007</b> , 75,	4.9	138
46	Simulations of Cold Electroweak Baryogenesis. <i>Nuclear Physics A</i> , <b>2007</b> , 785, 102-105	1.3	2
45	Simulations of Cold Electroweak Baryogenesis: finite time quenches. <i>Journal of High Energy Physics</i> , <b>2007</b> , 2007, 034-034	5.4	28
44	Unsuccessful cosmology with modified gravity models. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2007</b> , 2007, 028-028	6.4	27
43	CMB polarization power spectra contributions from a network of cosmic strings. <i>Physical Review D</i> , <b>2007</b> , 76,	4.9	64
42	Scaling in a SU(2)/Bbb Z3model of cosmic superstring networks. <i>Journal of High Energy Physics</i> , <b>2006</b> , 2006, 066-066	5.4	42

41	Ghosts, instabilities, and superluminal propagation in modified gravity models. <i>Journal of Cosmology and Astroparticle Physics</i> , <b>2006</b> , 2006, 005-005	6.4	107
40	Numerical investigations of oscillons in 2 dimensions. <i>Physical Review D</i> , <b>2006</b> , 74,	4.9	43
39	Dark matter of weakly interacting massive particles and the QCD equation of state. <i>Physical Review D</i> , <b>2005</b> , 71,	4.9	53
38	WMAP constraints on inflationary models with global defects. <i>Physical Review D</i> , <b>2004</b> , 70,	4.9	55
37	Kink-boundary collisions in a two-dimensional scalar field theory. <i>Physical Review D</i> , <b>2004</b> , 69,	4.9	9
36	Scaling in numerical simulations of domain walls. <i>Physical Review D</i> , <b>2003</b> , 68,	4.9	45
35	Level set method for the evolution of defect and brane networks. <i>Physical Review D</i> , <b>2003</b> , 68,	4.9	18
34	Kinky brane worlds. <i>Physical Review D</i> , <b>2003</b> , 68,	4.9	12
33	Sphalerons in two Higgs doublet theories. <i>Physical Review D</i> , <b>2001</b> , 64,	4.9	19
32	Inverse cascade in decaying three-dimensional magnetohydrodynamic turbulence. <i>Physical Review E</i> , <b>2001</b> , 64, 056405	2.4	140
31	Structure formation with strings plus inflation: a new paradigm <b>1999</b> ,		2
30	Sphalerons with CP-violating Higgs potentials. <i>Physical Review D</i> , <b>1999</b> , 59,	4.9	17
29	Cosmic Microwave Background and Density Fluctuations from Strings plus Inflation. <i>Physical Review Letters</i> , <b>1999</b> , 82, 2034-2037	7.4	66
28	Power Spectra of the Cosmic Microwave Background and Density Fluctuations Seeded by Local Cosmic Strings. <i>Physical Review Letters</i> , <b>1999</b> , 82, 679-682	7.4	76
27	Magnetic fields from phase transitions. <i>Physical Review D</i> , <b>1998</b> , 58,	4.9	53
26	Thermodynamics of Cosmic String Densities in U(1) Scalar Field Theory. <i>Physical Review Letters</i> , <b>1998</b> , 80, 908-911	7.4	30
25	Numerical Simulations of String Networks in the Abelian-Higgs Model. <i>Physical Review Letters</i> , <b>1998</b> , 80, 2277-2280	7.4	142
24	Universality and critical phenomena in string defect statistics. <i>Physical Review E</i> , <b>1997</b> , 55, 1120-1149	2.4	10

23	Correlations in cosmic string networks. <i>Physical Review D</i> , <b>1997</b> , 55, 573-581	4.9	33
22	Scaling and small-scale structure in cosmic string networks. <i>Physical Review D</i> , <b>1997</b> , 56, 637-646	4.9	87
21	Cosmic electroweak strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1996</b> , 370, 29-36	4.2	5
20	Analytic Scaling Solutions for Cosmic Domain Walls. <i>Physical Review Letters</i> , <b>1996</b> , 77, 4495-4498	7.4	32
19	Instabilities of electroweak strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1995</b> , 363, 58-64	4.2	19
18	Smooth metrics for snapping strings. <i>Physical Review D</i> , <b>1995</b> , 52, 5598-5604	4.9	46
17	Bound states and instabilities of vortices. <i>Physical Review D</i> , <b>1995</b> , 52, 4621-4632	4.9	20
16	Where are the hedgehogs in quenched nematics?. <i>Physical Review Letters</i> , <b>1995</b> , 75, 2502-2505	7.4	18
15	Formation of topological defects in first order phase transitions. <i>Physical Review D</i> , <b>1994</b> , 49, 1944-1950	4.9	36
14	Origin of the sphaleron dipole moment. <i>Physical Review D</i> , <b>1994</b> , 49, 6109-6114	4.9	31
13	Thermal fluctuations at second-order phase transitions. <i>Nuclear Physics B</i> , <b>1994</b> , 417, 506-526	2.8	8
12	Small-scale microwave background fluctuations from cosmic strings. <i>Astrophysical Journal</i> , <b>1994</b> , 431, 534	4.7	37
11	Generalized semilocal theories and higher Hopf maps. <i>Nuclear Physics B</i> , <b>1993</b> , 404, 794-804	2.8	12
10	Semilocal topological defects. <i>Nuclear Physics B</i> , <b>1993</b> , 392, 461-489	2.8	83
9	Axions and the QCD phase transition. <i>Physical Review D</i> , <b>1992</b> , 45, 1130-1138	4.9	7
8	Existence and stability of semilocal strings. <i>Physical Review Letters</i> , <b>1992</b> , 68, 1263-1266	7.4	147
7	Massless modes on cosmic strings. <i>Physica B: Condensed Matter</i> , <b>1992</b> , 178, 47-55	2.8	2
6	Baryogenesis from collapsing topological defects. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1991</b> , 263, 239-244	4.2	46

5	Gravitational radiation from kinky infinite strings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1990</b> , 251, 28-33	4.2	52
4	Gravitational effects of line sources and the zero-width limit. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1990</b> , 251, 498-502	4.2	10
3	Superconducting cosmic strings in grand unified models. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1989</b> , 225, 127-132	4.2	10
2	Superconducting cosmic strings with coupled zero modes. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1988</b> , 200, 429-433	4.2	12
1	Phase transitions in the early universe. <i>SciPost Physics Lecture Notes</i> ,		25