Andrew I Macfadyen

List of Publications by Year
in descending order

86 papers	7,471 citations	36303 51 h-index	62596 80 g-index
87 all docs	87 docs citations	87 times ranked	5074 citing authors

#	Article	IF	Citations
1	Supernovae, Jets, and Collapsars. Astrophysical Journal, 2001, 550, 410-425.	4.5	592
2	The afterglow of GRB 050709 and the nature of the short-hard Î³-ray bursts. Nature, 2005, 437, 845-850.	27.8	430
3	Relativistic Jets in Collapsars. Astrophysical Journal, 2003, 586, 356-371.	4.5	369
4	A novel explosive process is required for the Î³-ray burst GRB 060614. Nature, 2006, 444, 1053-1055.	27.8	319
5	An Eccentric Circumbinary Accretion Disk and the Detection of Binary Massive Black Holes. Astrophysical Journal, 2008, 672, 83-93.	4.5	290
6	The Binary Neutron Star Event LIGO/Virgo GW170817 160 Days after Merger: Synchrotron Emission across the Electromagnetic Spectrum. Astrophysical Journal Letters, 2018, 856, L18.	8.3	258
7	BINARY BLACK HOLE ACCRETION FROM A CIRCUMBINARY DISK: GAS DYNAMICS INSIDE THE CENTRAL CAVITY. Astrophysical Journal, 2014, 783, 134.	4.5	254
8	Accretion into the central cavity of a circumbinary disc. Monthly Notices of the Royal Astronomical Society, 2013, 436, 2997-3020.	4.4	185
9	An Embedded X-Ray Source Shines through the Aspherical ATÂ2018cow: Revealing the Inner Workings of the Most Luminous Fast-evolving Optical Transients. Astrophysical Journal, 2019, 872, 18.	4.5	160
10	OFF-AXIS GAMMA-RAY BURST AFTERGLOW MODELING BASED ON A TWO-DIMENSIONAL AXISYMMETRIC HYDRODYNAMICS SIMULATION. Astrophysical Journal, 2010, 722, 235-247.	4.5	151
11	THE MIGRATION OF GAP-OPENING PLANETS IS NOT LOCKED TO VISCOUS DISK EVOLUTION. Astrophysical Journal Letters, 2014, 792, L10.	8.3	148
12	GAP OPENING BY EXTREMELY LOW-MASS PLANETS IN A VISCOUS DISK. Astrophysical Journal, 2013, 769, 41.	4.5	146
13	A Decline in the X-Ray through Radio Emission from GW170817 Continues to Support an Off-axis Structured Jet. Astrophysical Journal Letters, 2018, 863, L18.	8.3	138
14	THE DYNAMICS AND AFTERGLOW RADIATION OF GAMMA-RAY BURSTS. I. CONSTANT DENSITY MEDIUM. Astrophysical Journal, 2009, 698, 1261-1272.	4.5	136
15	The THESEUS space mission concept: science case, design and expected performances. Advances in Space Research, 2018, 62, 191-244.	2.6	133
16	Axisymmetric Magnetohydrodynamic Simulations of the Collapsar Model for Gamma-Ray Bursts. Astrophysical Journal, 2003, 599, L5-L8.	4.5	127
17	RAM: A Relativistic Adaptive Mesh Refinement Hydrodynamics Code. Astrophysical Journal, Supplement Series, 2006, 164, 255-279.	7.7	121
18	Two Years of Nonthermal Emission from the Binary Neutron Star Merger GW170817: Rapid Fading of the Jet Afterglow and First Constraints on the Kilonova Fastest Ejecta. Astrophysical Journal Letters, 2019, 886, L17.	8.3	117

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19	GAMMA-RAY BURST AFTERGLOW BROADBAND FITTING BASED DIRECTLY ON HYDRODYNAMICS SIMULATIONS. Astrophysical Journal, 2012, 749, 44.	4.5	115
20	TESS: A RELATIVISTIC HYDRODYNAMICS CODE ON A MOVING VORONOI MESH. Astrophysical Journal, Supplement Series, 2011, 197, 15.	7.7	109
21	On the orbital evolution of supermassive black hole binaries with circumbinary accretion discs. Monthly Notices of the Royal Astronomical Society, 2017, 469, 4258-4267.	4.4	105
22	Circumbinary Disks: Accretion and Torque as a Function of Mass Ratio and Disk Viscosity. Astrophysical Journal, 2020, 901, 25.	4.5	99
23	THREE-DIMENSIONAL RELATIVISTIC MAGNETOHYDRODYNAMIC SIMULATIONS OF THE KELVIN-HELMHOLTZ INSTABILITY: MAGNETIC FIELD AMPLIFICATION BY A TURBULENT DYNAMO. Astrophysical Journal, 2009, 692, L40-L44.	4.5	96
24	PRODUCING MAGNETAR MAGNETIC FIELDS IN THE MERGER OF BINARY NEUTRON STARS. Astrophysical Journal, 2015, 809, 39.	4.5	94
25	Numerical Simulations of the Jet Dynamics and Synchrotron Radiation of Binary Neutron Star Merger Event GW170817/GRB 170817A. Astrophysical Journal, 2018, 863, 58.	4.5	92
26	Binary black hole accretion during inspiral and merger. Monthly Notices of the Royal Astronomical Society: Letters, 2015, 447, L80-L84.	3.3	90
27	MAGNETIC ENERGY PRODUCTION BY TURBULENCE IN BINARY NEUTRON STAR MERGERS. Astrophysical Journal Letters, 2013, 769, L29.	8.3	88
28	Stellar Explosions by Magnetic Towers. Astrophysical Journal, 2006, 647, 1192-1212.	4.5	86
29	AnHSTSearch for Supernovae Accompanying Xâ€Ray Flashes. Astrophysical Journal, 2005, 627, 877-887.	4.5	82
30	GAMMA-RAY BURSTS ARE OBSERVED OFF-AXIS. Astrophysical Journal, 2015, 799, 3.	4.5	82
31	A transition in circumbinary accretion discs at a binary mass ratio of 1:25. Monthly Notices of the Royal Astronomical Society, 2016, 459, 2379-2393.	4.4	79
32	The late inspiral of supermassive black hole binaries with circumbinary gas discs in the LISA band. Monthly Notices of the Royal Astronomical Society, 2018, 476, 2249-2257.	4.4	76
33	Characteristic signatures in the thermal emission from accreting binary black holes. Monthly Notices of the Royal Astronomical Society: Letters, 2015, 446, L36-L40.	3.3	75
34	SYNTHETIC OFF-AXIS LIGHT CURVES FOR LOW-ENERGY GAMMA-RAY BURSTS. Astrophysical Journal Letters, 2011, 733, L37.	8.3	74
35	THE FATE OF FALLBACK MATTER AROUND NEWLY BORN COMPACT OBJECTS. Astrophysical Journal, 2014, 781, 119.	4.5	73
36	Gas-driven Inspiral of Binaries in Thin Accretion Disks. Astrophysical Journal, 2020, 900, 43.	4.5	73

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37	OBSERVATIONAL IMPLICATIONS OF GAMMA-RAY BURST AFTERGLOW JET SIMULATIONS AND NUMERICAL LIGHT CURVE CALCULATIONS. Astrophysical Journal, 2012, 751, 155.	4.5	72
38	ASTRONOMY: Long Gamma-Ray Bursts. Science, 2004, 303, 45-46.	12.6	70
39	The Optical Afterglow of GW170817: An Off-axis Structured Jet and Deep Constraints on a Globular Cluster Origin. Astrophysical Journal Letters, 2019, 883, L1.	8.3	69
40	AnHSTStudy of the Supernovae Accompanying GRB 040924 and GRB 041006. Astrophysical Journal, 2006, 636, 391-399.	4.5	66
41	Magnetarâ€Driven Magnetic Tower as a Model for Gammaâ€Ray Bursts and Asymmetric Supernovae. Astrophysical Journal, 2007, 669, 546-560.	4.5	66
42	NUMERICAL SIMULATIONS OF DRIVEN RELATIVISTIC MAGNETOHYDRODYNAMIC TURBULENCE. Astrophysical Journal, 2012, 744, 32.	4.5	66
43	MULTI-WAVELENGTH OBSERVATIONS OF SUPERNOVA 2011ei: TIME-DEPENDENT CLASSIFICATION OF TYPE IIb AND Ib SUPERNOVAE AND IMPLICATIONS FOR THEIR PROGENITORS. Astrophysical Journal, 2013, 767, 71.	4.5	64
44	SPECTRAL AND INTERMITTENCY PROPERTIES OF RELATIVISTIC TURBULENCE. Astrophysical Journal Letters, 2013, 763, L12.	8.3	63
45	RAYLEIGH-TAYLOR INSTABILITY IN A RELATIVISTIC FIREBALL ON A MOVING COMPUTATIONAL GRID. Astrophysical Journal, 2013, 775, 87.	4.5	60
46	A Spectacular Radio Flare from XRF 050416a at 40 Days and Implications for the Nature of Xâ€Ray Flashes. Astrophysical Journal, 2007, 661, 982-994.	4.5	57
47	AN ANALYSIS OFCHANDRADEEP FOLLOW-UP GAMMA-RAY BURSTS: IMPLICATIONS FOR OFF-AXIS JETS. Astrophysical Journal, 2015, 806, 15.	4.5	57
48	GLOBAL CALCULATIONS OF DENSITY WAVES AND GAP FORMATION IN PROTOPLANETARY DISKS USING A MOVING MESH. Astrophysical Journal, 2012, 755, 7.	4.5	54
49	A GRB and Broad-lined Type Ic Supernova from a Single Central Engine. Astrophysical Journal, 2018, 860, 38.	4.5	54
50	Cosmic Rays from Transrelativistic Supernovae. Astrophysical Journal, 2008, 673, 928-933.	4.5	53
51	Precursors and eÂ±pair loading from erupting fireballs. Monthly Notices of the Royal Astronomical Society, 2002, 331, 197-202.	4.4	51
52	Minidisks in Binary Black Hole Accretion. Astrophysical Journal, 2017, 835, 199.	4.5	51
53	Equilibrium Eccentricity of Accreting Binaries. Astrophysical Journal Letters, 2021, 909, L13.	8.3	50
54	Hydrodynamical response of a circumbinary gas disc to black hole recoil and mass loss. Monthly Notices of the Royal Astronomical Society, 0, 404, 947-962.	4.4	49

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55	Constraining the Outflow Structure of the Binary Neutron Star Merger Event GW170817/GRB170817A with a Markov Chain Monte Carlo Analysis. Astrophysical Journal, 2018, 869, 55.	4.5	47
56	Luminosity and Variability of Collimated Gammaâ€Ray Bursts. Astrophysical Journal, 2002, 577, 302-310.	4.5	47
57	A NARROW SHORT-DURATION GRB JET FROM A WIDE CENTRAL ENGINE. Astrophysical Journal, 2015, 813, 64.	4.5	45
58	A reduced orbital period for the supermassive black hole binary candidate in the quasar PG 1302-102?. Monthly Notices of the Royal Astronomical Society, 2015, 452, 2540-2545.	4.4	45
59	Probing gas disc physics with LISA: simulations of an intermediate mass ratio inspiral in an accretion disc. Monthly Notices of the Royal Astronomical Society, 2019, 486, 2754-2765.	4.4	45
60	A MISSING-LINK IN THE SUPERNOVAâ€“GRB CONNECTION: THE CASE OF SN 2012ap. Astrophysical Journal, 2015, 805, 187.	4.5	43
61	FROM ENGINE TO AFTERGLOW: COLLAPSARS NATURALLY PRODUCE TOP-HEAVY JETS AND EARLY-TIME PLATEAUS IN GAMMA-RAY BURST AFTERGLOWS. Astrophysical Journal, 2015, 806, 205.	4.5	42
62	GW170817 Afterglow Reveals that Short Gamma-Ray Bursts are Neutron Star Mergers. Astrophysical Journal Letters, 2019, 880, L23.	8.3	41
63	Evidence for X-Ray Emission in Excess to the Jet-afterglow Decay 3.5 yr after the Binary Neutron Star Merger GW 170817: A New Emission Component. Astrophysical Journal Letters, 2022, 927, L17.	8.3	41
64	The transient gravitational-wave sky. Classical and Quantum Gravity, 2013, 30, 193002.	4.0	40
65	GAMMA-RAY BURST AFTERGLOW SCALING RELATIONS FOR THE FULL BLAST WAVE EVOLUTION. Astrophysical Journal Letters, 2012, 747, L30.	8.3	39
66	GAMMA-RAY BURST AFTERGLOW LIGHT CURVES FROM A LORENTZ-BOOSTED SIMULATION FRAME AND THE SHAPE OF THE JET BREAK. Astrophysical Journal, 2013, 767, 141.	4.5	38
67	Jets in Hydrogen-poor Superluminous Supernovae: Constraints from a Comprehensive Analysis of Radio Observations. Astrophysical Journal, 2018, 856, 56.	4.5	30
68	Ultra-relativistic geometrical shock dynamics and vorticity. Journal of Fluid Mechanics, 2008, 604, 325-338.	3.4	24
69	SHOCK CORRUGATION BY RAYLEIGH-TAYLOR INSTABILITY IN GAMMA-RAY BURST AFTERGLOW JETS. Astrophysical Journal Letters, 2014, 791, L1.	8.3	23
70	NO FLARES FROM GAMMA-RAY BURST AFTERGLOW BLAST WAVES ENCOUNTERING SUDDEN CIRCUMBURST DENSITY CHANGE. Astrophysical Journal, 2013, 773, 2.	4.5	22
71	THE HYDRODYNAMICS OF GAMMA-RAY BURST REMNANTS. Astrophysical Journal, 2010, 716, 1028-1039.	4.5	20
72	A â€œBOOSTED FIREBALLâ€•MODEL FOR STRUCTURED RELATIVISTIC JETS. Astrophysical Journal Letters, 2013, 776, L9.	8.3	17

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73	Magnetically dominated jets inside collapsing stars as a model for gamma-ray bursts and supernova explosions. Physics of Plasmas, 2007, 14, 056506.	1.9	15
74	Slightly two- or three-dimensional self-similar solutions. Physics of Fluids, 2012, 24, .	4.0	13
75	Radio Sky Maps of the GRB 170817A Afterglow from Simulations. Astrophysical Journal Letters, 2018, 865, L2.	8.3	13
76	FLARE-LESS LONG GAMMA-RAY BURSTS AND THE PROPERTIES OF THEIR MASSIVE PROGENITOR STARS. Astrophysical Journal Letters, 2010, 710, L103-L106.	8.3	9
77	Off-axis Synchrotron Light Curves from Full-time-domain Moving-mesh Simulations of Jets from Massive Stars. Astrophysical Journal, 2019, 880, 135.	4.5	9
78	High-frequency Voronoi noise reduced by smoothed-mesh motion. Monthly Notices of the Royal Astronomical Society, 2015, 449, 2718-2722.	4.4	8
79	How Binaries Accrete: Hydrodynamic Simulations with Passive Tracer Particles. Astrophysical Journal, 2022, 932, 24.	4.5	8
80	Ellipsars: Ring-like Explosions from Flattened Stars. Astrophysical Journal Letters, 2022, 931, L16.	8.3	4
81	Numerical Simulations of Driven Supersonic Relativistic MHD Turbulence. , 2011, , .		3
82	Off-Axis Afterglow Light Curves from High-Resolution Hydrodynamical Jet Simulations. , 2011, , .		3
83	Late flares from GRBs â€" Clues about the Central Engine. AIP Conference Proceedings, 2006, , .	0.4	2
84	Fallback in Supernovae and Black Hole Formation. , 0, , 332-333.		1
85	Erupting Fireballs, Nozzles and Precursors. AIP Conference Proceedings, 2003, , .	0.4	0
86	An on-line library of afterglow light curves. , 2011, , .		0