

# Andrew I Macfadyen

## List of Publications by Year in descending order

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86  
papers

7,471  
citations

36303

51  
h-index

62596

80  
g-index

87  
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87  
docs citations

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times ranked

5074  
citing authors

#	ARTICLE	IF	CITATIONS
1	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. <i>Astrophysical Journal Letters</i> , 2022, 927, L17.	8.3	41
2	Ellipsars: Ring-like Explosions from Flattened Stars. <i>Astrophysical Journal Letters</i> , 2022, 931, L16.	8.3	4
3	How Binaries Accrete: Hydrodynamic Simulations with Passive Tracer Particles. <i>Astrophysical Journal</i> , 2022, 932, 24.	4.5	8
4	Equilibrium Eccentricity of Accreting Binaries. <i>Astrophysical Journal Letters</i> , 2021, 909, L13.	8.3	50
5	Gas-driven Inspiral of Binaries in Thin Accretion Disks. <i>Astrophysical Journal</i> , 2020, 900, 43.	4.5	73
6	Circumbinary Disks: Accretion and Torque as a Function of Mass Ratio and Disk Viscosity. <i>Astrophysical Journal</i> , 2020, 901, 25.	4.5	99
7	GW170817 Afterglow Reveals that Short Gamma-Ray Bursts are Neutron Star Mergers. <i>Astrophysical Journal Letters</i> , 2019, 880, L23.	8.3	41
8	Off-axis Synchrotron Light Curves from Full-time-domain Moving-mesh Simulations of Jets from Massive Stars. <i>Astrophysical Journal</i> , 2019, 880, 135.	4.5	9
9	The Optical Afterglow of GW170817: An Off-axis Structured Jet and Deep Constraints on a Globular Cluster Origin. <i>Astrophysical Journal Letters</i> , 2019, 883, L1.	8.3	69
10	Probing gas disc physics with LISA: simulations of an intermediate mass ratio inspiral in an accretion disc. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 486, 2754-2765.	4.4	45
11	An Embedded X-Ray Source Shines through the Aspherical AT2018cow: Revealing the Inner Workings of the Most Luminous Fast-evolving Optical Transients. <i>Astrophysical Journal</i> , 2019, 872, 18.	4.5	160
12	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. <i>Astrophysical Journal Letters</i> , 2019, 886, L17.	8.3	117
13	The Binary Neutron Star Event LIGO/Virgo GW170817 160 Days after Merger: Synchrotron Emission across the Electromagnetic Spectrum. <i>Astrophysical Journal Letters</i> , 2018, 856, L18.	8.3	258
14	Numerical Simulations of the Jet Dynamics and Synchrotron Radiation of Binary Neutron Star Merger Event GW170817/GRB 170817A. <i>Astrophysical Journal</i> , 2018, 863, 58.	4.5	92
15	A Decline in the X-Ray through Radio Emission from GW170817 Continues to Support an Off-axis Structured Jet. <i>Astrophysical Journal Letters</i> , 2018, 863, L18.	8.3	138
16	The late inspiral of supermassive black hole binaries with circumbinary gas discs in the LISA band. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 476, 2249-2257.	4.4	76
17	Constraining the Outflow Structure of the Binary Neutron Star Merger Event GW170817/GRB170817A with a Markov Chain Monte Carlo Analysis. <i>Astrophysical Journal</i> , 2018, 869, 55.	4.5	47
18	Radio Sky Maps of the GRB 170817A Afterglow from Simulations. <i>Astrophysical Journal Letters</i> , 2018, 865, L2.	8.3	13

#	ARTICLE	IF	CITATIONS
19	Jets in Hydrogen-poor Superluminous Supernovae: Constraints from a Comprehensive Analysis of Radio Observations. <i>Astrophysical Journal</i> , 2018, 856, 56.	4.5	30
20	The THESEUS space mission concept: science case, design and expected performances. <i>Advances in Space Research</i> , 2018, 62, 191-244.	2.6	133
21	A GRB and Broad-lined Type Ic Supernova from a Single Central Engine. <i>Astrophysical Journal</i> , 2018, 860, 38.	4.5	54
22	Minidisks in Binary Black Hole Accretion. <i>Astrophysical Journal</i> , 2017, 835, 199.	4.5	51
23	On the orbital evolution of supermassive black hole binaries with circumbinary accretion discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, 4258-4267.	4.4	105
24	A transition in circumbinary accretion discs at a binary mass ratio of 1:25. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 2379-2393.	4.4	79
25	A NARROW SHORT-DURATION GRB JET FROM A WIDE CENTRAL ENGINE. <i>Astrophysical Journal</i> , 2015, 813, 64.	4.5	45
26	AN ANALYSIS OF <i>CHANDRA</i> DEEP FOLLOW-UP GAMMA-RAY BURSTS: IMPLICATIONS FOR OFF-AXIS JETS. <i>Astrophysical Journal</i> , 2015, 806, 15.	4.5	57
27	High-frequency Voronoi noise reduced by smoothed-mesh motion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 449, 2718-2722.	4.4	8
28	PRODUCING MAGNETAR MAGNETIC FIELDS IN THE MERGER OF BINARY NEUTRON STARS. <i>Astrophysical Journal</i> , 2015, 809, 39.	4.5	94
29	GAMMA-RAY BURSTS ARE OBSERVED OFF-AXIS. <i>Astrophysical Journal</i> , 2015, 799, 3.	4.5	82
30	A reduced orbital period for the supermassive black hole binary candidate in the quasar PG 1302-102?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 452, 2540-2545.	4.4	45
31	FROM ENGINE TO AFTERGLOW: COLLAPSARS NATURALLY PRODUCE TOP-HEAVY JETS AND EARLY-TIME PLATEAUS IN GAMMA-RAY BURST AFTERGLOWS. <i>Astrophysical Journal</i> , 2015, 806, 205.	4.5	42
32	Characteristic signatures in the thermal emission from accreting binary black holes. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2015, 446, L36-L40.	3.3	75
33	A MISSING-LINK IN THE SUPERNOVA-GRB CONNECTION: THE CASE OF SN 2012ap. <i>Astrophysical Journal</i> , 2015, 805, 187.	4.5	43
34	Binary black hole accretion during inspiral and merger. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2015, 447, L80-L84.	3.3	90
35	SHOCK CORRUGATION BY RAYLEIGH-TAYLOR INSTABILITY IN GAMMA-RAY BURST AFTERGLOW JETS. <i>Astrophysical Journal Letters</i> , 2014, 791, L1.	8.3	23
36	THE FATE OF FALLBACK MATTER AROUND NEWLY BORN COMPACT OBJECTS. <i>Astrophysical Journal</i> , 2014, 781, 119.	4.5	73

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37	BINARY BLACK HOLE ACCRETION FROM A CIRCUMBINARY DISK: GAS DYNAMICS INSIDE THE CENTRAL CAVITY. <i>Astrophysical Journal</i> , 2014, 783, 134.	4.5	254
38	THE MIGRATION OF GAP-OPENING PLANETS IS NOT LOCKED TO VISCOUS DISK EVOLUTION. <i>Astrophysical Journal Letters</i> , 2014, 792, L10.	8.3	148
39	Accretion into the central cavity of a circumbinary disc. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 436, 2997-3020.	4.4	185
40	SPECTRAL AND INTERMITTENCY PROPERTIES OF RELATIVISTIC TURBULENCE. <i>Astrophysical Journal Letters</i> , 2013, 763, L12.	8.3	63
41	MAGNETIC ENERGY PRODUCTION BY TURBULENCE IN BINARY NEUTRON STAR MERGERS. <i>Astrophysical Journal Letters</i> , 2013, 769, L29.	8.3	88
42	RAYLEIGH-TAYLOR INSTABILITY IN A RELATIVISTIC FIREBALL ON A MOVING COMPUTATIONAL GRID. <i>Astrophysical Journal</i> , 2013, 775, 87.	4.5	60
43	GAMMA-RAY BURST AFTERGLOW LIGHT CURVES FROM A LORENTZ-BOOSTED SIMULATION FRAME AND THE SHAPE OF THE JET BREAK. <i>Astrophysical Journal</i> , 2013, 767, 141.	4.5	38
44	The transient gravitational-wave sky. <i>Classical and Quantum Gravity</i> , 2013, 30, 193002.	4.0	40
45	NO FLARES FROM GAMMA-RAY BURST AFTERGLOW BLAST WAVES ENCOUNTERING SUDDEN CIRCUMBURST DENSITY CHANGE. <i>Astrophysical Journal</i> , 2013, 773, 2.	4.5	22
46	GAP OPENING BY EXTREMELY LOW-MASS PLANETS IN A VISCOUS DISK. <i>Astrophysical Journal</i> , 2013, 769, 41.	4.5	146
47	MULTI-WAVELENGTH OBSERVATIONS OF SUPERNOVA 2011ei: TIME-DEPENDENT CLASSIFICATION OF TYPE IIb AND Ib SUPERNOVAE AND IMPLICATIONS FOR THEIR PROGENITORS. <i>Astrophysical Journal</i> , 2013, 767, 71.	4.5	64
48	A $\gamma$ -BOOSTED FIREBALL MODEL FOR STRUCTURED RELATIVISTIC JETS. <i>Astrophysical Journal Letters</i> , 2013, 776, L9.	8.3	17
49	Slightly two- or three-dimensional self-similar solutions. <i>Physics of Fluids</i> , 2012, 24, .	4.0	13
50	OBSERVATIONAL IMPLICATIONS OF GAMMA-RAY BURST AFTERGLOW JET SIMULATIONS AND NUMERICAL LIGHT CURVE CALCULATIONS. <i>Astrophysical Journal</i> , 2012, 751, 155.	4.5	72
51	GLOBAL CALCULATIONS OF DENSITY WAVES AND GAP FORMATION IN PROTOPLANETARY DISKS USING A MOVING MESH. <i>Astrophysical Journal</i> , 2012, 755, 7.	4.5	54
52	NUMERICAL SIMULATIONS OF DRIVEN RELATIVISTIC MAGNETOHYDRODYNAMIC TURBULENCE. <i>Astrophysical Journal</i> , 2012, 744, 32.	4.5	66
53	GAMMA-RAY BURST AFTERGLOW SCALING RELATIONS FOR THE FULL BLAST WAVE EVOLUTION. <i>Astrophysical Journal Letters</i> , 2012, 747, L30.	8.3	39
54	GAMMA-RAY BURST AFTERGLOW BROADBAND FITTING BASED DIRECTLY ON HYDRODYNAMICS SIMULATIONS. <i>Astrophysical Journal</i> , 2012, 749, 44.	4.5	115

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55	Numerical Simulations of Driven Supersonic Relativistic MHD Turbulence. , 2011, , .		3
56	An on-line library of afterglow light curves. , 2011, , .		0
57	Off-Axis Afterglow Light Curves from High-Resolution Hydrodynamical Jet Simulations. , 2011, , .		3
58	TESS: A RELATIVISTIC HYDRODYNAMICS CODE ON A MOVING VORONOI MESH. Astrophysical Journal, Supplement Series, 2011, 197, 15.	7.7	109
59	SYNTHETIC OFF-AXIS LIGHT CURVES FOR LOW-ENERGY GAMMA-RAY BURSTS. Astrophysical Journal Letters, 2011, 733, L37.	8.3	74
60	THE HYDRODYNAMICS OF GAMMA-RAY BURST REMNANTS. Astrophysical Journal, 2010, 716, 1028-1039.	4.5	20
61	FLARE-LESS LONG GAMMA-RAY BURSTS AND THE PROPERTIES OF THEIR MASSIVE PROGENITOR STARS. Astrophysical Journal Letters, 2010, 710, L103-L106.	8.3	9
62	OFF-AXIS GAMMA-RAY BURST AFTERGLOW MODELING BASED ON A TWO-DIMENSIONAL AXISYMMETRIC HYDRODYNAMICS SIMULATION. Astrophysical Journal, 2010, 722, 235-247.	4.5	151
63	THE DYNAMICS AND AFTERGLOW RADIATION OF GAMMA-RAY BURSTS. I. CONSTANT DENSITY MEDIUM. Astrophysical Journal, 2009, 698, 1261-1272.	4.5	136
64	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
65	Ultra-relativistic geometrical shock dynamics and vorticity. Journal of Fluid Mechanics, 2008, 604, 325-338.	3.4	24
66	Cosmic Rays from Transrelativistic Supernovae. Astrophysical Journal, 2008, 673, 928-933.	4.5	53
67	An Eccentric Circumbinary Accretion Disk and the Detection of Binary Massive Black Holes. Astrophysical Journal, 2008, 672, 83-93.	4.5	290
68	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
69	Magnetarâ€Driven Magnetic Tower as a Model for Gammaâ€Ray Bursts and Asymmetric Supernovae. Astrophysical Journal, 2007, 669, 546-560.	4.5	66
70	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
71	AnHSTStudy of the Supernovae Accompanying GRB 040924 and GRB 041006. Astrophysical Journal, 2006, 636, 391-399.	4.5	66
72	Stellar Explosions by Magnetic Towers. Astrophysical Journal, 2006, 647, 1192-1212.	4.5	86

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73	RAM: A Relativistic Adaptive Mesh Refinement Hydrodynamics Code. <i>Astrophysical Journal, Supplement Series</i> , 2006, 164, 255-279.	7.7	121
74	A novel explosive process is required for the $\hat{\Gamma}$ -ray burst GRB 060614. <i>Nature</i> , 2006, 444, 1053-1055.	27.8	319
75	Late flares from GRBs – Clues about the Central Engine. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	2
76	The afterglow of GRB 050709 and the nature of the short-hard $\hat{\Gamma}$ -ray bursts. <i>Nature</i> , 2005, 437, 845-850.	27.8	430
77	An HST Search for Supernovae Accompanying $\chi$ -Ray Flashes. <i>Astrophysical Journal</i> , 2005, 627, 877-887.	4.5	82
78	ASTRONOMY: Long Gamma-Ray Bursts. <i>Science</i> , 2004, 303, 45-46.	12.6	70
79	Axisymmetric Magnetohydrodynamic Simulations of the Collapsar Model for Gamma-Ray Bursts. <i>Astrophysical Journal</i> , 2003, 599, L5-L8.	4.5	127
80	Relativistic Jets in Collapsars. <i>Astrophysical Journal</i> , 2003, 586, 356-371.	4.5	369
81	Erupting Fireballs, Nozzles and Precursors. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	0
82	Precursors and $e^{\pm}$ pair loading from erupting fireballs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 331, 197-202.	4.4	51
83	Luminosity and Variability of Collimated Gamma-Ray Bursts. <i>Astrophysical Journal</i> , 2002, 577, 302-310.	4.5	47
84	Supernovae, Jets, and Collapsars. <i>Astrophysical Journal</i> , 2001, 550, 410-425.	4.5	592
85	Fallback in Supernovae and Black Hole Formation. , 0, , 332-333.		1
86	Hydrodynamical response of a circumbinary gas disc to black hole recoil and mass loss. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 404, 947-962.	4.4	49