Benjamin D G Chandran

List of Publications by Year
in descending order

76 papers	3,755 citations	117625 34 h-index	128289 60 g-index
76 all docs	76 docs citations	76 times ranked	1791 citing authors

#	Article	IF	Citations
1	Features of Magnetic Field Switchbacks in Relation to the Local-field Geometry of Large-amplitude AlfvÃ©nic Oscillations: Wind and PSP Observations. Astrophysical Journal Letters, 2022, 932, L13.	8.3	4
2	Multiscale Solar Wind Turbulence Properties inside and near Switchbacks Measured by the Parker Solar Probe. Astrophysical Journal, 2021, 912, 28.	4.5	23
3	How AlfvÃ©n waves energize the solar wind: heat versus work. Journal of Plasma Physics, 2021, 87, .	2.1	5
4	An approximate analytic solution to the coupled problems of coronal heating and solar-wind acceleration. Journal of Plasma Physics, 2021, 87, .	2.1	11
5	Turbulent Generation of Magnetic Switchbacks in the AlfvÃ©nic Solar Wind. Astrophysical Journal, 2021, 915, 52.	4.5	43
6	Evolution of Large-amplitude AlfvÃ©n Waves and Generation of Switchbacks in the Expanding Solar Wind. Astrophysical Journal, 2021, 918, 62.	4.5	24
7	Constraining Ion-Scale Heating and Spectral Energy Transfer in Observations of Plasma Turbulence. Physical Review Letters, 2020, 125, 025102.	7.8	29
8	Ion-scale Electromagnetic Waves in the Inner Heliosphere. Astrophysical Journal, Supplement Series, 2020, 246, 66.	7.7	67
9	Cross Helicity Reversals in Magnetic Switchbacks. Astrophysical Journal, Supplement Series, 2020, 246, 67.	7.7	61
10	Mirror and Proton-cyclotron Instabilities Coexisting with Ambient Turbulence in a Protonâ€“Alpha Plasma. Astrophysical Journal, 2020, 889, 7.	4.5	11
11	The Enhancement of Proton Stochastic Heating in the Near-Sun Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 30.	7.7	23
12	Sharp AlfvÃ©nic Impulses in the Near-Sun Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 45.	7.7	115
13	Hybrid-kinetic Simulations of Ion Heating in AlfvÃ©nic Turbulence. Astrophysical Journal, 2019, 879, 53.	4.5	66
14	Interplay between intermittency and dissipation in collisionless plasma turbulence. Journal of Plasma Physics, 2019, 85, .	2.1	19
15	Reflection-driven magnetohydrodynamic turbulence in the solar atmosphere and solar wind. Journal of Plasma Physics, 2019, 85, .	2.1	50
16	Proton Temperature-anisotropy Instability Coexisting with Ambient Turbulence in the Solar-wind Plasma. Astrophysical Journal, 2019, 875, 125.	4.5	10
17	Self-induced Scattering of Strahl Electrons in the Solar Wind. Astrophysical Journal, 2019, 886, 136.	4.5	54
18	Ion Heating Resulting from the Deceleration of Alpha Particles by a Proton-alpha Drift Instability in a Nonuniform Solar-wind Plasma. Astrophysical Journal, 2019, 870, 121.	4.5	10

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19	Two-dimensional Nonlinear Simulations of Temperature-anisotropy Instabilities with a Proton-alpha Drift. Astrophysical Journal, 2018, 856, 153.	4.5	7
20	Parametric instability, inverse cascade and theÂ range of solar-wind turbulence. Journal of Plasma Physics, 2018, 84, .	2.1	39
21	Stochastic proton heating by kinetic-AlfvÃ©n-wave turbulence in moderately high- plasmas. Journal of Plasma Physics, 2018, 84, .	2.1	25
22	Heating of accretion-disk coronae and jets by general relativistic magnetohydrodynamic turbulence. Journal of Plasma Physics, 2018, 84, .	2.1	12
23	NHDS: The New Hampshire Dispersion Relation Solver. Research Notes of the AAS, 2018, 2, 13.	0.7	41
24	Disruption of AlfvÃ©nic turbulence by magnetic reconnection in a collisionless plasma. Journal of Plasma Physics, 2017, 83, .	2.1	66
25	COLLISIONLESS ISOTROPIZATION OF THE SOLAR-WIND PROTONS BY COMPRESSIVE FLUCTUATIONS AND PLASMA INSTABILITIES. Astrophysical Journal, 2016, 831, 128.	4.5	53
26	EVOLUTION OF THE PROTON VELOCITY DISTRIBUTION DUE TO STOCHASTIC HEATING IN THE NEAR-SUN SOLAR WIND. Astrophysical Journal, 2016, 820, 47.	4.5	23
27	Solar Wind Electrons Alphas and Protons (SWEAP) Investigation: Design of the Solar Wind and Coronal Plasma Instrument Suite for Solar Probe Plus. Space Science Reviews, 2016, 204, 131-186.	8.1	439
28	ON THE CONSERVATION OF CROSS HELICITY AND WAVE ACTION IN SOLAR-WIND MODELS WITH NON-WKB ALFVÃ‰N WAVE REFLECTION. Astrophysical Journal, 2015, 811, 50.	4.5	6
29	A MODIFIED VERSION OF TAYLORâ€™S HYPOTHESIS FOR SOLAR PROBE PLUS OBSERVATIONS. Astrophysical Journal Letters, 2015, 801, L18.	8.3	25
30	DECELERATION OF ALPHA PARTICLES IN THE SOLAR WIND BY INSTABILITIES AND THE ROTATIONAL FORCE: IMPLICATIONS FOR HEATING, AZIMUTHAL FLOW, AND THE PARKER SPIRAL MAGNETIC FIELD. Astrophysical Journal, 2015, 806, 157.	4.5	24
31	ACCELERATION OF RELATIVISTIC ELECTRONS BY MAGNETOHYDRODYNAMIC TURBULENCE: IMPLICATIONS FOR NON-THERMAL EMISSION FROM BLACK HOLE ACCRETION DISKS. Astrophysical Journal, 2014, 791, 71.	4.5	51
32	STOCHASTIC ACCELERATION OF ELECTRONS BY FAST MAGNETOSONIC WAVES IN SOLAR FLARES: THE EFFECTS OF ANISOTROPY IN VELOCITY AND WAVENUMBER SPACE. Astrophysical Journal, 2014, 796, 45.	4.5	4
33	THREE-DIMENSIONAL HYBRID SIMULATION STUDY OF ANISOTROPIC TURBULENCE IN THE PROTON KINETIC REGIME. Astrophysical Journal, 2014, 788, 178.	4.5	30
34	MAGNETOHYDRODYNAMIC SLOW MODE WITH DRIFTING He⁺⁺: IMPLICATIONS FOR CORONAL SEISMOLOGY AND THE SOLAR WIND. Astrophysical Journal, 2014, 788, 35.	4.5	6
35	PERPENDICULAR ION HEATING BY REDUCED MAGNETOHYDRODYNAMIC TURBULENCE. Astrophysical Journal, 2013, 776, 90.	4.5	30
36	THE EFFICIENCY OF SECOND-ORDER FERMI ACCELERATION BY WEAKLY COMPRESSIBLE MAGNETOHYDRODYNAMIC TURBULENCE. Astrophysical Journal, 2013, 777, 128.	4.5	21

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37	THE DISPERSION RELATIONS AND INSTABILITY THRESHOLDS OF OBLIQUE PLASMA MODES IN THE PRESENCE OF AN ION BEAM. Astrophysical Journal, 2013, 764, 88.	4.5	48
38	VELOCITY-SHEAR-INDUCED MODE COUPLING IN THE SOLAR ATMOSPHERE AND SOLAR WIND: IMPLICATIONS FOR PLASMA HEATING AND MHD TURBULENCE. Astrophysical Journal, 2013, 769, 142.	4.5	11
39	A PARALLEL-PROPAGATING ALFVÃ‰NIC ION-BEAM INSTABILITY IN THE HIGH-BETA SOLAR WIND. Astrophysical Journal, 2013, 773, 8.	4.5	46
40	INSTABILITIES DRIVEN BY THE DRIFT AND TEMPERATURE ANISOTROPY OF ALPHA PARTICLES IN THE SOLAR WIND. Astrophysical Journal, 2013, 773, 163.	4.5	59
41	LIMITS ON ALPHA PARTICLE TEMPERATURE ANISOTROPY AND DIFFERENTIAL FLOW FROM KINETIC INSTABILITIES: SOLAR WIND OBSERVATIONS. Astrophysical Journal Letters, 2013, 777, L3.	8.3	50
42	OBSERVATIONAL TEST OF STOCHASTIC HEATING IN LOW-Î² FAST-SOLAR-WIND STREAMS. Astrophysical Journal, 2013, 774, 96.	4.5	51
43	DIRECT NUMERICAL SIMULATIONS OF REFLECTION-DRIVEN, REDUCED MAGNETOHYDRODYNAMIC TURBULENCE FROM THE SUN TO THE ALFVÃ‰N CRITICAL POINT. Astrophysical Journal, 2013, 776, 124.	4.5	98
44	RESONANCE BROADENING AND HEATING OF CHARGED PARTICLES IN MAGNETOHYDRODYNAMIC TURBULENCE. Astrophysical Journal, 2012, 758, 78.	4.5	34
45	THE EFFECTS OF WAVE ESCAPE ON FAST MAGNETOSONIC WAVE TURBULENCE IN SOLAR FLARES. Astrophysical Journal, 2012, 757, 72.	4.5	1
46	INCORPORATING KINETIC PHYSICS INTO A TWO-FLUID SOLAR-WIND MODEL WITH TEMPERATURE ANISOTROPY AND LOW-FREQUENCY ALFVÃ‰N-WAVE TURBULENCE. Astrophysical Journal, 2011, 743, 197.	4.5	167
47	CORONAL FARADAY ROTATION FLUCTUATIONS AND A WAVE/TURBULENCE-DRIVEN MODEL OF THE SOLAR WIND. Astrophysical Journal, 2010, 722, 1495-1503.	4.5	34
48	RESONANT INTERACTIONS BETWEEN PROTONS AND OBLIQUE ALFVÃ‰N/ION-CYCLOTRON WAVES IN THE SOLAR CORONA AND SOLAR FLARES. Astrophysical Journal, 2010, 722, 710-720.	4.5	24
49	PERPENDICULAR PROTON HEATING DUE TO ENERGY CASCADE OF FAST MAGNETOSONIC WAVES IN THE SOLAR CORONA. Astrophysical Journal, 2010, 709, 1003-1008.	4.5	25
50	ALFVÃ‰N-WAVE TURBULENCE AND PERPENDICULAR ION TEMPERATURES IN CORONAL HOLES. Astrophysical Journal, 2010, 720, 548-554.	4.5	76
51	PERPENDICULAR ION HEATING BY LOW-FREQUENCY ALFVÃ‰N-WAVE TURBULENCE IN THE SOLAR WIND. Astrophysical Journal, 2010, 720, 503-515.	4.5	248
52	PARKER/BUOYANCY INSTABILITIES WITH ANISOTROPIC THERMAL CONDUCTION, COSMIC RAYS, AND ARBITRARY MAGNETIC FIELD STRENGTH. Astrophysical Journal, 2009, 690, 566-579.	4.5	7
53	THE TURBULENT HEATING RATE IN STRONG MAGNETOHYDRODYNAMIC TURBULENCE WITH NONZERO CROSS HELICITY. Astrophysical Journal, 2009, 701, 652-657.	4.5	24
54	ALFVÃ‰N WAVE REFLECTION AND TURBULENT HEATING IN THE SOLAR WIND FROM 1 SOLAR RADIUS TO 1 AU: AN ANALYTICAL TREATMENT. Astrophysical Journal, 2009, 707, 1659-1667.	4.5	111

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55	BUOYANCY INSTABILITIES IN GALAXY CLUSTERS: CONVECTION DUE TO ADIABATIC COSMIC RAYS AND ANISOTROPIC THERMAL CONDUCTION. Astrophysical Journal, 2009, 699, 348-361.	4.5	61
56	CONSTRAINING LOW-FREQUENCY ALFVÃ‰NIC TURBULENCE IN THE SOLAR WIND USING DENSITY-FLUCTUATION MEASUREMENTS. Astrophysical Journal, 2009, 707, 1668-1675.	4.5	88
57	Weakly Turbulent Magnetohydrodynamic Waves in Compressible Low-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>Plasmas. Physical Review Letters, 2008, 101, 235004.	7.8	37
58	Strong Anisotropic MHD Turbulence with Cross Helicity. Astrophysical Journal, 2008, 685, 646-658.	4.5	111
59	Convection and AGN Feedback in Clusters of Galaxies. Astrophysical Journal, 2007, 671, 1413-1433.	4.5	28
60	AGNâ€driven Convection in Galaxyâ€Cluster Plasmas. Astrophysical Journal, 2005, 632, 809-820.	4.5	34
61	Weak Compressible Magnetohydrodynamic Turbulence in the Solar Corona. Physical Review Letters, 2005, 95, 265004.	7.8	114
62	Turbulent Heating of Galaxyâ€Cluster Plasmas. Astrophysical Journal, 2005, 622, 205-216.	4.5	88
63	Divergence of Neighboring Magnetic-Field Lines and Fast-Particle Diffusion in Strong Magnetohydrodynamic Turbulence, with Application to Thermal Conduction in Galaxy Clusters. Physical Review Letters, 2004, 92, 045001.	7.8	36
64	Acceleration of Energetic Particles by Largeâ€Scale Compressible Magnetohydrodynamic Turbulence. Astrophysical Journal, 2004, 603, 23-27.	4.5	20
65	Thermal Conduction and Particle Transport in Strong Magnetohydrodynamic Turbulence, with Application to Galaxy Cluster Plasmas. Astrophysical Journal, 2004, 602, 170-180.	4.5	40
66	Convection in Galaxyâ€Cluster Plasmas Driven by Active Galactic Nuclei and Cosmicâ€Ray Buoyancy. Astrophysical Journal, 2004, 616, 169-177.	4.5	16
67	Particle Acceleration by Slow Modes in Strong Compressible Magnetohydrodynamic Turbulence, with Application to Solar Flares. Astrophysical Journal, 2003, 599, 1426-1433.	4.5	22
68	The Importance of Anisotropic Interstellar Turbulence and Molecular-Cloud Magnetic Mirrors for Galactic Cosmic-Ray Propagation. Space Sciences Series of ISSI, 2001, , 271-280.	0.0	0
69	Confinement and Isotropization of Galactic Cosmic Rays by Moleculaâ€Cloud Magnetic Mirrors When Turbulent Scattering Is Weak. Astrophysical Journal, 2000, 529, 513-535.	4.5	53
70	Scattering of Energetic Particles by Anisotropic Magnetohydrodynamic Turbulence with a Goldreich-Sridhar Power Spectrum. Physical Review Letters, 2000, 85, 4656-4659.	7.8	158
71	Heat Transport Along an Inhomogeneous Magnetic Field. I. Periodic Magnetic Mirrors. Astrophysical Journal, 1999, 525, 638-650.	4.5	23
72	Thermal Conduction in a Tangled Magnetic Field. Physical Review Letters, 1998, 80, 3077-3080.	7.8	158

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73	Viscous Relaxation and the Transition between the Kinematic and Nonlinear Galactic Dynamos. Astrophysical Journal, 1998, 492, 179-189.	4.5	6
74	The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. Astrophysical Journal, 1997, 482, 156-166.	4.5	11
75	A Comparison between Markovian and Nonâ€Markovian Closures in Simulations of Nonlinear Dynamos with Application to the Protogalactic Dynamo. Astrophysical Journal, 1997, 485, 148-158.	4.5	8
76	The Growth of Cross Helicity in the Protogalactic Dynamo. Astrophysical Journal, 1997, 490, 156-165.	4.5	2