

Gary M Webb

List of Publications by Year in descending order

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82
papers

2,389
citations

236612

25
h-index

205818

48
g-index

84
all docs

84
docs citations

84
times ranked

1192
citing authors

#	ARTICLE	IF	CITATIONS
1	Interstellar pickup ions and quasi-perpendicular shocks: Implications for the termination shock and interplanetary shocks. <i>Journal of Geophysical Research</i> , 1996, 101, 457-477.	3.3	346
2	PARTICLE ACCELERATION VIA RECONNECTION PROCESSES IN THE SUPERSONIC SOLAR WIND. <i>Astrophysical Journal</i> , 2014, 797, 28.	1.6	185
3	DIFFUSIVE SHOCK ACCELERATION AND RECONNECTION ACCELERATION PROCESSES. <i>Astrophysical Journal</i> , 2015, 814, 137.	1.6	156
4	THE TRANSPORT OF LOW-FREQUENCY TURBULENCE IN ASTROPHYSICAL FLOWS. I. GOVERNING EQUATIONS. <i>Astrophysical Journal</i> , 2012, 745, 35.	1.6	133
5	Perpendicular diffusion coefficient for charged particles of arbitrary energy. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	125
6	A KINETIC TRANSPORT THEORY FOR PARTICLE ACCELERATION AND TRANSPORT IN REGIONS OF MULTIPLE CONTRACTING AND RECONNECTING INERTIAL-SCALE FLUX ROPES. <i>Astrophysical Journal</i> , 2015, 801, 112.	1.6	124
7	SMALL-SCALE MAGNETIC ISLANDS IN THE SOLAR WIND AND THEIR ROLE IN PARTICLE ACCELERATION. I. DYNAMICS OF MAGNETIC ISLANDS NEAR THE HELIOSPHERIC CURRENT SHEET. <i>Astrophysical Journal</i> , 2015, 808, 181.	1.6	106
8	SMALL-SCALE MAGNETIC ISLANDS IN THE SOLAR WIND AND THEIR ROLE IN PARTICLE ACCELERATION. II. PARTICLE ENERGIZATION INSIDE MAGNETICALLY CONFINED CAVITIES. <i>Astrophysical Journal</i> , 2016, 827, 122.	1.6	80
9	TIME-DEPENDENT ACCELERATION OF INTERSTELLAR PICKUP IONS AT THE HELIOSPHERIC TERMINATION SHOCK USING A FOCUSED TRANSPORT APPROACH. <i>Astrophysical Journal</i> , 2009, 693, 534-551.	1.6	57
10	The diffusion approximation and transport theory for cosmic rays in relativistic flows. <i>Astrophysical Journal</i> , 1989, 340, 1112.	1.6	54
11	Relativistic transport theory for cosmic rays. <i>Astrophysical Journal</i> , 1985, 296, 319.	1.6	51
12	COMBINING DIFFUSIVE SHOCK ACCELERATION WITH ACCELERATION BY CONTRACTING AND RECONNECTING SMALL-SCALE FLUX ROPES AT HELIOSPHERIC SHOCKS. <i>Astrophysical Journal</i> , 2016, 827, 47.	1.6	50
13	A Focused Transport Approach to Pickup Ion Shock Acceleration: Implications for the Termination Shock. <i>Astrophysical Journal</i> , 2007, 662, 350-371.	1.6	48
14	PICKUP ION DYNAMICS AT THE HELIOSPHERIC TERMINATION SHOCK OBSERVED BY <i>VOYAGER 2</i> . <i>Astrophysical Journal</i> , 2010, 715, 1109-1116.	1.6	45
15	Compressible and Incompressible Magnetic Turbulence Observed in the Very Local Interstellar Medium by Voyager 1. <i>Astrophysical Journal</i> , 2019, 887, 116.	1.6	38
16	Fluid relabelling symmetries, Lie point symmetries and the Lagrangian map in magnetohydrodynamics and gas dynamics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 545-579.	0.7	36
17	An introductory guide to fluid models with anisotropic temperatures. Part 1. CGL description and collisionless fluid hierarchy. <i>Journal of Plasma Physics</i> , 2019, 85, .	0.7	32
18	Transport of energetic charged particles in a radial magnetic field. Part 1. Large-angle scattering. <i>Journal of Plasma Physics</i> , 2000, 64, 507-541.	0.7	30

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19	Magnetohydrodynamic waves in non-uniform flows II: stress-energy tensors, conservation laws and Lie symmetries. <i>Journal of Plasma Physics</i> , 2005, 71, 811.	0.7	29
20	Diffusive Compression Acceleration and Turbulent Diffusion of Cosmic Rays in Quasi-periodic and Turbulent Flows. <i>Astrophysical Journal</i> , 2003, 595, 195-226.	1.6	28
21	Homotopy formulas for the magnetic vector potential and magnetic helicity: The Parker spiral interplanetary magnetic field and magnetic flux ropes. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	28
22	Magnetohydrodynamic waves in non-uniform flows I: a variational approach. <i>Journal of Plasma Physics</i> , 2005, 71, 785.	0.7	27
23	Local and nonlocal advected invariants and helicities in magnetohydrodynamics and gas dynamics I: Lie dragging approach. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 095501.	0.7	27
24	A FOCUSED TRANSPORT APPROACH TO THE TIME-DEPENDENT SHOCK ACCELERATION OF SOLAR ENERGETIC PARTICLES AT A FAST TRAVELING SHOCK. <i>Astrophysical Journal</i> , 2012, 746, 104.	1.6	26
25	Particle Acceleration Due to Cosmic-ray Viscosity and Fluid Shear in Astrophysical Jets. <i>Astrophysical Journal</i> , 2018, 855, 31.	1.6	26
26	Structure of Energetic Particle Mediated Shocks Revisited. <i>Astrophysical Journal</i> , 2017, 841, 4.	1.6	25
27	Magnetohydrodynamics and Fluid Dynamics: Action Principles and Conservation Laws. <i>Lecture Notes in Physics</i> , 2018, , .	0.3	25
28	Modeling Energetic Particle Acceleration and Transport in a Solar Wind Region with Contracting and Reconnecting Small-scale Flux Ropes at Earth Orbit. <i>Astrophysical Journal</i> , 2019, 887, 77.	1.6	25
29	New Closures for More Precise Modeling of Landau Damping in the Fluid Framework. <i>Physical Review Letters</i> , 2018, 121, 135101.	2.9	24
30	Local and nonlocal advected invariants and helicities in magnetohydrodynamics and gas dynamics: II. Noether's theorems and Casimirs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 095502.	0.7	22
31	An introductory guide to fluid models with anisotropic temperatures. Part 2. Kinetic theory, Padé approximants and Landau fluid closures. <i>Journal of Plasma Physics</i> , 2019, 85, .	0.7	19
32	ALFVÉN SIMPLE WAVES: EULER POTENTIALS AND MAGNETIC HELICITY. <i>Astrophysical Journal</i> , 2010, 725, 2128-2151.	1.6	18
33	Wave interactions in magnetohydrodynamics, and cosmic-ray-modified shocks. <i>Journal of Plasma Physics</i> , 1999, 61, 295-346.	0.7	17
34	The Mediation of Collisionless Oblique Magnetized Shocks by Energetic Particles. <i>Astrophysical Journal</i> , 2018, 868, 120.	1.6	17
35	Evolution of Entropy and Mediation of the Solar Wind by Turbulence. <i>Astrophysical Journal</i> , 2020, 891, 34.	1.6	17
36	Green's theorem and Green's functions for the steady-state cosmic-ray equation of transport. <i>Astrophysics and Space Science</i> , 1977, 50, 205-223.	0.5	15

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37	Particle Acceleration by Cosmic Ray Viscosity in Radio-jet Shear Flows. <i>Astrophysical Journal</i> , 2019, 881, 123.	1.6	15
38	First order and second order Fermi acceleration of energetic charged particles by shock waves. <i>Astrophysical Journal</i> , 1983, 270, 319.	1.6	15
39	Hydrodynamical constraints on cosmic-ray acceleration in relativistic shocks. <i>Astrophysical Journal</i> , 1987, 319, 215.	1.6	15
40	Scaling symmetries, conservation laws and action principles in one-dimensional gas dynamics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 475205.	0.7	14
41	Dynamical small-scale magnetic islands as a source of local acceleration of particles in the solar wind. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012033.	0.3	14
42	Particle acceleration by combined diffusive shock acceleration and downstream multiple magnetic island acceleration. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012031.	0.3	14
43	On magnetohydrodynamic gauge field theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 255501.	0.7	13
44	Green's formula and variational principles for cosmic-ray transport with application to rotating and shearing flows. <i>Astrophysical Journal</i> , 1994, 424, 158.	1.6	13
45	Conservation laws in magnetohydrodynamics and fluid dynamics: Lagrangian approach. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	11
46	Nonlinear and three-wave resonant interactions in magnetohydrodynamics. <i>Journal of Plasma Physics</i> , 2000, 63, 393-445.	0.7	10
47	Hierarchies of new invariants and conserved integrals in inviscid fluid flow. <i>Physics of Fluids</i> , 2020, 32, 086104.	1.6	10
48	Generalized Fluid Models of the Braginskii Type. <i>Astrophysical Journal, Supplement Series</i> , 2022, 260, 26.	3.0	10
49	Propagation of Alfvén waves in shear flows: Nature of driven longitudinal velocity and density fluctuations. <i>Physics of Plasmas</i> , 2006, 13, 112107.	0.7	9
50	Multi-symplectic magnetohydrodynamics: II, addendum and erratum. <i>Journal of Plasma Physics</i> , 2015, 81, .	0.7	9
51	Alfvén simple waves. <i>Journal of Plasma Physics</i> , 2011, 77, 51-93.	0.7	8
52	Shock Wave Structure in the Presence of Energetic Particles. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012016.	0.3	8
53	Time-dependent shock acceleration of energetic electrons including synchrotron losses. <i>Astrophysical Journal</i> , 1990, 360, 387.	1.6	8
54	Cosmic-Ray Acceleration in Radio-jet Shear Flows: Scattering Inside and Outside the Jet. <i>Astrophysical Journal</i> , 2020, 894, 95.	1.6	8

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55	Cosmic-ray hydrodynamics at relativistic shocks. <i>Astrophysical Journal</i> , 1988, 331, 336.	1.6	7
56	Magnetohydrodynamic wave mixing in shear flows: Hamiltonian equations and wave action. <i>Journal of Plasma Physics</i> , 2007, 73, 15-68.	0.7	6
57	Godbillon-Vey helicity and magnetic helicity in magnetohydrodynamics. <i>Journal of Plasma Physics</i> , 2019, 85, .	0.7	6
58	Relativistic Transport Theory for Cosmic Rays: Erratum. <i>Astrophysical Journal</i> , 1987, 321, 606.	1.6	6
59	Dual variational principles for nonlinear traveling waves in multifluid plasmas. <i>Physics of Plasmas</i> , 2007, 14, 082318.	0.7	5
60	Drift Kinetic Theory and Cosmic Rays. , 2009, , .		5
61	Multi-dimensional MHD simple waves. <i>AIP Conference Proceedings</i> , 1996, , .	0.3	4
62	Double Alfvén waves. <i>Journal of Plasma Physics</i> , 2012, 78, 71-85.	0.7	4
63	Toroidal hydromagnetic waves in an axisymmetric magnetic field. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	4
64	Klein-Gordon equations for horizontal transverse oscillations in two-dimensional coronal loops. <i>Astronomy and Astrophysics</i> , 2012, 541, A53.	2.1	4
65	Parametric instabilities and wave coupling in Alfvén simple waves. <i>Journal of Plasma Physics</i> , 2001, 66, 167-212.	0.7	3
66	Compound Perpendicular Diffusion of Cosmic Rays and Field Line Random Walk, with Drift. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	3
67	Structure and properties of the termination shock. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	2
68	Reply to "Comment on "On the interaction of the solar wind with the interstellar medium: Field aligned MHD flow" by R. Ratkiewicz and G. M. Webb" by N. V. Pogorelov and T. Matsuda. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	2
69	Hydrodynamics of shock waves with reflected particles. I. Rankine-Hugoniot relations and stationary solutions. <i>Physics of Plasmas</i> , 2006, 13, 082112.	0.7	2
70	The transport of low frequency turbulence throughout the heliosphere. , 2010, , .		2
71	Rossby wave Green's functions in an azimuthal wind. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2016, 110, 224-258.	0.4	2
72	Investigating 1st and 2nd order Fermi acceleration of energetic particles by small-scale magnetic flux ropes at 1AU. <i>Journal of Physics: Conference Series</i> , 2020, 1620, 012008.	0.3	2

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73	A Fluid Model for Shock Waves with Reflected Particles. AIP Conference Proceedings, 2004, , .	0.3	1
74	Hydromagnetic waves in a compressed-dipole field via field-aligned Kleinâ€“Gordon equations. Annales Geophysicae, 2016, 34, 473-484.	0.6	1
75	Evolution of entropy in the outer heliosphere. Journal of Physics: Conference Series, 2020, 1620, 012001.	0.3	1
76	â€œSuper GZKâ€•Particles in a Classic Kramersâ€™ Diffusion-over-a-barrier Model. I. The Case of Protons. Astrophysical Journal, 2021, 915, 11.	1.6	1
77	Energetic Particle Transport in Strong Compressive Wave Turbulence Near Shocks. AIP Conference Proceedings, 2005, , .	0.3	0
78	Compound and perpendicular diffusive transport of cosmic rays. AIP Conference Proceedings, 2006, , .	0.3	0
79	A BGK-Boltzmann Approach to Nonlinear Cosmic Ray Transport in 2D and Slab Turbulence. AIP Conference Proceedings, 2007, , .	0.3	0
80	MHD action principles and wave interactions in non-uniform flows. AIP Conference Proceedings, 2007, , .	0.3	0
81	AlfvÃ©n wave mixing and non-JWKB waves in stellar winds. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 125501.	0.7	0
82	Multi-Symplectic Clebsch Approach. Lecture Notes in Physics, 2018, , 167-189.	0.3	0