

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	Generalized Fluid Models of the Braginskii Type. <i>Astrophysical Journal, Supplement Series</i> , 2022, 260, 26.	3.0	10
2	“Super GZK” Particles in a Classic Kramers TM Diffusion-over-a-barrier Model. I. The Case of Protons. <i>Astrophysical Journal</i> , 2021, 915, 11.	1.6	1
3	Hierarchies of new invariants and conserved integrals in inviscid fluid flow. <i>Physics of Fluids</i> , 2020, 32, 086104.	1.6	10
4	Evolution of entropy in the outer heliosphere. <i>Journal of Physics: Conference Series</i> , 2020, 1620, 012001.	0.3	1
5	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
6	Evolution of Entropy and Mediation of the Solar Wind by Turbulence. <i>Astrophysical Journal</i> , 2020, 891, 34.	1.6	17
7	Cosmic-Ray Acceleration in Radio-jet Shear Flows: Scattering Inside and Outside the Jet. <i>Astrophysical Journal</i> , 2020, 894, 95.	1.6	8
8	Godbillon-Vey helicity and magnetic helicity in magnetohydrodynamics. <i>Journal of Plasma Physics</i> , 2019, 85, .	0.7	6
9	Particle Acceleration by Cosmic Ray Viscosity in Radio-jet Shear Flows. <i>Astrophysical Journal</i> , 2019, 881, 123.	1.6	15
10	Conservation laws in magnetohydrodynamics and fluid dynamics: Lagrangian approach. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	11
11	An introductory guide to fluid models with anisotropic temperatures. Part 2. Kinetic theory, Pad \tilde{A} approximants and Landau fluid closures. <i>Journal of Plasma Physics</i> , 2019, 85, .	0.7	19
12	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
13	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
14	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
15	Particle Acceleration Due to Cosmic-ray Viscosity and Fluid Shear in Astrophysical Jets. <i>Astrophysical Journal</i> , 2018, 855, 31.	1.6	26
16	Magnetohydrodynamics and Fluid Dynamics: Action Principles and Conservation Laws. <i>Lecture Notes in Physics</i> , 2018, , .	0.3	25
17	Multi-Symplectic Clebsch Approach. <i>Lecture Notes in Physics</i> , 2018, , 167-189.	0.3	0
18	The Mediation of Collisionless Oblique Magnetized Shocks by Energetic Particles. <i>Astrophysical Journal</i> , 2018, 868, 120.	1.6	17

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19	New Closures for More Precise Modeling of Landau Damping in the Fluid Framework. <i>Physical Review Letters</i> , 2018, 121, 135101.	2.9	24
20	Structure of Energetic Particle Mediated Shocks Revisited. <i>Astrophysical Journal</i> , 2017, 841, 4.	1.6	25
21	Shock Wave Structure in the Presence of Energetic Particles. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012016.	0.3	8
22	On magnetohydrodynamic gauge field theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 255501.	0.7	13
23	Hydromagnetic waves in a compressed-dipole field via field-aligned Klein-Gordon equations. <i>Annales Geophysicae</i> , 2016, 34, 473-484.	0.6	1
24	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
25	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
26	Rossby wave Green's functions in an azimuthal wind. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2016, 110, 224-258.	0.4	2
27	Multi-symplectic magnetohydrodynamics: II, addendum and erratum. <i>Journal of Plasma Physics</i> , 2015, 81, .	0.7	9
28	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
29	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
30	DIFFUSIVE SHOCK ACCELERATION AND RECONNECTION ACCELERATION PROCESSES. <i>Astrophysical Journal</i> , 2015, 814, 137.	1.6	156
31	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
32	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
33	PARTICLE ACCELERATION VIA RECONNECTION PROCESSES IN THE SUPERSONIC SOLAR WIND. <i>Astrophysical Journal</i> , 2014, 797, 28.	1.6	185
34	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
35	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
36	Alfvén wave mixing and non-JWKB waves in stellar winds. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 125501.	0.7	0

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37	Double Alfvén waves. <i>Journal of Plasma Physics</i> , 2012, 78, 71-85.	0.7	4
38	Toroidal hydromagnetic waves in an axisymmetric magnetic field. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	4
39	THE TRANSPORT OF LOW-FREQUENCY TURBULENCE IN ASTROPHYSICAL FLOWS. I. GOVERNING EQUATIONS. <i>Astrophysical Journal</i> , 2012, 745, 35.	1.6	133
40	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
41	Klein-Gordon equations for horizontal transverse oscillations in two-dimensional coronal loops. <i>Astronomy and Astrophysics</i> , 2012, 541, A53.	2.1	4
42	Alfvén simple waves. <i>Journal of Plasma Physics</i> , 2011, 77, 51-93.	0.7	8
43	PICKUP ION DYNAMICS AT THE HELIOSPHERIC TERMINATION SHOCK OBSERVED BY VOYAGER 2. <i>Astrophysical Journal</i> , 2010, 715, 1109-1116.	1.6	45
44	ALFVÉN SIMPLE WAVES: EULER POTENTIALS AND MAGNETIC HELICITY. <i>Astrophysical Journal</i> , 2010, 725, 2128-2151.	1.6	18
45	The transport of low frequency turbulence throughout the heliosphere. , 2010, , .		2
46	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
47	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
48	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
49	Drift Kinetic Theory and Cosmic Rays. , 2009, , .		5
50	Compound Perpendicular Diffusion of Cosmic Rays and Field Line Random Walk, with Drift. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	3
51	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
52	Dual variational principles for nonlinear traveling waves in multifluid plasmas. <i>Physics of Plasmas</i> , 2007, 14, 082318.	0.7	5
53	A BGK-Boltzmann Approach to Nonlinear Cosmic Ray Transport in 2D and Slab Turbulence. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
54	MHD action principles and wave interactions in non-uniform flows. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0

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55	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
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	Compound and perpendicular diffusive transport of cosmic rays. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
58	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
59	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
60	Magnetohydrodynamic waves in non-uniform flows I: a variational approach. <i>Journal of Plasma Physics</i> , 2005, 71, 785.	0.7	27
61	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
62	Energetic Particle Transport in Strong Compressive Wave Turbulence Near Shocks. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	0
63	A Fluid Model for Shock Waves with Reflected Particles. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	1
64	Structure and properties of the termination shock. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	2
65	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
66	Perpendicular diffusion coefficient for charged particles of arbitrary energy. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	125
67	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
68	Parametric instabilities and wave coupling in Alfvén simple waves. <i>Journal of Plasma Physics</i> , 2001, 66, 167-212.	0.7	3
69	Nonlinear and three-wave resonant interactions in magnetohydrodynamics. <i>Journal of Plasma Physics</i> , 2000, 63, 393-445.	0.7	10
70	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
71	Wave interactions in magnetohydrodynamics, and cosmic-ray-modified shocks. <i>Journal of Plasma Physics</i> , 1999, 61, 295-346.	0.7	17
72	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

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73	Multi-dimensional MHD simple waves. AIP Conference Proceedings, 1996, , .	0.3	4
74	Green's formula and variational principles for cosmic-ray transport with application to rotating and shearing flows. Astrophysical Journal, 1994, 424, 158.	1.6	13
75	Time-dependent shock acceleration of energetic electrons including synchrotron losses. Astrophysical Journal, 1990, 360, 387.	1.6	8
76	The diffusion approximation and transport theory for cosmic rays in relativistic flows. Astrophysical Journal, 1989, 340, 1112.	1.6	54
77	Cosmic-ray hydrodynamics at relativistic shocks. Astrophysical Journal, 1988, 331, 336.	1.6	7
78	Hydrodynamical constraints on cosmic-ray acceleration in relativistic shocks. Astrophysical Journal, 1987, 319, 215.	1.6	15
79	Relativistic Transport Theory for Cosmic Rays: Erratum. Astrophysical Journal, 1987, 321, 606.	1.6	6
80	Relativistic transport theory for cosmic rays. Astrophysical Journal, 1985, 296, 319.	1.6	51
81	First order and second order Fermi acceleration of energetic charged particles by shock waves. Astrophysical Journal, 1983, 270, 319.	1.6	15
82	Green's theorem and Green's functions for the steady-state cosmic-ray equation of transport. Astrophysics and Space Science, 1977, 50, 205-223.	0.5	15