Sergio Servidio

List of Publications by Year
in descending order

121 papers	4,486 citations	94433 37 h-index	118850 62 g-index
122 all docs	122 docs citations	122 times ranked	1472 citing authors

#	Article	IF	Citations
1	Magnetic Switchback Occurrence Rates in the Inner Heliosphere: Parker Solar Probe and 1 au. Astrophysical Journal Letters, 2022, 929, L10.	8.3	11
2	An experimental study on the anisotropic and intermittent behaviour of a turbulent flow over a rough bed. Journal of Physics: Conference Series, 2022, 2293, 012001.	0.4	0
3	On the Transmission of Turbulent Structures across the Earthâ€™s Bow Shock. Astrophysical Journal, 2022, 933, 167.	4.5	15
4	Local and global properties of energy transfer in models of plasma turbulence. Journal of Plasma Physics, 2021, 87, .	2.1	3
5	Current Sheets, Plasmoids and Flux Ropes in the Heliosphere. Space Science Reviews, 2021, 217, 1.	8.1	32
6	A spectral method algorithm for numerical simulations of gravitational fields. Classical and Quantum Gravity, 2021, 38, 075027.	4.0	7
7	Current Sheets, Plasmoids and Flux Ropes in the Heliosphere. Space Science Reviews, 2021, 217, 1.	8.1	24
8	Dissipation measures in weakly collisional plasmas. Monthly Notices of the Royal Astronomical Society, 2021, 505, 4857-4873.	4.4	29
9	Phase space transport in the interaction between shocks and plasma turbulence. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	25
10	Identification of coherent structures in space plasmas: the magnetic helicityâ€“PVI method. Astronomy and Astrophysics, 2021, 650, A20.	5.1	18
11	MagneToRE: Mapping the 3-D Magnetic Structure of the Solar Wind Using a Large Constellation of Nanosatellites. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	13
12	Parker Solar Probe observations of helical structures as boundaries for energetic particles. Monthly Notices of the Royal Astronomical Society, 2021, 508, 2114-2122.	4.4	10
13	Aliasing instabilities in the numerical evolution of the Einstein field equations. General Relativity and Gravitation, 2021, 53, 1.	2.0	5
14	Turbulent Magnetogenesis in a Collisionless Plasma. Astrophysical Journal Letters, 2021, 922, L18.	8.3	4
15	Turbulence anisotropy and intermittency in open-channel flows on rough beds. Physics of Fluids, 2020, 32, 115127.	4.0	15
16	Kinetic entropy-based measures of distribution function non-Maxwellianity: theory and simulations. Journal of Plasma Physics, 2020, 86, .	2.1	13
17	Estimating Effective Collision Frequency and Kinetic Entropy Uncertainty in Particle-in-Cell Simulations. Journal of Physics: Conference Series, 2020, 1620, 012009.	0.4	5
18	Single-spacecraft Identification of Flux Tubes and Current Sheets in the Solar Wind. Astrophysical Journal Letters, 2019, 881, L11.	8.3	18

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19	Current Sheets, Magnetic Islands, and Associated Particle Acceleration in the Solar Wind as Observed by Ulysses near the Ecliptic Plane. Astrophysical Journal, 2019, 881, 116.	4.5	29
20	Parametric Instability in Two-dimensional AlfvÃ©nic Turbulence. Astrophysical Journal, 2019, 880, 156.	4.5	22
21	Energy conversion in turbulent weakly collisional plasmas: Eulerian hybrid Vlasov-Maxwell simulations. Physics of Plasmas, 2019, 26, .	1.9	23
22	Decomposition of plasma kinetic entropy into position and velocity space and the use of kinetic entropy in particle-in-cell simulations. Physics of Plasmas, 2019, 26, .	1.9	20
23	Statistical Analysis of Ions in Two-Dimensional Plasma Turbulence. Solar Physics, 2019, 294, 1.	2.5	8
24	Fourierâ€“Hermite decomposition of the collisional Vlasovâ€“Maxwell system: implications for the velocity-space cascade. Plasma Physics and Controlled Fusion, 2019, 61, 054005.	2.1	8
25	Velocity scales in steady-nonuniform turbulent flows with low relative submergence. Environmental Fluid Mechanics, 2019, 19, 1025-1041.	1.6	7
26	Protonâ€“Proton Collisions in the Turbulent Solar Wind: Hybrid Boltzmannâ€“Maxwell Simulations. Astrophysical Journal, 2019, 887, 208.	4.5	20
27	Nonlinear waves and instabilities leading to secondary reconnection in reconnectionÂoutflows. Journal of Plasma Physics, 2018, 84, .	2.1	19
28	Local energy transfer rate and kinetic processes: the fate of turbulent energy in two-dimensional hybrid Vlasovâ€“Maxwell numerical simulations. Journal of Plasma Physics, 2018, 84, .	2.1	29
29	Partial Variance of Increments Method in Solar Wind Observations and Plasma Simulations. Space Science Reviews, 2018, 214, 1.	8.1	67
30	Ion diffusion and acceleration in plasmaÂturbulence. Journal of Plasma Physics, 2018, 84, .	2.1	16
31	Generation of Turbulence in Colliding Reconnection Jets. Astrophysical Journal, 2018, 867, 10.	4.5	26
32	Velocity-space cascade in magnetized plasmas: Numerical simulations. Physics of Plasmas, 2018, 25, .	1.9	37
33	Fluid simulations of plasma turbulence at ion scales: Comparison with Vlasov-Maxwell simulations. Physics of Plasmas, 2018, 25, .	1.9	22
34	Properties of Decaying Plasma Turbulence at Subproton Scales. Astrophysical Journal, 2018, 860, 11.	4.5	13
35	Electrostatic analyzer design for solar wind proton measurements with high temporal, energy, and angular resolutions. Journal of Geophysical Research: Space Physics, 2017, 122, 1439-1450.	2.4	17
36	Colliding AlfvÃ©nic wave packets in magnetohydrodynamics, Hall and kineticÂsimulations. Journal of Plasma Physics, 2017, 83, .	2.1	38

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37	Properties of Turbulence in the Reconnection Exhaust: Numerical Simulations Compared with Observations. Astrophysical Journal, 2017, 841, 60.	4.5	43
38	Coherent Structure Formation through nonlinear interactions in 2D Magnetohydrodynamic Turbulence. Scientific Reports, 2017, 7, 13849.	3.3	9
39	Exploring the statistics of magnetic reconnection X-points in kinetic particle-in-cell turbulence. Physics of Plasmas, 2017, 24, .	1.9	37
40	Kinetic Cascade in Solar-wind Turbulence: 3D3V Hybrid-kinetic Simulations with Electron Inertia. Astrophysical Journal Letters, 2017, 846, L18.	8.3	66
41	REVISITING A CLASSIC: THE PARKERâ€“MOFFATT PROBLEM. Astrophysical Journal, 2017, 834, 166.	4.5	32
42	Coronal Heating Topology: The Interplay of Current Sheets and Magnetic Field Lines. Astrophysical Journal, 2017, 844, 87.	4.5	13
43	Turbulent energy dissipation rate in a tilting flume with a highly rough bed. Physics of Fluids, 2017, 29, .	4.0	23
44	Turbulence generation during the head-on collision of AlfvÃ©nic wave packets. Physical Review E, 2017, 96, 023201.	2.1	24
45	Magnetospheric Multiscale Observation of Plasma Velocity-Space Cascade: Hermite Representation and Theory. Physical Review Letters, 2017, 119, 205101.	7.8	69
46	Numerical Study on the Validity of the Taylor Hypothesis in Space Plasmas. Astrophysical Journal, Supplement Series, 2017, 231, 4.	7.7	35
47	Transition to kinetic turbulence at proton scales driven by large-amplitude kinetic AlfvÃ©n fluctuations. Astronomy and Astrophysics, 2017, 599, A8.	5.1	30
48	From AlfvÃ©n waves to kinetic AlfvÃ©n waves in an inhomogeneous equilibrium structure. Journal of Geophysical Research: Space Physics, 2016, 121, 1024-1045.	2.4	33
49	Differential kinetic dynamics and heating of ions in the turbulent solar wind. New Journal of Physics, 2016, 18, 125001.	2.9	51
50	Multifractal scaling and intermittency in hybrid Vlasov-Maxwell simulations of plasma turbulence. Physics of Plasmas, 2016, 23, .	1.9	20
51	Turbulence laws in natural bed flows. Journal of Fluid Mechanics, 2016, 798, 540-571.	3.4	28
52	Explosive Particle Dispersion in Plasma Turbulence. Physical Review Letters, 2016, 117, 095101.	7.8	18
53	THE COMPLEX STRUCTURE OF MAGNETIC FIELD DISCONTINUITIES IN THE TURBULENT SOLAR WIND. Astrophysical Journal Letters, 2016, 823, L39.	8.3	70
54	Importance of energy and angular resolutions in top-hat electrostatic analysers for solar wind proton measurements. Journal of Instrumentation, 2016, 11, C08010-C08010.	1.2	5

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55	Turbulence Heating ObserveR â€“ satellite mission proposal. Journal of Plasma Physics, 2016, 82, .	2.1	60
56	KINETIC ALFVÃ‰N WAVE GENERATION BY LARGE-SCALE PHASE MIXING. Astrophysical Journal, 2015, 815, 7.	4.5	38
57	Two-fluid numerical simulations of turbulence inside Kelvin-Helmholtz vortices: Intermittency and reconnecting current sheets. Physics of Plasmas, 2015, 22, .	1.9	18
58	Cancellation analysis of current density in solar active region NOAA10019. Journal of Space Weather and Space Climate, 2015, 5, A28.	3.3	2
59	A kinetic model of plasma turbulence. Journal of Plasma Physics, 2015, 81, .	2.1	136
60	Intermittency, nonlinear dynamics and dissipation in the solar wind and astrophysical plasmas. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140154.	3.4	141
61	Multipoint observations of plasma phenomena made in space by Cluster. Journal of Plasma Physics, 2015, 81, .	2.1	18
62	SIGN SINGULARITY AND FLARES IN SOLAR ACTIVE REGION NOAA 11158. Astrophysical Journal, 2015, 801, 36.	4.5	14
63	DISSIPATION AND RECONNECTION IN BOUNDARY-DRIVEN REDUCED MAGNETOHYDRODYNAMICS. Astrophysical Journal, 2014, 797, 63.	4.5	32
64	Magnetic field reversals and long-time memory in conducting flows. Physical Review E, 2014, 90, 043010.	2.1	11
65	Magnetic Reconnection and Intermittent Turbulence in the Solar Wind. Physical Review Letters, 2014, 112, .	7.8	124
66	Analysis of cancellation exponents in two-dimensional Vlasov turbulence. Physics of Plasmas, 2014, 21, 072315.	1.9	6
67	PROTON KINETIC EFFECTS IN VLASOV AND SOLAR WIND TURBULENCE. Astrophysical Journal Letters, 2014, 781, L27.	8.3	80
68	NONLINEAR AND LINEAR TIMESCALES NEAR KINETIC SCALES IN SOLAR WIND TURBULENCE. Astrophysical Journal, 2014, 790, 155.	4.5	50
69	RELAXATION PROCESSES IN SOLAR WIND TURBULENCE. Astrophysical Journal Letters, 2014, 789, L44.	8.3	10
70	COMPLEXITY AND DIFFUSION OF MAGNETIC FLUX SURFACES IN ANISOTROPIC TURBULENCE. Astrophysical Journal, 2014, 785, 56.	4.5	17
71	Analysis of intermittent heating in a multi-component turbulent plasma. European Physical Journal D, 2014, 68, 1.	1.3	16
72	Hybrid Vlasov-Maxwell simulations of two-dimensional turbulence in plasmas. Physics of Plasmas, 2014, 21, .	1.9	55

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73	MAGNETIC FIELD LINE RANDOM WALK IN MODELS AND SIMULATIONS OF REDUCED MAGNETOHYDRODYNAMIC TURBULENCE. Astrophysical Journal, 2013, 779, 56.	4.5	24
74	How to identify reconnecting current sheets in incompressible Hall MHD turbulence. Journal of Geophysical Research: Space Physics, 2013, 118, 4033-4038.	2.4	11
75	Overview on numerical studies of reconnection and dissipation in the solar wind. , 2013, , .		0
76	Solar wind fluctuations and the von Kaì•maìnâ€“Howarth equations: The role of fourth-order correlations. , 2013, , .		0
77	Generation of X-points and secondary islands in 2D magnetohydrodynamic turbulence. Physics of Plasmas, 2013, 20, .	1.9	38
78	ON THE ORIGIN OF ANISOTROPY IN MAGNETOHYDRODYNAMIC TURBULENCE: THE ROLE OF HIGHER-ORDER CORRELATIONS. Astrophysical Journal, 2013, 768, 10.	4.5	23
79	VLASOV SIMULATIONS OF MULTI-ION PLASMA TURBULENCE IN THE SOLAR WIND. Astrophysical Journal, 2013, 762, 99.	4.5	69
80	Reconnection events in two-dimensional Hall magnetohydrodynamic turbulence. Physics of Plasmas, 2012, 19, .	1.9	35
81	EVIDENCE FOR NONLINEAR DEVELOPMENT OF MAGNETOHYDRODYNAMIC SCALE INTERMITTENCY IN THE INNER HELIOSPHERE. Astrophysical Journal, 2012, 749, 105.	4.5	30
82	Inhomogeneous kinetic effects related to intermittent magnetic discontinuities. Physical Review E, 2012, 86, 066405.	2.1	78
83	A review of relaxation and structure in some turbulent plasmas: magnetohydrodynamics and related models. Journal of Turbulence, 2012, 13, N37.	1.4	10
84	INTERCHANGE RECONNECTION IN A TURBULENT CORONA. Astrophysical Journal Letters, 2012, 758, L14.	8.3	43
85	LOCAL ANISOTROPY, HIGHER ORDER STATISTICS, AND TURBULENCE SPECTRA. Astrophysical Journal, 2012, 750, 103.	4.5	50
86	von KÃ¡rmÃ¡n self-preservation hypothesis for magnetohydrodynamic turbulence and its consequences for universality. Journal of Fluid Mechanics, 2012, 697, 296-315.	3.4	67
87	Local Kinetic Effects in Two-Dimensional Plasma Turbulence. Physical Review Letters, 2012, 108, 045001.	7.8	159
88	Statistical association of discontinuities and reconnection in magnetohydrodynamic turbulence. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	103
89	Magnetic reconnection as an element of turbulence. Nonlinear Processes in Geophysics, 2011, 18, 675-695.	1.3	96
90	EVIDENCE FOR INHOMOGENEOUS HEATING IN THE SOLAR WIND. Astrophysical Journal Letters, 2011, 727, L11.	8.3	174

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91	Time decorrelation in isotropic magnetohydrodynamic turbulence. Europhysics Letters, 2011, 96, 55003.	2.0	26
92	Emergence of very long time fluctuations and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mi>f</mml:mi></mml:mrow></mml:math>noise in ideal flows. Physical Review E, 2011, 83, 066318.	2.1	24
93	Effect of driving frequency on excitation of turbulence in a kinetic plasma. Physics of Plasmas, 2011, 18, .	1.9	42
94	Emergence of intermittent structures and reconnection in MHD turbulence. Proceedings of the International Astronomical Union, 2010, 6, 116-119.	0.0	0
95	Intermittent structures and magnetic discontinuities on small scales in MHD simulations and solar wind. Planetary and Space Science, 2010, 58, 1895-1899.	1.7	31
96	Statistics of magnetic reconnection in two-dimensional magnetohydrodynamic turbulence. Physics of Plasmas, 2010, 17, .	1.9	113
97	Local relaxation and maximum entropy in two-dimensional turbulence. Physics of Fluids, 2010, 22, .	4.0	10
98	The third-order law for magnetohydrodynamic turbulence with shear: Numerical investigation. Physics of Plasmas, 2010, 17, .	1.9	37
99	On the accuracy of simulations of turbulence. Physics of Plasmas, 2010, 17, 082308.	1.9	45
100	Dispersive Effects of Hall Electric Field in Turbulence. , 2010, , .		3
101	Properties of magnetic reconnection in MHD turbulence. , 2010, , .		1
102	Statistical properties of solar wind discontinuities, intermittent turbulence, and rapid emergence of non-Gaussian distributions. AIP Conference Proceedings, 2010, , .	0.4	3
103	Orszag Tang vortexâ€"Kinetic study of a turbulent plasma. , 2010, , .		2
104	The third-order law for magnetohydrodynamic turbulence with constant shear. , 2010, , .		0
105	Kinetic driven turbulence: Structure in space and time. Physics of Plasmas, 2010, 17, .	1.9	44
106	STATISTICAL ANALYSIS OF DISCONTINUITIES IN SOLAR WIND ACE DATA AND COMPARISON WITH INTERMITTENT MHD TURBULENCE. Astrophysical Journal, 2009, 691, L111-L114.	4.5	217
107	Generation of non-Gaussian statistics and coherent structures in ideal magnetohydrodynamics. Physics of Plasmas, 2009, 16, .	1.9	34
108	Hydrodynamic Relaxation of an Electron Plasma to a Near-Maximum Entropy State. Physical Review Letters, 2009, 102, 244501.	7.8	19

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109	Waiting-time distributions of magnetic discontinuities: Clustering or Poisson process?. Physical Review E, 2009, 80, 046401.	2.1	54
110	The third-order law for increments in magnetohydrodynamic turbulence with constant shear. Physics of Plasmas, 2009, 16, .	1.9	41
111	Magnetic Reconnection in Two-Dimensional Magnetohydrodynamic Turbulence. Physical Review Letters, 2009, 102, 115003.	7.8	205
112	Intermittent MHD structures and classical discontinuities. Geophysical Research Letters, 2008, 35, .	4.0	175
113	Depression of Nonlinearity in Decaying Isotropic MHD Turbulence. Physical Review Letters, 2008, 100, 095005.	7.8	96
114	Statistical properties of ideal three-dimensional Hall magnetohydrodynamics: The spectral structure of the equilibrium ensemble. Physics of Plasmas, 2008, 15, .	1.9	30
115	Ergodicity of ideal Galerkin three-dimensional magnetohydrodynamics and Hall magnetohydrodynamics models. Physical Review E, 2008, 78, 046302.	2.1	15
116	Comment on â€œKinetic Simulations of Magnetized Turbulence in Astrophysical Plasmasâ€. Physical Review Letters, 2008, 101, 149501; author reply 149502.	7.8	41
117	A model for two-dimensional bursty turbulence in magnetized plasmas. Physics of Plasmas, 2008, 15, .	1.9	9
118	Complexity in astro and geospace systems: the turbulence versus SOC controversy. AIP Conference Proceedings, 2007, , .	0.4	0
119	Compressible turbulence in Hall Magnetohydrodynamics. Planetary and Space Science, 2007, 55, 2239-2243.	1.7	39
120	Nonlinear Dynamics of Inviscid Reduced MHD Plasmas: The Appearance of Quasi-Single-Helicity States. Physical Review Letters, 2005, 95, 045001.	7.8	7
121	A Case for Electron-Astrophysics. Experimental Astronomy, 0, , 1.	3.7	11