

Francesco Valentini

List of Publications by Year in descending order

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106
papers

2,769
citations

147801

31
h-index

206112

48
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112
all docs

112
docs citations

112
times ranked

1110
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterizing Satellite Path Through Kelvin-Helmholtz Instability Using a Mixing Parameter. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	3
2	On the Transmission of Turbulent Structures across the Earth's Bow Shock. Astrophysical Journal, 2022, 933, 167.	4.5	15
3	Plasma physics and astrophysics: retrospects, state-of-the art, and prospects. Rendiconti Lincei, 2021, 32, 25-44.	2.2	0
4	Exact hybrid-kinetic equilibria for magnetized plasmas with shearing flows. Astronomy and Astrophysics, 2021, 645, A147.	5.1	2
5	Local and global properties of energy transfer in models of plasma turbulence. Journal of Plasma Physics, 2021, 87, .	2.1	3
6	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
7	Kinetic Features for the Identification of Kelvin-Helmholtz Vortices in In Situ Observations. Astrophysical Journal, 2021, 912, 154.	4.5	6
8	Non-Maxwellianity of Electron Distributions Near Earth's Magnetopause. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029260.	2.4	9
9	Nature of Electrostatic Fluctuations in the Terrestrial Magnetosheath. Astrophysical Journal, 2021, 919, 75.	4.5	2
10	Turbulent Magnetogenesis in a Collisionless Plasma. Astrophysical Journal Letters, 2021, 922, L18.	8.3	4
11	Spatiotemporal Pattern Formation in a Ring of Chua's Oscillators. Regular and Chaotic Dynamics, 2021, 26, 717-731.	0.8	1
12	Kinetic entropy-based measures of distribution function non-Maxwellianity: theory and simulations. Journal of Plasma Physics, 2020, 86, .	2.1	13
13	Diagnosing collisionless energy transfer using field-particle correlations: Alfvén-ion cyclotron turbulence. Journal of Plasma Physics, 2020, 86, .	2.1	29
14	Kinetic Alfvén wave generation by velocity shear in collisionless plasmas. Journal of Plasma Physics, 2020, 86, .	2.1	9
15	Pathways to Dissipation in Weakly Collisional Plasmas. Astrophysical Journal, 2020, 891, 101.	4.5	56
16	On the deviation from Maxwellian of the ion velocity distribution functions in the turbulent magnetosheath. Journal of Plasma Physics, 2020, 86, .	2.1	15
17	Kelvin-Helmholtz Instability at Proton Scales with an Exact Kinetic Equilibrium. Astrophysical Journal, 2020, 901, 17.	4.5	7
18	Building Up Solar-wind-like 3D Uniform-intensity Magnetic Fields. Astrophysical Journal Letters, 2019, 881, L5.	8.3	15

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19	ViDA: a Vlasov-DARwin solver for plasma physics at electron scales. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	13
20	Energy conversion in turbulent weakly collisional plasmas: Eulerian hybrid Vlasov-Maxwell simulations. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	23
21	Electron Heating by Kinetic Alfvén Waves in Coronal Loop Turbulence. <i>Astrophysical Journal</i> , 2019, 871, 66.	4.5	11
22	Turbulence-Driven Ion Beams in the Magnetospheric Kelvin-Helmholtz Instability. <i>Physical Review Letters</i> , 2019, 122, 035102.	7.8	62
23	Fourier-Hermite decomposition of the collisional Vlasov-Maxwell system: implications for the velocity-space cascade. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 054005.	2.1	8
24	Proton-Proton Collisions in the Turbulent Solar Wind: Hybrid Boltzmann-Maxwell Simulations. <i>Astrophysical Journal</i> , 2019, 887, 208.	4.5	20
25	Fluid and kinetic nonlinearities of near-acoustic plasma waves. <i>Physics of Plasmas</i> , 2019, 26, 122108.	1.9	5
26	Local energy transfer rate and kinetic processes: the fate of turbulent energy in two-dimensional hybrid Vlasov-Maxwell numerical simulations. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	29
27	Trapped Particle Effects in the Parametric Instability of Near-Acoustic Plasma Waves. <i>Physical Review Letters</i> , 2018, 121, 235004.	7.8	7
28	Velocity-space cascade in magnetized plasmas: Numerical simulations. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	37
29	Fluid simulations of plasma turbulence at ion scales: Comparison with Vlasov-Maxwell simulations. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	22
30	Exact hybrid Vlasov equilibria for sheared plasmas with in-plane and out-of-plane magnetic field. <i>Physical Review E</i> , 2018, 97, 053212.	2.1	9
31	Electrostatic analyzer design for solar wind proton measurements with high temporal, energy, and angular resolutions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1439-1450.	2.4	17
32	Slow electrostatic fluctuations generated by beam-plasma interaction. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	10
33	Colliding Alfvénic wave packets in magnetohydrodynamics, Hall and kinetic simulations. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	38
34	On the estimation of the current density in space plasmas: Multi- versus single-point techniques. <i>Planetary and Space Science</i> , 2017, 140, 6-10.	1.7	10
35	REVISITING A CLASSIC: THE PARKER-MOFFATT PROBLEM. <i>Astrophysical Journal</i> , 2017, 834, 166.	4.5	32
36	Turbulence generation during the head-on collision of Alfvénic wave packets. <i>Physical Review E</i> , 2017, 96, 023201.	2.1	24

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37	Magnetospheric Multiscale Observation of Plasma Velocity-Space Cascade: Hermite Representation and Theory. <i>Physical Review Letters</i> , 2017, 119, 205101.	7.8	69
38	Numerical Study on the Validity of the Taylor Hypothesis in Space Plasmas. <i>Astrophysical Journal, Supplement Series</i> , 2017, 231, 4.	7.7	35
39	Transition to kinetic turbulence at proton scales driven by large-amplitude kinetic Alfvén fluctuations. <i>Astronomy and Astrophysics</i> , 2017, 599, A8.	5.1	30
40	From Alfvén waves to kinetic Alfvén waves in an inhomogeneous equilibrium structure. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 1024-1045.	2.4	33
41	Differential kinetic dynamics and heating of ions in the turbulent solar wind. <i>New Journal of Physics</i> , 2016, 18, 125001.	2.9	51
42	Multifractal scaling and intermittency in hybrid Vlasov-Maxwell simulations of plasma turbulence. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	20
43	Turbulent dynamo in a collisionless plasma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3950-3953.	7.1	43
44	Energetic particle transport in the presence of magnetic turbulence: influence of spectral extension and intermittency. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 3395-3406.	4.4	36
45	Collisional Relaxation of Fine Velocity Structures in Plasmas. <i>Physical Review Letters</i> , 2016, 116, 145001.	7.8	58
46	Importance of energy and angular resolutions in top-hat electrostatic analysers for solar wind proton measurements. <i>Journal of Instrumentation</i> , 2016, 11, C08010-C08010.	1.2	5
47	Collisional effects on the numerical recurrence in Vlasov-Poisson simulations. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	17
48	Turbulence Heating Observer " " satellite mission proposal. <i>Journal of Plasma Physics</i> , 2016, 82, .	2.1	60
49	KINETIC ALFVÉN WAVE GENERATION BY LARGE-SCALE PHASE MIXING. <i>Astrophysical Journal</i> , 2015, 815, 7.	4.5	38
50	Two-fluid numerical simulations of turbulence inside Kelvin-Helmholtz vortices: Intermittency and reconnecting current sheets. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	18
51	Non-linear plasma wave decay to longer wavelength. <i>AIP Conference Proceedings</i> , 2015, , .	0.4	4
52	A kinetic model of plasma turbulence. <i>Journal of Plasma Physics</i> , 2015, 81, .	2.1	136
53	Collisional relaxation: Landau versus Dougherty operator. <i>Journal of Plasma Physics</i> , 2015, 81, .	2.1	17
54	Nonlinear regime of electrostatic waves propagation in presence of electron-electron collisions. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	10

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55	Generation of temperature anisotropy for alpha particle velocity distributions in solar wind at 0.3 AU: Vlasov simulations and Helios observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2400-2410.	2.4	14
56	Electrostatic fluctuations in the solar wind: An evidence of the link between Alfvénic and electrostatic scales. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 7012-7024.	2.4	5
57	Analysis of cancellation exponents in two-dimensional Vlasov turbulence. <i>Physics of Plasmas</i> , 2014, 21, 072315.	1.9	6
58	PROTON KINETIC EFFECTS IN VLASOV AND SOLAR WIND TURBULENCE. <i>Astrophysical Journal Letters</i> , 2014, 781, L27.	8.3	80
59	Vlasov simulations of kinetic Alfvén waves at proton kinetic scales. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	19
60	NONLINEAR AND LINEAR TIMESCALES NEAR KINETIC SCALES IN SOLAR WIND TURBULENCE. <i>Astrophysical Journal</i> , 2014, 790, 155.	4.5	50
61	Kinetic ion-acoustic solitary waves in collisional plasmas. <i>European Physical Journal D</i> , 2014, 68, 1.	1.3	11
62	Analysis of intermittent heating in a multi-component turbulent plasma. <i>European Physical Journal D</i> , 2014, 68, 1.	1.3	16
63	Hybrid Vlasov-Maxwell simulations of two-dimensional turbulence in plasmas. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	55
64	THE NONLINEAR AND NONLOCAL LINK BETWEEN MACROSCOPIC ALFVÉNIC AND MICROSCOPIC ELECTROSTATIC SCALES IN THE SOLAR WIND. <i>Astrophysical Journal Letters</i> , 2014, 788, L16.	8.3	12
65	Eulerian simulations of collisional effects on electrostatic plasma waves. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	18
66	Nonclassical Transport and Particle-Field Coupling: from Laboratory Plasmas to the Solar Wind. <i>Space Science Reviews</i> , 2013, 178, 233-270.	8.1	48
67	Overview on numerical studies of reconnection and dissipation in the solar wind. , 2013, , .		0
68	Response to "Comment on "Undamped electrostatic plasma waves" [Phys. Plasmas 20, 034701 (2013)]". <i>Physics of Plasmas</i> , 2013, 20, 034702.	1.9	11
69	VLASOV SIMULATIONS OF MULTI-ION PLASMA TURBULENCE IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2013, 762, 99.	4.5	69
70	Nonclassical Transport and Particle-Field Coupling: from Laboratory Plasmas to the Solar Wind. <i>Space Sciences Series of ISSI</i> , 2013, , 157-194.	0.0	1
71	Inhomogeneous kinetic effects related to intermittent magnetic discontinuities. <i>Physical Review E</i> , 2012, 86, 066405.	2.1	78
72	Undamped electrostatic plasma waves. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	37

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73	Local Kinetic Effects in Two-Dimensional Plasma Turbulence. <i>Physical Review Letters</i> , 2012, 108, 045001.	7.8	159
74	THE ROLE OF ALPHA PARTICLES IN THE EVOLUTION OF THE SOLAR-WIND TURBULENCE TOWARD SHORT SPATIAL SCALES. <i>Astrophysical Journal</i> , 2011, 741, 43.	4.5	16
75	SHORT-WAVELENGTH ELECTROSTATIC FLUCTUATIONS IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2011, 739, 54.	4.5	41
76	The kinetic nature of turbulence at short scales in the solar wind. <i>Planetary and Space Science</i> , 2011, 59, 547-555.	1.7	3
77	New Ion-Wave Path in the Energy Cascade. <i>Physical Review Letters</i> , 2011, 106, 165002.	7.8	37
78	Excitation of nonlinear electrostatic waves with phase velocity close to the ion-thermal speed. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 105017.	2.1	12
79	Hybrid Vlasov simulations for alpha particles heating in the solar wind. <i>Proceedings of the International Astronomical Union</i> , 2010, 6, 168-171.	0.0	1
80	Proper Orthogonal Decomposition of two-dimensional turbulence in a pure electron plasma. , 2010, , .		0
81	Two-Dimensional Kinetic Turbulence in the Solar Wind. <i>Physical Review Letters</i> , 2010, 104, 205002.	7.8	53
82	Numerical study of ion-cyclotron resonant interaction via hybrid-Vlasov simulations. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	11
83	Kinetic evolution of the perpendicular turbulent cascade in the solar wind. <i>Europhysics Letters</i> , 2010, 92, 49002.	2.0	3
84	Solar wind interaction with the Earth's magnetosphere: the role of reconnection in the presence of a large scale sheared flow. <i>Nonlinear Processes in Geophysics</i> , 2009, 16, 1-10.	1.3	14
85	Electrostatic Short-Scale Termination of Solar-Wind Turbulence. <i>Physical Review Letters</i> , 2009, 102, 225001.	7.8	43
86	Electron acoustic waves in pure ion plasmas. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	58
87	The approach to statistical equilibrium in collisionless wave-particle interactions. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2008, 13, 34-39.	3.3	2
88	Decay instability of electron acoustic waves. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2008, 13, 215-220.	3.3	2
89	Damping of Bernsteinâ€“Greeneâ€“Kruskal modes in collisional plasmas. <i>Physics of Plasmas</i> , 2008, 15, 022102.	1.9	10
90	Cross-Scale Effects in Solar-Wind Turbulence. <i>Physical Review Letters</i> , 2008, 101, 025006.	7.8	70

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91	Effect of velocity diffusion on the propagation of nonlinear plasma waves. Europhysics Letters, 2008, 81, 15002.	2.0	5
92	Linear and nonlinear regimes of bump-on-tail instability through Vlasov and toy model simulations. Europhysics Letters, 2008, 83, 55001.	2.0	1
93	Wave-particle interactions in collisionless plasmas: The failure of Vlasov approximation in describing the approach to statistical equilibrium. Europhysics Letters, 2007, 78, 65001.	2.0	10
94	A hybrid-Vlasov model based on the current advance method for the simulation of collisionless magnetized plasma. Journal of Computational Physics, 2007, 225, 753-770.	3.8	167
95	Electrostatic Landau pole for \hat{v} -velocity distributions. Physics of Plasmas, 2007, 14, .	1.9	18
96	Excitation and Decay of Electron Acoustic Waves. AIP Conference Proceedings, 2006, , .	0.4	6
97	Experimental Investigation of Electron-Acoustic Waves in Electron Plasmas. AIP Conference Proceedings, 2006, , .	0.4	22
98	Excitation of nonlinear electron acoustic waves. Physics of Plasmas, 2006, 13, 052303.	1.9	74
99	A numerical scheme for the integration of the Vlasov-Poisson system of equations, in the magnetized case. Journal of Computational Physics, 2005, 210, 730-751.	3.8	26
100	Wave-Particle Interaction and Nonlinear Landau Damping in Collisionless Electron Plasmas. Transport Theory and Statistical Physics, 2005, 34, 89-101.	0.4	5
101	Self-consistent Lagrangian study of nonlinear Landau damping. Physical Review E, 2005, 71, 017402.	2.1	27
102	Nonlinear Landau damping in nonextensive statistics. Physics of Plasmas, 2005, 12, 072106.	1.9	45
103	Magnetic-field effects on nonlinear electrostatic-wave Landau damping. Physical Review E, 2005, 71, 016402.	2.1	12
104	Phase Space Flights in Nonlinear Landau Damping. AIP Conference Proceedings, 2004, , .	0.4	0
105	Nonlinear evolution of high frequency electrostatic waves in a magnetized plasma: Bernstein-Landau paradox revisited. AIP Conference Proceedings, 2004, , .	0.4	1
106	Small Scale Processes in the Solar Wind. , 0, , .		0