

George Livadiotis

List of Publications by Year in descending order

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129
papers

5,096
citations

81743

39
h-index

95083

68
g-index

134
all docs

134
docs citations

134
times ranked

1871
citing authors

#	ARTICLE	IF	CITATIONS
1	Global Observations of the Interstellar Interaction from the Interstellar Boundary Explorer (IBEX). <i>Science</i> , 2009, 326, 959-962.	6.0	461
2	Beyond kappa distributions: Exploiting Tsallis statistical mechanics in space plasmas. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	323
3	Understanding Kappa Distributions: A Toolbox for Space Science and Astrophysics. <i>Space Science Reviews</i> , 2013, 175, 183-214.	3.7	293
4	Comparison of Interstellar Boundary Explorer Observations with 3D Global Heliospheric Models. <i>Science</i> , 2009, 326, 966-968.	6.0	221
5	Introduction to special section on Origins and Properties of Kappa Distributions: Statistical Background and Properties of Kappa Distributions in Space Plasmas. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1607-1619.	0.8	168
6	SEPARATION OF THE INTERSTELLAR BOUNDARY EXPLORER RIBBON FROM GLOBALLY DISTRIBUTED ENERGETIC NEUTRAL ATOM FLUX. <i>Astrophysical Journal</i> , 2011, 731, 56.	1.6	153
7	LOCAL INTERSTELLAR MAGNETIC FIELD DETERMINED FROM THE INTERSTELLAR BOUNDARY EXPLORER RIBBON. <i>Astrophysical Journal Letters</i> , 2016, 818, L18.	3.0	153
8	INVARIANT KAPPA DISTRIBUTION IN SPACE PLASMAS OUT OF EQUILIBRIUM. <i>Astrophysical Journal</i> , 2011, 741, 88.	1.6	138
9	FIRST SKY MAP OF THE INNER HELIOSHEATH TEMPERATURE USING IBEX SPECTRA. <i>Astrophysical Journal</i> , 2011, 734, 1.	1.6	132
10	CIRCULARITY OF THE INTERSTELLAR BOUNDARY EXPLORER RIBBON OF ENHANCED ENERGETIC NEUTRAL ATOM (ENA) FLUX. <i>Astrophysical Journal</i> , 2013, 776, 30.	1.6	121
11	EXPLORING TRANSITIONS OF SPACE PLASMAS OUT OF EQUILIBRIUM. <i>Astrophysical Journal</i> , 2010, 714, 971-987.	1.6	111
12	SEPARATION OF THE RIBBON FROM GLOBALLY DISTRIBUTED ENERGETIC NEUTRAL ATOM FLUX USING THE FIRST FIVE YEARS OF IBEX OBSERVATIONS. <i>Astrophysical Journal, Supplement Series</i> , 2014, 215, 13.	3.0	97
13	Evolving outer heliosphere: Large-scale stability and time variations observed by the Interstellar Boundary Explorer. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	92
14	Thermodynamic origin of kappa distributions. <i>Europhysics Letters</i> , 2018, 122, 50001.	0.7	66
15	PRESSURE OF THE PROTON PLASMA IN THE INNER HELIOSHEATH. <i>Astrophysical Journal</i> , 2013, 762, 134.	1.6	65
16	Decades-Long Changes of the Interstellar Wind Through Our Solar System. <i>Science</i> , 2013, 341, 1080-1082.	6.0	63
17	Characterizing cometary electrons with kappa distributions. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7407-7422.	0.8	62
18	Formulae of Kappa Distributions. , 2017, , 177-246.		61

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19	NON-EQUILIBRIUM THERMODYNAMIC PROCESSES: SPACE PLASMAS AND THE INNER HELIOSHEATH. <i>Astrophysical Journal</i> , 2012, 749, 11.	1.6	60
20	Generation of Kappa Distributions in Solar Wind at 1 au. <i>Astrophysical Journal</i> , 2018, 853, 142.	1.6	60
21	Characterizing the dayside magnetosheath using energetic neutral atoms: IBEX and THEMIS observations. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3126-3137.	0.8	59
22	Kappa distribution in the presence of a potential energy. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 880-903.	0.8	59
23	SOLAR RADIATION PRESSURE AND LOCAL INTERSTELLAR MEDIUM FLOW PARAMETERS FROM INTERSTELLAR BOUNDARY EXPLORER LOW ENERGY HYDROGEN MEASUREMENTS. <i>Astrophysical Journal</i> , 2013, 775, 86.	1.6	57
24	Long-Term Variability of the Polytropic Index of Solar Wind Protons at 1 AU. <i>Solar Physics</i> , 2014, 289, 1371-1378.	1.0	55
25	LOW ENERGY NEUTRAL ATOMS FROM THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2014, 784, 89.	1.6	53
26	Electron Power-Law Spectra in Solar and Space Plasmas. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	53
27	Fitting method based on correlation maximization: Applications in space physics. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 2863-2875.	0.8	52
28	THE INFLUENCE OF PICK-UP IONS ON SPACE PLASMA DISTRIBUTIONS. <i>Astrophysical Journal</i> , 2011, 738, 64.	1.6	51
29	Electrostatic shielding in plasmas and the physical meaning of the Debye length. <i>Journal of Plasma Physics</i> , 2014, 80, 341-378.	0.7	51
30	SUPERPOSITION OF POLYTROPES IN THE INNER HELIOSHEATH. <i>Astrophysical Journal, Supplement Series</i> , 2016, 223, 13.	3.0	50
31	Statistical analysis of the impact of environmental temperature on the exponential growth rate of cases infected by COVID-19. <i>PLoS ONE</i> , 2020, 15, e0233875.	1.1	50
32	PICK-UP ION DISTRIBUTIONS AND THEIR INFLUENCE ON ENERGETIC NEUTRAL ATOM SPECTRAL CURVATURE. <i>Astrophysical Journal</i> , 2012, 751, 64.	1.6	49
33	Evidence of Large-Scale Quantization in Space Plasmas. <i>Entropy</i> , 2013, 15, 1118-1134.	1.1	47
34	Slowing of the Solar Wind in the Outer Heliosphere. <i>Astrophysical Journal</i> , 2019, 885, 156.	1.6	47
35	PLASMA-FIELD COUPLING AT SMALL LENGTH SCALES IN SOLAR WIND NEAR 1 au. <i>Astrophysical Journal</i> , 2016, 829, 88.	1.6	45
36	Statistical analysis of suprathermal electron drivers at 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S312-S322.	1.6	45

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37	Using Kappa Distributions to Identify the Potential Energy. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1050-1060.	0.8	45
38	Kappa and q Indices: Dependence on the Degrees of Freedom. <i>Entropy</i> , 2015, 17, 2062-2081.	1.1	44
39	Measure of the departure of the q -metastable stationary states from equilibrium. <i>Physica Scripta</i> , 2010, 82, 035003.	1.2	41
40	Approach on Tsallis statistical interpretation of hydrogen-atom by adopting the generalized radial distribution function. <i>Journal of Mathematical Chemistry</i> , 2009, 45, 930-939.	0.7	39
41	THE NEW HORIZONS SOLAR WIND AROUND PLUTO (SWAP) OBSERVATIONS OF THE SOLAR WIND FROM 11–33 au. <i>Astrophysical Journal, Supplement Series</i> , 2016, 223, 19.	3.0	39
42	SPECTRAL PROPERTIES OF REGIONS AND STRUCTURES IN THE INTERSTELLAR BOUNDARY EXPLORER (IBEX) SKY MAPS. <i>Astrophysical Journal</i> , 2011, 734, 29.	1.6	38
43	â€œLagrangian Temperatureâ€ Derivation and Physical Meaning for Systems Described by Kappa Distributions. <i>Entropy</i> , 2014, 16, 4290-4308.	1.1	38
44	Approach to general methods for fitting and their sensitivity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 375, 518-536.	1.2	36
45	On the Origin of Polytopic Behavior in Space and Astrophysical Plasmas. <i>Astrophysical Journal</i> , 2019, 874, 10.	1.6	36
46	Survey of Ion Properties in Jupiter's Plasma Sheet: Juno JADEâ€™ Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027696.	0.8	36
47	DETERMINATION OF INTERSTELLAR O PARAMETERS USING THE FIRST TWO YEARS OF DATA FROM THE INTERSTELLAR BOUNDARY EXPLORER. <i>Astrophysical Journal</i> , 2016, 828, 81.	1.6	35
48	General Allee effect in two-species population biology. <i>Journal of Biological Dynamics</i> , 2012, 6, 959-973.	0.8	34
49	A discrete-time hostâ€™ parasitoid model with an Allee effect. <i>Journal of Biological Dynamics</i> , 2015, 9, 34-51.	0.8	34
50	Misestimation of temperature when applying Maxwellian distributions to space plasmas described by kappa distributions. <i>Astrophysics and Space Science</i> , 2016, 361, 1.	0.5	33
51	Long-Term Independence of Solar Wind Polytopic Index on Plasma Flow Speed. <i>Entropy</i> , 2018, 20, 799.	1.1	32
52	Determining the Kappa Distributions of Space Plasmas from Observations in a Limited Energy Range. <i>Astrophysical Journal</i> , 2018, 864, 3.	1.6	32
53	Method to Derive Ion Properties From Juno JADE Including Abundance Estimates for O^{+} and S^{2+} . <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2018JA026169.	0.8	31
54	Properties of suprathermal electrons associated with discrete auroral arcs. <i>Geophysical Research Letters</i> , 2017, 44, 3475-3484.	1.5	29

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55	Derivation of the entropic formula for the statistical mechanics of space plasmas. <i>Nonlinear Processes in Geophysics</i> , 2018, 25, 77-88.	0.6	29
56	STATISTICAL ANALYSIS OF THE HEAVY NEUTRAL ATOMS MEASURED BY <i>IBEX</i> . <i>Astrophysical Journal, Supplement Series</i> , 2015, 220, 34.	3.0	28
57	Long-term Correlations of Polytrropic Indices with Kappa Distributions in Solar Wind Plasma near 1 au. <i>Astrophysical Journal</i> , 2019, 884, 52.	1.6	25
58	On the generalized formulation of Debye shielding in plasmas. <i>Physics of Plasmas</i> , 2019, 26, .	0.7	23
59	The sunspot as an autonomous dynamical system: A model for the growth and decay phases of sunspots. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 379, 436-458.	1.2	22
60	Chi-p distribution: characterization of the goodness of the fitting using Lp norms. <i>Journal of Statistical Distributions and Applications</i> , 2014, 1, 4.	1.2	21
61	SHOCK STRENGTH IN SPACE AND ASTROPHYSICAL PLASMAS. <i>Astrophysical Journal</i> , 2015, 809, 111.	1.6	21
62	Polytropic Behavior of Solar Wind Protons Observed by Parker Solar Probe. <i>Astrophysical Journal</i> , 2020, 901, 26.	1.6	21
63	Interplanetary magnetic field dependence of the suprathermal energetic neutral atoms originated in subsolar magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 964-972.	0.8	19
64	Competition models with Allee effects. <i>Journal of Difference Equations and Applications</i> , 2014, 20, 1127-1151.	0.7	18
65	KAPPA FUNCTION AS A UNIFYING FRAMEWORK FOR DISCRETE POPULATION MODELING. <i>Natural Resource Modelling</i> , 2016, 29, 130-144.	0.8	17
66	Expectation Values and Variance Based on Lp-Norms. <i>Entropy</i> , 2012, 14, 2375-2396.	1.1	16
67	<i>Large-scale</i> quantization from local correlations in space plasmas. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 3247-3258.	0.8	16
68	Curie law for systems described by kappa distributions. <i>Europhysics Letters</i> , 2016, 113, 10003.	0.7	16
69	NUMERICAL APPROXIMATION OF THE PERCENTAGE OF ORDER FOR ONE-DIMENSIONAL MAPS. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2005, 08, 15-32.	0.9	15
70	Non-Euclidean-normed Statistical Mechanics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016, 445, 240-255.	1.2	15
71	Thermodynamic Definitions of Temperature and Kappa and Introduction of the Entropy Defect. <i>Entropy</i> , 2021, 23, 1683.	1.1	15
72	Kappa Distributions: Statistical Physics and Thermodynamics of Space and Astrophysical Plasmas. <i>Universe</i> , 2018, 4, 144.	0.9	14

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73	Relationship between Polytopic Index and Temperature Anisotropy in Space Plasmas. <i>Astrophysical Journal</i> , 2021, 909, 127.	1.6	14
74	Modeling the Plasma Flow in the Inner Heliosheath with a Spatially Varying Compression Ratio. <i>Astrophysical Journal</i> , 2017, 838, 7.	1.6	13
75	Collision frequency and mean free path for plasmas described by kappa distributions. <i>AIP Advances</i> , 2019, 9, .	0.6	13
76	Hierarchical competition models with the Allee effect III: multispecies. <i>Journal of Biological Dynamics</i> , 2018, 12, 271-287.	0.8	12
77	Connection of Turbulence with Polytopic Index in the Solar Wind Proton Plasma. <i>Entropy</i> , 2019, 21, 1041.	1.1	12
78	Rankine–Hugoniot Shock Conditions for Space and Astrophysical Plasmas Described by Kappa Distributions. <i>Astrophysical Journal</i> , 2019, 886, 3.	1.6	12
79	Determining the Bulk Parameters of Plasma Electrons from Pitch-Angle Distribution Measurements. <i>Entropy</i> , 2020, 22, 103.	1.1	12
80	Hierarchical competition models with Allee effects. <i>Journal of Biological Dynamics</i> , 2015, 9, 32-44.	0.8	11
81	Statistical origin and properties of kappa distributions. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012014.	0.3	11
82	On the Simplification of Statistical Mechanics for Space Plasmas. <i>Entropy</i> , 2017, 19, 285.	1.1	11
83	On the Calculation of the Effective Polytopic Index in Space Plasmas. <i>Entropy</i> , 2019, 21, 997.	1.1	11
84	Electron Partial Density and Temperature Over Jupiter's Main Auroral Emission Using Juno Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029426.	0.8	11
85	Hierarchical competition models with the Allee effect II: the case of immigration. <i>Journal of Biological Dynamics</i> , 2015, 9, 288-316.	0.8	10
86	Nearly exact discretization of single species population models. <i>Natural Resource Modelling</i> , 2018, 31, .	0.8	10
87	Turbulent Heating in Solar Wind Thermodynamics. <i>Astrophysical Journal</i> , 2019, 887, 117.	1.6	10
88	Physical meaning of temperature in superstatistics. <i>Europhysics Letters</i> , 2020, 130, 30005.	0.7	10
89	Approach to block entropy modeling and optimization. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 2471-2494.	1.2	9
90	Near-equilibrium heliosphere - Far-equilibrium heliosheath. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	9

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91	On the Determination of Kappa Distribution Functions from Space Plasma Observations. <i>Entropy</i> , 2020, 22, 212.	1.1	9
92	Anisotropic Kappa Distributions. I. Formulation Based on Particle Correlations. <i>Astrophysical Journal, Supplement Series</i> , 2021, 253, 16.	3.0	9
93	Application of the theory of Large-Scale Quantization to the inner heliosheath. <i>Journal of Physics: Conference Series</i> , 2015, 577, 012018.	0.3	8
94	Modeling anisotropic Maxwellian distributions: derivation and properties. <i>Annales Geophysicae</i> , 2016, 34, 1145-1158.	0.6	8
95	Theoretical aspects of Hamiltonian kappa distributions. <i>Physica Scripta</i> , 2019, 94, 105009.	1.2	8
96	Comparison of neutral outgassing of comet 67P/Churyumov-Gerasimenko inbound and outbound beyond 3 AU from ROSINA/DFMS. <i>Astronomy and Astrophysics</i> , 2019, 630, A30.	2.1	8
97	Radial Profile of the Polytropic Index of Solar Wind Plasma in the Heliosphere. <i>Research Notes of the AAS</i> , 2021, 5, 4.	0.3	8
98	Non-equilibrium Stationary States in the Heliosphere and the Influence of Pick-up Ions. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	7
99	Thermal Doppler Broadening of Spectral Emissions in Space and Astrophysical Plasmas. <i>Astrophysical Journal, Supplement Series</i> , 2018, 239, 25.	3.0	7
100	Statistical Uncertainties of Space Plasma Properties Described by Kappa Distributions. <i>Entropy</i> , 2020, 22, 541.	1.1	7
101	Closed Fluxtubes and Dispersive Proton Conics at Jupiter's Polar Cap. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	7
102	Kappa Distributions and Isotropic Turbulence. <i>Entropy</i> , 2019, 21, 1093.	1.1	6
103	General Fitting Methods Based on Lq Norms and their Optimization. <i>Stats</i> , 2020, 3, 16-31.	0.5	6
104	Non-Extensive Statistical Analysis of Energetic Particle Flux Enhancements Caused by the Interplanetary Coronal Mass Ejection-Heliospheric Current Sheet Interaction. <i>Entropy</i> , 2019, 21, 648.	1.1	5
105	The generalized criterion for collisionless plasma sheaths with kappa distributed electrons. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 105004.	0.9	5
106	A stochastic modified Beverton-Holt model with the Allee effect. <i>Journal of Difference Equations and Applications</i> , 2016, 22, 37-54.	0.7	4
107	Stochastic modified Beverton-Holt model with Allee effect II: the Cushing-Henson conjecture. <i>Journal of Difference Equations and Applications</i> , 2016, 22, 164-176.	0.7	4
108	Kappa distributions: Thermodynamic origin and Generation in space plasmas. <i>Journal of Physics: Conference Series</i> , 2018, 1100, 012017.	0.3	4

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109	High Density Nodes in the Chaotic Region of 1D Discrete Maps. Entropy, 2018, 20, 24.	1.1	4
110	Geometric Interpretation of Errors in Multi-Parametrical Fitting Methods Based on Non-Euclidean Norms. Stats, 2019, 2, 426-438.	0.5	4
111	Black-body radiation in space plasmas. Europhysics Letters, 2021, 135, 49001.	0.7	4
112	Plasma oscillations and spectral index in non-extensive statistics. Physica A: Statistical Mechanics and Its Applications, 2022, 593, 126909.	1.2	4
113	Complex Symmetric Formulation of Maxwell Equations for Fields and Potentials. Mathematics, 2018, 6, 114.	1.1	3
114	Linear Regression with Optimal Rotation. Stats, 2019, 2, 416-425.	0.5	3
115	On the origin of the polytropic behavior in space plasmas. Journal of Physics: Conference Series, 2019, 1332, 012010.	0.3	3
116	Nonextensive statistical mechanics, superstatistics and beyond: theory and applications in astrophysical and other complex systems. European Physical Journal: Special Topics, 2020, 229, 707-709.	1.2	3
117	On the Convergence and Law of Large Numbers for the Non-Euclidean L_p -Means. Entropy, 2017, 19, 217.	1.1	2
118	Effects of Cholesterol in Stress-Related Neuronal Death—A Statistical Analysis Perspective. International Journal of Molecular Sciences, 2020, 21, 2905.	1.8	2
119	Superstatistics and isotropic turbulence. Physica A: Statistical Mechanics and Its Applications, 2021, 567, 125694.	1.2	2
120	Estimating the Polytropic Indices of Plasmas with Partial Temperature Tensor Measurements: Application to Solar Wind Protons at ~ 1 au. Applied Sciences (Switzerland), 2021, 11, 4019.	1.3	2
121	Significance of Bernoulli Integral Terms for the Solar Wind Protons at 1 au. Applied Sciences (Switzerland), 2021, 11, 4643.	1.3	2
122	The maximum magnetic flux in an active region. Proceedings of the International Astronomical Union, 2008, 4, 101-108.	0.0	1
123	Nonextensive Statistical Mechanics: Equivalence Between Dual Entropy and Dual Probabilities. Entropy, 2020, 22, 594.	1.1	1
124	Invariant Spectra in N-Coupled Standard Maps. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650084.	0.7	0
125	Polytropes in plasmas described by kappa distributions – Application in atmospheric modelling. Contributions To Plasma Physics, 2020, 60, e202000041.	0.5	0
126	Title is missing!, 2020, 15, e0233875.		0

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127	Title is missing!. , 2020, 15, e0233875.		0
128	Title is missing!. , 2020, 15, e0233875.		0
129	Title is missing!. , 2020, 15, e0233875.		0