# 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 | Plasma oscillations and spectral index in non-extensive statistics. Physica A: Statistical Mechanics and Its Applications, 2022, 593, 126909. | 1.2 | 4 |
| 2 | Closed Fluxtubes and Dispersive Proton Conics at Jupiter's Polar Cap. Geophysical Research Letters, 2022, 49, . | 1.5 | 7 |
| 3 | Radial Profile of the Polytropic Index of Solar Wind Plasma in the Heliosphere. Research Notes of the AAS, 2021, 5, 4. | 0.3 | 8 |
| 4 | Relationship between Polytropic Index and Temperature Anisotropy in Space Plasmas. Astrophysical Journal, 2021, 909, 127. | 1.6 | 14 |
| 5 | Anisotropic Kappa Distributions. I. Formulation Based on Particle Correlations. Astrophysical Journal, Supplement Series, 2021, 253, 16. | 3.0 | 9 |
| 6 | Superstatistics and isotropic turbulence. Physica A: Statistical Mechanics and Its Applications, 2021, 567, 125694. | 1.2 | 2 |
| 7 | 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 |
| 8 | Significance of Bernoulli Integral Terms for the Solar Wind Protons at 1 au. Applied Sciences (Switzerland), 2021, 11, 4643. | 1.3 | 2 |
| 9 | Electron Partial Density and Temperature Over Jupiter's Main Auroral Emission Using Juno Observations. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029426. | 0.8 | 11 |
| 10 | Black-body radiation in space plasmas. Europhysics Letters, 2021, 135, 49001. | 0.7 | 4 |
| 11 | Thermodynamic Definitions of Temperature and Kappa and Introduction of the Entropy Defect. Entropy, 2021, 23, 1683. | 1.1 | 15 |
| 12 | Method to Derive Ion Properties From Juno JADE Including Abundance Estimates for O<sup>+</sup> and S<sup>2+</sup>. Journal of Geophysical Research: Space Physics, 2020, 125, e2018JA026169. | 0.8 | 31 |
| 13 | Polytropes in plasmas described by kappa distributions â€“ Application in atmospheric modelling. Contributions To Plasma Physics, 2020, 60, e202000041. | 0.5 | 0 |
| 14 | Statistical analysis of the impact of environmental temperature on the exponential growth rate of cases infected by COVID-19. PLoS ONE, 2020, 15, e0233875. | 1.1 | 50 |
| 15 | Physical meaning of temperature in superstatistics. Europhysics Letters, 2020, 130, 30005. | 0.7 | 10 |
| 16 | Statistical Uncertainties of Space Plasma Properties Described by Kappa Distributions. Entropy, 2020, 22, 541. | 1.1 | 7 |
| 17 | On the Determination of Kappa Distribution Functions from Space Plasma Observations. Entropy, 2020, 22, 212. | 1.1 | 9 |
| 18 | Nonextensive Statistical Mechanics: Equivalence Between Dual Entropy and Dual Probabilities. Entropy, 2020, 22, 594. | 1.1 | 1 |

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|---|---|---|---|
| 19 | Determining the Bulk Parameters of Plasma Electrons from Pitch-Angle Distribution Measurements. Entropy, 2020, 22, 103. | 1.1 | 12 |
| 20 | General Fitting Methods Based on Lq Norms and their Optimization. Stats, 2020, 3, 16-31. | 0.5 | 6 |
| 21 | Survey of Ion Properties in Jupiter's Plasma Sheet: Juno JADEâ€‰ Observations. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027696. | 0.8 | 36 |
| 22 | Effects of Cholesterol in Stress-Related Neuronal Deathâ€”A Statistical Analysis Perspective. International Journal of Molecular Sciences, 2020, 21, 2905. | 1.8 | 2 |
| 23 | 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 |
| 24 | Polytropic Behavior of Solar Wind Protons Observed by Parker Solar Probe. Astrophysical Journal, 2020, 901, 26. | 1.6 | 21 |
| 25 | The generalized criterion for collisionless plasma sheaths with kappa distributed electrons. Plasma Physics and Controlled Fusion, 2020, 62, 105004. | 0.9 | 5 |
| 26 | Title is missing!. , 2020, 15, e0233875. | | 0 |
| 27 | Title is missing!. , 2020, 15, e0233875. | | 0 |
| 28 | Title is missing!. , 2020, 15, e0233875. | | 0 |
| 29 | Title is missing!. , 2020, 15, e0233875. | | 0 |
| 30 | Non-Extensive Statistical Analysis of Energetic Particle Flux Enhancements Caused by the Interplanetary Coronal Mass Ejection-Heliospheric Current Sheet Interaction. Entropy, 2019, 21, 648. | 1.1 | 5 |
| 31 | On the Calculation of the Effective Polytropic Index in Space Plasmas. Entropy, 2019, 21, 997. | 1.1 | 11 |
| 32 | Collision frequency and mean free path for plasmas described by kappa distributions. AIP Advances, 2019, 9, . | 0.6 | 13 |
| 33 | Long-term Correlations of Polytropic Indices with Kappa Distributions in Solar Wind Plasma near 1 au. Astrophysical Journal, 2019, 884, 52. | 1.6 | 25 |
| 34 | On the generalized formulation of Debye shielding in plasmas. Physics of Plasmas, 2019, 26, . | 0.7 | 23 |
| 35 | On the Origin of Polytropic Behavior in Space and Astrophysical Plasmas. Astrophysical Journal, 2019, 874, 10. | 1.6 | 36 |
| 36 | Theoretical aspects of Hamiltonian kappa distributions. Physica Scripta, 2019, 94, 105009. | 1.2 | 8 |

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|---|---|---|---|
| 37 | Linear Regression with Optimal Rotation. Stats, 2019, 2, 416-425. | 0.5 | 3 |
| 38 | Turbulent Heating in Solar Wind Thermodynamics. Astrophysical Journal, 2019, 887, 117. | 1.6 | 10 |
| 39 | Comparison of neutral outgassing of comet 67P/Churyumov-Gerasimenko inbound and outbound beyond 3 AU from ROSINA/DFMS. Astronomy and Astrophysics, 2019, 630, A30. | 2.1 | 8 |
| 40 | Kappa Distributions and Isotropic Turbulence. Entropy, 2019, 21, 1093. | 1.1 | 6 |
| 41 | Connection of Turbulence with Polytropic Index in the Solar Wind Proton Plasma. Entropy, 2019, 21, 1041. | 1.1 | 12 |
| 42 | Geometric Interpretation of Errors in Multi-Parametrical Fitting Methods Based on Non-Euclidean Norms. Stats, 2019, 2, 426-438. | 0.5 | 4 |
| 43 | Slowing of the Solar Wind in the Outer Heliosphere. Astrophysical Journal, 2019, 885, 156. | 1.6 | 47 |
| 44 | On the origin of the polytropic behavior in space plasmas. Journal of Physics: Conference Series, 2019, 1332, 012010. | 0.3 | 3 |
| 45 | Rankineâ€“Hugoniot Shock Conditions for Space and Astrophysical Plasmas Described by Kappa Distributions. Astrophysical Journal, 2019, 886, 3. | 1.6 | 12 |
| 46 | Hierarchical competition models with the Allee effect III: multispecies. Journal of Biological Dynamics, 2018, 12, 271-287. | 0.8 | 12 |
| 47 | Using Kappa Distributions to Identify the Potential Energy. Journal of Geophysical Research: Space Physics, 2018, 123, 1050-1060. | 0.8 | 45 |
| 48 | Generation of Kappa Distributions in Solar Wind at 1 au. Astrophysical Journal, 2018, 853, 142. | 1.6 | 60 |
| 49 | Kappa Distributions: Statistical Physics and Thermodynamics of Space and Astrophysical Plasmas. Universe, 2018, 4, 144. | 0.9 | 14 |
| 50 | Kappa distributions: Thermodynamic origin and Generation in space plasmas. Journal of Physics: Conference Series, 2018, 1100, 012017. | 0.3 | 4 |
| 51 | Thermal Doppler Broadening of Spectral Emissions in Space and Astrophysical Plasmas. Astrophysical Journal, Supplement Series, 2018, 239, 25. | 3.0 | 7 |
| 52 | Complex Symmetric Formulation of Maxwell Equations for Fields and Potentials. Mathematics, 2018, 6, 114. | 1.1 | 3 |
| 53 | Long-Term Independence of Solar Wind Polytropic Index on Plasma Flow Speed. Entropy, 2018, 20, 799. | 1.1 | 32 |
| 54 | Determining the Kappa Distributions of Space Plasmas from Observations in a Limited Energy Range. Astrophysical Journal, 2018, 864, 3. | 1.6 | 32 |

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|---|---|---|---|
| 55 | Nearly exact discretization of single species population models. Natural Resource Modelling, 2018, 31, . | 0.8 | 10 |
| 56 | Electron Power-Law Spectra in Solar and Space Plasmas. Space Science Reviews, 2018, 214, 1. | 3.7 | 53 |
| 57 | Derivation of the entropic formula for the statistical mechanics of space plasmas. Nonlinear Processes in Geophysics, 2018, 25, 77-88. | 0.6 | 29 |
| 58 | High Density Nodes in the Chaotic Region of 1D Discrete Maps. Entropy, 2018, 20, 24. | 1.1 | 4 |
| 59 | Thermodynamic origin of kappa distributions. Europhysics Letters, 2018, 122, 50001. | 0.7 | 66 |
| 60 | Properties of suprathermal electrons associated with discrete auroral arcs. Geophysical Research Letters, 2017, 44, 3475-3484. | 1.5 | 29 |
| 61 | Modeling the Plasma Flow in the Inner Heliosheath with a Spatially Varying Compression Ratio. Astrophysical Journal, 2017, 838, 7. | 1.6 | 13 |
| 62 | Statistical origin and properties of kappa distributions. Journal of Physics: Conference Series, 2017, 900, 012014. | 0.3 | 11 |
| 63 | On the Simplification of Statistical Mechanics for Space Plasmas. Entropy, 2017, 19, 285. | 1.1 | 11 |
| 64 | On the Convergence and Law of Large Numbers for the Non-Euclidean Lp -Means. Entropy, 2017, 19, 217. | 1.1 | 2 |
| 65 | Formulae of Kappa Distributions. , 2017, , 177-246. | | 61 |
| 66 | Modeling anisotropic Maxwellâ€“JÃ¼ttner distributions: derivation and properties. Annales Geophysicae, 2016, 34, 1145-1158. | 0.6 | 8 |
| 67 | Curie law for systems described by kappa distributions. Europhysics Letters, 2016, 113, 10003. | 0.7 | 16 |
| 68 | PLASMA-FIELD COUPLING AT SMALL LENGTH SCALES IN SOLAR WIND NEAR 1 au. Astrophysical Journal, 2016, 829, 88. | 1.6 | 45 |
| 69 | Misestimation of temperature when applying Maxwellian distributions to space plasmas described by kappa distributions. Astrophysics and Space Science, 2016, 361, 1. | 0.5 | 33 |
| 70 | Characterizing cometary electrons with kappa distributions. Journal of Geophysical Research: Space Physics, 2016, 121, 7407-7422. | 0.8 | 62 |
| 71 | DETERMINATION OF INTERSTELLAR O PARAMETERS USING THE FIRST TWO YEARS OF DATA FROM THE INTERSTELLAR BOUNDARY EXPLORER. Astrophysical Journal, 2016, 828, 81. | 1.6 | 35 |
| 72 | THE NEW HORIZONS SOLAR WIND AROUND PLUTO (SWAP) OBSERVATIONS OF THE SOLAR WIND FROM 11â€“33 au. Astrophysical Journal, Supplement Series, 2016, 223, 19. | 3.0 | 39 |

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|---|---|---|---|
| 73 | KAPPA FUNCTION AS A UNIFYING FRAMEWORK FOR DISCRETE POPULATION MODELING. Natural Resource Modelling, 2016, 29, 130-144. | 0.8 | 17 |
| 74 | Statistical analysis of suprathermal electron drivers at 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S312-S322. | 1.6 | 45 |
| 75 | Invariant Spectra in N-Coupled Standard Maps. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650084. | 0.7 | 0 |
| 76 | SUPERPOSITION OF POLYTROPES IN THE INNER HELIOSHEATH. Astrophysical Journal, Supplement Series, 2016, 223, 13. | 3.0 | 50 |
| 77 | A stochastic modified Bevertonâ€“Holt model with the Allee effect. Journal of Difference Equations and Applications, 2016, 22, 37-54. | 0.7 | 4 |
| 78 | LOCAL INTERSTELLAR MAGNETIC FIELD DETERMINED FROM THE INTERSTELLAR BOUNDARY EXPLORER RIBBON. Astrophysical Journal Letters, 2016, 818, L18. | 3.0 | 153 |
| 79 | Non-Euclidean-normed Statistical Mechanics. Physica A: Statistical Mechanics and Its Applications, 2016, 445, 240-255. | 1.2 | 15 |
| 80 | Stochastic modified Bevertonâ€“Holt model with Allee effect II: the Cushingâ€“Henson conjecture. Journal of Difference Equations and Applications, 2016, 22, 164-176. | 0.7 | 4 |
| 81 | SHOCK STRENGTH IN SPACE AND ASTROPHYSICAL PLASMAS. Astrophysical Journal, 2015, 809, 111. | 1.6 | 21 |
| 82 | STATISTICAL ANALYSIS OF THE HEAVY NEUTRAL ATOMS MEASURED BY IBEX. Astrophysical Journal, Supplement Series, 2015, 220, 34. | 3.0 | 28 |
| 83 | Application of the theory of Large-Scale Quantization to the inner heliosheath. Journal of Physics: Conference Series, 2015, 577, 012018. | 0.3 | 8 |
| 84 | Hierarchical competition models with the Allee effect II: the case of immigration. Journal of Biological Dynamics, 2015, 9, 288-316. | 0.8 | 10 |
| 85 | Kappa distribution in the presence of a potential energy. Journal of Geophysical Research: Space Physics, 2015, 120, 880-903. | 0.8 | 59 |
| 86 | A discrete-time hostâ€“parasitoid model with an Allee effect. Journal of Biological Dynamics, 2015, 9, 34-51. | 0.8 | 34 |
| 87 | Interplanetary magnetic field dependence of the suprathermal energetic neutral atoms originated in subsolar magnetopause. Journal of Geophysical Research: Space Physics, 2015, 120, 964-972. | 0.8 | 19 |
| 88 | Introduction to special section on Origins and Properties of Kappa Distributions: Statistical Background and Properties of Kappa Distributions in Space Plasmas. Journal of Geophysical Research: Space Physics, 2015, 120, 1607-1619. | 0.8 | 168 |
| 89 | Kappa and q Indices: Dependence on the Degrees of Freedom. Entropy, 2015, 17, 2062-2081. | 1.1 | 44 |
| 90 | Hierarchical competition models with Allee effects. Journal of Biological Dynamics, 2015, 9, 32-44. | 0.8 | 11 |

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| 91 | SEPARATION OF THE RIBBON FROM GLOBALLY DISTRIBUTED ENERGETIC NEUTRAL ATOM FLUX USING THE FIRST FIVE YEARS OF IBEX OBSERVATIONS. Astrophysical Journal, Supplement Series, 2014, 215, 13. | 3.0 | 97 |
| 92 | â€œLagrangian Temperatureâ€: Derivation and Physical Meaning for Systems Described by Kappa Distributions. Entropy, 2014, 16, 4290-4308. | 1.1 | 38 |
| 93 | Electrostatic shielding in plasmas and the physical meaning of the Debye length. Journal of Plasma Physics, 2014, 80, 341-378. | 0.7 | 51 |
| 94 | LOW ENERGY NEUTRAL ATOMS FROM THE HELIOSHEATH. Astrophysical Journal, 2014, 784, 89. | 1.6 | 53 |
| 95 | Long-Term Variability of the Polytropic Index of Solar Wind Protons at 1 AU. Solar Physics, 2014, 289, 1371-1378. | 1.0 | 55 |
| 96 | Competition models with Allee effects. Journal of Difference Equations and Applications, 2014, 20, 1127-1151. | 0.7 | 18 |
| 97 | Chi-p distribution: characterization of the goodness of the fitting using Lp norms. Journal of Statistical Distributions and Applications, 2014, 1, 4. | 1.2 | 21 |
| 98 | Largeâ€scale quantization from local correlations in space plasmas. Journal of Geophysical Research: Space Physics, 2014, 119, 3247-3258. | 0.8 | 16 |
| 99 | Decades-Long Changes of the Interstellar Wind Through Our Solar System. Science, 2013, 341, 1080-1082. | 6.0 | 63 |
| 100 | Understanding Kappa Distributions: A Toolbox for Space Science and Astrophysics. Space Science Reviews, 2013, 175, 183-214. | 3.7 | 293 |
| 101 | Fitting method based on correlation maximization: Applications in space physics. Journal of Geophysical Research: Space Physics, 2013, 118, 2863-2875. | 0.8 | 52 |
| 102 | Characterizing the dayside magnetosheath using energetic neutral atoms: IBEX and THEMIS observations. Journal of Geophysical Research: Space Physics, 2013, 118, 3126-3137. | 0.8 | 59 |
| 103 | Near-equilibrium heliosphere - Far-equilibrium heliosheath. AIP Conference Proceedings, 2013, , . | 0.3 | 9 |
| 104 | Evidence of Large-Scale Quantization in Space Plasmas. Entropy, 2013, 15, 1118-1134. | 1.1 | 47 |
| 105 | SOLAR RADIATION PRESSURE AND LOCAL INTERSTELLAR MEDIUM FLOW PARAMETERS FROMINTERSTELLAR BOUNDARY EXPLORERLOW ENERGY HYDROGEN MEASUREMENTS. Astrophysical Journal, 2013, 775, 86. | 1.6 | 57 |
| 106 | CIRCULARITY OF THEINTERSTELLAR BOUNDARY EXPLORERRIBBON OF ENHANCED ENERGETIC NEUTRAL ATOM (ENA) FLUX. Astrophysical Journal, 2013, 776, 30. | 1.6 | 121 |
| 107 | PRESSURE OF THE PROTON PLASMA IN THE INNER HELIOSHEATH. Astrophysical Journal, 2013, 762, 134. | 1.6 | 65 |
| 108 | Expectation Values and Variance Based on Lp-Norms. Entropy, 2012, 14, 2375-2396. | 1.1 | 16 |

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| 109 | NON-EQUILIBRIUM THERMODYNAMIC PROCESSES: SPACE PLASMAS AND THE INNER HELIOSHEATH. Astrophysical Journal, 2012, 749, 11. | 1.6 | 60 |
| 110 | General Allee effect in two-species population biology. Journal of Biological Dynamics, 2012, 6, 959-973. | 0.8 | 34 |
| 111 | PICK-UP ION DISTRIBUTIONS AND THEIR INFLUENCE ON ENERGETIC NEUTRAL ATOM SPECTRAL CURVATURE. Astrophysical Journal, 2012, 751, 64. | 1.6 | 49 |
| 112 | SEPARATION OF THEINTERSTELLAR BOUNDARY EXPLORERRIBBON FROM GLOBALLY DISTRIBUTED ENERGETIC NEUTRAL ATOM FLUX. Astrophysical Journal, 2011, 731, 56. | 1.6 | 153 |
| 113 | FIRST SKY MAP OF THE INNER HELIOSHEATH TEMPERATURE USINGIBEXSPECTRA. Astrophysical Journal, 2011, 734, 1. | 1.6 | 132 |
| 114 | THE INFLUENCE OF PICK-UP IONS ON SPACE PLASMA DISTRIBUTIONS. Astrophysical Journal, 2011, 738, 64. | 1.6 | 51 |
| 115 | INVARIANT KAPPA DISTRIBUTION IN SPACE PLASMAS OUT OF EQUILIBRIUM. Astrophysical Journal, 2011, 741, 88. | 1.6 | 138 |
| 116 | SPECTRAL PROPERTIES OF REGIONS AND STRUCTURES IN THEINTERSTELLAR BOUNDARY EXPLORER(IBEX) SKY MAPS. Astrophysical Journal, 2011, 734, 29. | 1.6 | 38 |
| 117 | EXPLORING TRANSITIONS OF SPACE PLASMAS OUT OF EQUILIBRIUM. Astrophysical Journal, 2010, 714, 971-987. | 1.6 | 111 |
| 118 | Measure of the departure of theq-metastable stationary states from equilibrium. Physica Scripta, 2010, 82, 035003. | 1.2 | 41 |
| 119 | Non-equilibrium Stationary States in the Heliosphere and the Influence of Pick-up Ions. AIP Conference Proceedings, 2010, , . | 0.3 | 7 |
| 120 | Evolving outer heliosphere: Largeâ€scale stability and time variations observed by the Interstellar Boundary Explorer. Journal of Geophysical Research, 2010, 115, . | 3.3 | 92 |
| 121 | Comparison of Interstellar Boundary Explorer Observations with 3D Global Heliospheric Models. Science, 2009, 326, 966-968. | 6.0 | 221 |
| 122 | Global Observations of the Interstellar Interaction from the Interstellar Boundary Explorer (IBEX). Science, 2009, 326, 959-962. | 6.0 | 461 |
| 123 | Approach on Tsallis statistical interpretation of hydrogen-atom by adopting the generalized radial distribution function. Journal of Mathematical Chemistry, 2009, 45, 930-939. | 0.7 | 39 |
| 124 | Beyond kappa distributions: Exploiting Tsallis statistical mechanics in space plasmas. Journal of Geophysical Research, 2009, 114, . | 3.3 | 323 |
| 125 | Approach to block entropy modeling and optimization. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 2471-2494. | 1.2 | 9 |
| 126 | The maximum magnetic flux in an active region. Proceedings of the International Astronomical Union, 2008, 4, 101-108. | 0.0 | 1 |

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| 127 | Approach to general methods for fitting and their sensitivity. Physica A: Statistical Mechanics and Its Applications, 2007, 375, 518-536. | 1.2 | 36 |
| 128 | The sunspot as an autonomous dynamical system: A model for the growth and decay phases of sunspots. Physica A: Statistical Mechanics and Its Applications, 2007, 379, 436-458. | 1.2 | 22 |
| 129 | NUMERICAL APPROXIMATION OF THE PERCENTAGE OF ORDER FOR ONE-DIMENSIONAL MAPS. International Journal of Modeling, Simulation, and Scientific Computing, 2005, 08, 15-32. | 0.9 | 15 |