Fernando Angulo-Brown

List of Publications by Year
in descending order

106 papers	2,305 citations	236612 25 h-index	253896 43 g-index
109 all docs	109 docs citations	109 times ranked	735 citing authors

#	Article	IF	Citations
1	An ecological optimization criterion for finiteâ€time heat engines. Journal of Applied Physics, 1991, 69, 7465-7469.	1.1	498
2	Compression ratio of an optimized air standard Otto-cycle model. European Journal of Physics, 1994, 15, 38-42.	0.3	111
3	Endoreversible thermal cycle with a nonlinear heat transfer law. Journal of Applied Physics, 1993, 74, 2216-2219.	1.1	86
4	A general property of endoreversible thermal engines. Journal of Applied Physics, 1997, 81, 2973-2979.	1.1	84
5	A non-endoreversible Otto cycle model: improving power output and efficiency. Journal Physics D: Applied Physics, 1996, 29, 80-83.	1.3	60
6	Local stability analysis of an endoreversible Curzon-Ahborn-Novikov engine working in a maximum-power-like regime. Journal Physics D: Applied Physics, 2001, 34, 2068-2072.	1.3	50
7	On cycle-to-cycle heat release variations in a simulated spark ignition heat engine. Applied Energy, 2011, 88, 1557-1567.	5.1	47
8	A nonlinear strategy to reveal seismic precursory signatures in earthquake-related self-potential signals. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 2036-2040.	1.2	45
9	Thermodynamic optimality in some biochemical reactions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 87-90.	0.4	44
10	Multiscale entropy analysis of electroseismic time series. Natural Hazards and Earth System Sciences, 2008, 8, 855-860.	1.5	44
11	A general property of non-endoreversible thermal cycles. Journal Physics D: Applied Physics, 1999, 32, 1415-1420.	1.3	42
12	First-order irreversible thermodynamic approach to a simple energy converter. Physical Review E, 2008, 77, 011123.	0.8	38
13	Simple model of the aging effect in heart interbeat time series. Physical Review E, 2003, 67, 052901.	0.8	37
14	Dynamic Robustness and Thermodynamic Optimization in a Non-Endoreversible Curzonâ€“Ahlborn Engine. Journal of Non-Equilibrium Thermodynamics, 2006, 31, .	2.4	36
15	Thermoeconomic optimisation of Novikov power plant model under maximum ecological conditions. Journal of the Energy Institute, 2007, 80, 96-104.	2.7	34
16	Connection between maximum-work and maximum-power thermal cycles. Physical Review E, 2013, 88, 052142.	0.8	34
17	Spectral and multifractal study of electroseismic time series associated to the <i>M_w</i>=6.5 earthquake of 24 October 1993 in Mexico. Natural Hazards and Earth System Sciences, 2004, 4, 703-709.	1.5	31
18	On Some Nonendoreversible Engine Models with Nonlinear Heat Transfer Laws. Open Systems and Information Dynamics, 2003, 10, 351-375.	0.5	29

#	Article	IF	Citations
19	SOME CASES OF CROSSOVER BEHAVIOR IN HEART INTERBEAT AND ELECTROSEISMIC TIME SERIES. Fractals, 2005, 13, 253-263.	1.8	29
20	Company size distribution for developing countries. Physica A: Statistical Mechanics and Its Applications, 2006, 359, 607-618.	1.2	28
21	Comparative analysis of two ecological type modes of performance for a simple energy converter. Journal of the Energy Institute, 2009, 82, 223-227.	2.7	28
22	Entropy of geoelectrical time series in the natural time domain. Natural Hazards and Earth System Sciences, 2011, 11, 219-225.	1.5	28
23	Nowcasting Avalanches as Earthquakes and the Predictability of Strong Avalanches in the Olami-Feder-Christensen Model. Entropy, 2020, 22, 1228.	1.1	28
24	Reply to â€œComment on â€˜A general property of endoreversible thermal enginesâ€™â€Šâ€•[J. Appl. Phys. 89, 1518 (2001)]. Journal of Applied Physics, 2001, 89, 1520-1521.	1.1	27
25	Monofractal and multifractal analysis of simulated heat release fluctuations in a spark ignition heat engine. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 5662-5670.	1.2	27
26	Influence of the loss of time-constants repertoire in pathologic heartbeat dynamics. Physica A: Statistical Mechanics and Its Applications, 2005, 348, 304-316.	1.2	26
27	van't Hoff's Equation for Endoreversible Chemical Reactions. The Journal of Physical Chemistry, 1996, 100, 9193-9195.	2.9	23
28	Electric field patterns as seismic precursors. Geophysical Research Letters, 1995, 22, 3087-3090.	1.5	21
29	A proposal for relativistic transformations in thermodynamics. Journal of Physics A, 2005, 38, 2821-2834.	1.6	21
30	A simplified irreversible Otto engine model with fluctuations in the combustion heat. International Journal of Ambient Energy, 2006, 27, 181-192.	1.4	21
31	Finite-Time Thermoeconomic Optimization of a Solar-Driven Heat Engine Model. Entropy, 2011, 13, 171-183.	1.1	21
32	Statistical behavior of the spectral exponent and the correlation time of electric self-potential time series associated to the Ms=7.4 September 14, 1995 earthquake in Mexico. Physics and Chemistry of the Earth, 2004, 29, 305-312.	1.2	19
33	Thermoeconomic optimisation of endoreversible heat engine under maximum modified ecological criterion. Journal of the Energy Institute, 2007, 80, 232-238.	2.7	19
34	A variational approach to ecological-type optimization criteria for finite-time thermal engine models. Journal Physics D: Applied Physics, 2002, 35, 1089-1093.	1.3	18
35	The role of the Stefanâ€“Boltzmann law in the thermodynamic optimization of an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si18.gif" display="inline" overflow="scroll"><mml:mi>n</mml:mi></mml:math>-MÃ¼ser engine. Physica A: Statistical Mechanics and Its Applications, 2016, 444, 914-921.	1.2	18
36	On the possible correlation between the Gutenberg-Richter parameters of the frequency-magnitude relationship. Journal of Seismology, 2018, 22, 1025-1035.	0.6	18

#	Article	IF	Citations
37	Further seismic properties of a spring-block earthquake model. Geophysical Journal International, 1999, 139, 410-418.	1.0	17
38	A Thermodynamic Approach to the Compromise Between Power and Efficiency in Muscle Contraction. Journal of Theoretical Biology, 1997, 189, 391-398.	0.8	15
39	A variational optimization of a finite-time thermal cycle with a nonlinear heat transfer law. Energy, 1999, 24, 997-1008.	4.5	15
40	Statistical features of seismoelectric signals prior to M7.4 Guerrero-Oaxaca earthquake (MÃ©xico). Natural Hazards and Earth System Sciences, 2008, 8, 1001-1007.	1.5	15
41	Correlations and variability in electrical signals related to earthquake activity. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4218-4228.	1.2	15
42	Scaling instability in self-potential earthquake-related signals. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 1181-1186.	1.2	15
43	Thermodynamic and themoeconomic optimization of isothermal endoreversible chemical engine models. Physica A: Statistical Mechanics and Its Applications, 2017, 488, 149-161.	1.2	15
44	Ecological efficiency of finite-time thermodynamics: A molecular dynamics study. Physical Review E, 2018, 98, 022130.	0.8	15
45	Thermodynamic and thermoeconomic optimization of coupled thermal and chemical engines by means of an equivalent array of uncoupled endoreversible engines. European Physical Journal Plus, 2018, 133, 1.	1.2	15
46	Symbolic dynamics of the cubic map. Physica D: Nonlinear Phenomena, 1985, 14, 374-386.	1.3	14
47	FRACTAL CHANGES IN HEART RATE DYNAMICS WITH AGING AND HEART FAILURE. Fluctuation and Noise Letters, 2003, 03, L83-L89.	1.0	14
48	Thermodynamic analysis of an array of isothermal endoreversible electric engines. European Physical Journal Plus, 2020, 135, 1.	1.2	14
49	Black-body radiation and the maximum entropy production regime. European Journal of Physics, 1998, 19, 361-369.	0.3	13
50	Stability Analysis of an Endoreversible Heat Engine with Stefan-Boltzmann Heat Transfer Law Working in Maximum-Power-Like Regime. Open Systems and Information Dynamics, 2006, 13, 43-53.	0.5	13
51	Sliding size distribution in a simple spring-block system with asperities. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3137-3144.	1.2	13
52	Is the (3 + 1)-d nature of the universe a thermodynamic necessity?. Europhysics Letters, 2016, 113, 40006.	0.7	13
53	A nonendoreversible model for wind energy as a solarâ€driven heat engine. Journal of Applied Physics, 1996, 80, 4872-4876.	1.1	12
54	Distributions of city sizes in Mexico during the 20th century. Chaos, Solitons and Fractals, 2015, 73, 64-70.	2.5	12

#	Article	IF	Citations
55	On reversible, endoreversible, and irreversible heat device cycles versus the Carnot cycle: a pedagogical approach to account for losses. European Journal of Physics, 2016, 37, 045103.	0.3	12
56	A Variational Ecological-Type Optimization of Some Thermal-Engine Models. Open Systems and Information Dynamics, 2004, 11, 123-138.	0.5	11
57	A statistical analysis of electric self-potential time series associated to two 1993 earthquakes in Mexico. Natural Hazards and Earth System Sciences, 2007, 7, 549-556.	1.5	11
58	Pattern synchrony in electrical signals related to earthquake activity. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 1239-1252.	1.2	11
59	Ecological optimization of a family of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" display="inline" overflow="scroll"><mml:mi>n</mml:mi></mml:math>-MÃ¼ser engines for an arbitrary value of the solar concentration factor. Physica A: Statistical Mechanics and Its Applications, 2017, 469, 250-255.	1.2	11
60	A Proposal of Ecologic Taxes Based on Thermo-Economic Performance of Heat Engine Models. Energies, 2009, 2, 1042-1056.	1.6	10
61	Simulation and properties of a non-homogeneous spring-block earthquake model with asperities. Acta Geophysica, 2012, 60, 740-757.	1.0	10
62	Thermoeconomic Optimization of an Irreversible Novikov Plant Model under Different Regimes of Performance. Entropy, 2017, 19, 118.	1.1	10
63	Multifractal Spectrum Curvature of RR Tachograms of Healthy People and Patients with Congestive Heart Failure, a New Tool to Assess Health Conditions. Entropy, 2019, 21, 581.	1.1	10
64	A MÃ¼ser - Curzon - Ahlborn engine model for photothermal conversion. Journal Physics D: Applied Physics, 1997, 30, 2490-2496.	1.3	9
65	A comparison of ground geoelectric activity between three regions of different level of seismicity. Natural Hazards and Earth System Sciences, 2007, 7, 591-598.	1.5	8
66	Possible future scenarios for atmospheric concentration of greenhouse gases: A simplified thermodynamic approach. Renewable Energy, 2009, 34, 2344-2352.	4.3	8
67	Finite-time thermodynamics approach to the superconducting transition. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 183, 431-436.	0.9	7
68	A COMPARATIVE STUDY OF VALIDITY RANGES OF SOME FRACTAL METHODS OF TIME SERIES ANALYSIS. Fractals, 2010, 18, 235-246.	1.8	7
69	Restrictions on linear heat capacities from Joule-Brayton maximum-work cycle efficiency. Physical Review E, 2014, 89, 022134.	0.8	7
70	Some Common Features Between a Spring-Block Self-Organized Critical Model, Stickâ€œSlip Experiments with Sandpapers and Actual Seismicity. Pure and Applied Geophysics, 2020, 177, 889-903.	0.8	7
71	Fluctuations in the Energetic Properties of a Spark-Ignition Engine Model with Variability. Entropy, 2013, 15, 3277-3296.	1.1	6
72	A Possible Cosmological Application of Some Thermodynamic Properties of the Black Body Radiation in n-Dimensional Euclidean Spaces. Entropy, 2015, 17, 4563-4581.	1.1	6

#	Article	IF	Citations
73	A Simple Model to Relate the Elastic Ratio Gamma of a Critically Self-Organized Spring-Block Model with the Age of a Lithospheric Downgoing Plate in a Subduction Zone. Entropy, 2020, 22, 868.	1.1	6
74	Parameters of Higuchiâ€™s method to characterize primary waves in some seismograms from the Mexican subduction zone. Acta Geophysica, 2012, 60, 910-927.	1.0	5
75	The universality of the Carnot theorem. European Journal of Physics, 2013, 34, 273-289.	0.3	5
76	SOME FRACTAL CELLULAR AUTOMATA MODELS OF SEISMIC FAULTS. Fractals, 2007, 15, 207-215.	1.8	4
77	Patterns of significant seismic quiescence on the Mexican Pacific coast. Physics and Chemistry of the Earth, 2015, 85-86, 119-130.	1.2	4
78	A graphic approach to include dissipative-like effects in reversible thermal cycles. European Physical Journal B, 2017, 90, 1.	0.6	4
79	Review and Update on Some Connections between a Spring-Block SOC Model and Actual Seismicity in the Case of Subduction Zones. Entropy, 2022, 24, 435.	1.1	4
80	Evolution in time and scales of the stability of heart interbeat rate. Europhysics Letters, 2010, 92, 68006.	0.7	3
81	Scaling Differences of Heartbeat Excursions Between Wake and Sleep Periods. Methods in Enzymology, 2011, 487, 409-429.	0.4	3
82	Deduction of Lorentz Transformations from Classical Thermodynamics. Entropy, 2015, 17, 197-213.	1.1	3
83	Anticorrelation between the elastic ratio Î³ and the b-value in a spring-block SOC-model of earthquakes. Journal of Physics: Conference Series, 2019, 1221, 012061.	0.3	3
84	NON-UNIFORM SCALING BEHAVIOR IN SELF-POTENTIAL EARTHQUAKE-RELATED SIGNALS. Fluctuation and Noise Letters, 2008, 08, L261-L267.	1.0	2
85	DIFFERENCES IN THE STABILITY OF THE HEART INTERBEAT RATE DURING WAKE AND SLEEP PERIODS. Fluctuation and Noise Letters, 2011, 10, 405-416.	1.0	2
86	Equivalent norms in ${{mathbb{R}}}^{n}$ from thermodynamical laws. European Journal of Physics, 2015, 36, 065021.	0.3	2
87	Crossover scaling evaluation in mixed correlated signals by means of Detrended Fluctuation Analysis. Journal of Physics: Conference Series, 2015, 582, 012062.	0.3	2
88	Multifractality of Pseudo-Velocities and Seismic Quiescence Associated with the Tehuantepec M8.2 EQ. Entropy, 2018, 20, 961.	1.1	2
89	Time Evolution of the Fractal Dimension of Electric Self-Potential Time Series. , 2007, , 407-418.		2
90	A simple relationship between the sunlight concentration factor and the thermal conductance in a class of photothermal engines. Journal Physics D: Applied Physics, 1998, 31, 1742-1744.	1.3	1

#	Article	IF	Citations
91	An Endoreversible Thermodynamic Model Applied to the Convective Zone of the Sun. ISRN Astronomy and Astrophysics, 2012, 2012, 1-7.	0.2	1
92	The Faint Young Sun Paradox: A Simplified Thermodynamic Approach. Advances in Astronomy, 2012, 2012, 1-10.	0.5	1
93	Thermoeconomical analysis of a non-endoreversible Novikov power plant model under different regimes of performance. Journal of Physics: Conference Series, 2015, 582, 012050.	0.3	1
94	A Simple Thermodynamic Model of the Internal Convective Zone of the Earth. Entropy, 2018, 20, 985.	1.1	1
95	Distance distributions of human settlements. Chaos, Solitons and Fractals, 2020, 136, 109808.	2.5	1
96	Cycle-to-Cycle Variability. , 2014, , 107-145.		1
97	Some further analogies between the Bak-Sneppen model for biological evolution and the spring-block earthquake model. Canadian Journal of Physics, 2002, 80, 1675-1685.	0.4	0
98	Comment on â€œConvective heat transfer law for an endoreversible engineâ€•[J. Appl. Phys. 100, 014911 (2006)]. Journal of Applied Physics, 2007, 101, 036106.	1.1	0
99	A simple model for determining the atmospheric thermal conductivity. Journal of Physics: Conference Series, 2017, 792, 012088.	0.3	0
100	On some inconsistences between two accepted approaches to treat reversible thermal cycles. Journal of Physics: Conference Series, 2019, 1221, 012045.	0.3	0
101	A Comparative Study of Geoelectric Signals Possibly Associated with the Occurrence of Two Ms > 7 EQs in the South Pacific Coast of Mexico. Entropy, 2019, 21, 1225.	1.1	0
102	Ultrarelativistic Gas with Zero Chemical Potential. Symmetry, 2019, 11, 249.	1.1	0
103	Optimization of heat engines using different heat transfer laws by means of the method of saving functions. Journal of Physics: Conference Series, 2021, 1723, 012066.	0.3	0
104	Some Complexity Studies of Electroseismic Signals from Mexican Subduction Zone. , 0, , .		0
105	Validating and Comparing with Experiments and Other Models. , 2014, , 57-86.		0
106	Thermodynamic restrictions on the heat capacity of a fermion gas. Physica A: Statistical Mechanics and Its Applications, 2022, 592, 126782.	1.2	0