# Ricardo Lopez-Ruiz

## List of Publications by Year
## in descending order

| 67 papers | 1,860 citations | 516710<br>16 h-index | 265206<br>42 g-index |
|---|---|---|---|
| 71 all docs | 71 docs citations | 71 times ranked | 768 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | A statistical measure of complexity. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 209, 321-326. | 2.1 | 739 |
| 2 | Features of the extension of a statistical measure of complexity to continuous systems. Physical Review E, 2002, 66, 011102. | 2.1 | 213 |
| 3 | Tendency towards maximum complexity in a nonequilibrium isolated system. Physical Review E, 2001, 63, 066116. | 2.1 | 133 |
| 4 | Statistical complexity and Fisher–Shannon information in the H-atom. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 5283-5286. | 2.1 | 95 |
| 5 | Shannon information, LMC complexity and Rényi entropies: a straightforward approach. Biophysical Chemistry, 2005, 115, 215-218. | 2.8 | 60 |
| 6 | A generalized statistical complexity measure: Applications to quantum systems. Journal of Mathematical Physics, 2009, 50, . | 1.1 | 51 |
| 7 | COMPLEXITY IN SOME PHYSICAL SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 2669-2673. | 1.7 | 34 |
| 8 | Indirect Allee effect, bistability and chaotic oscillations in a predator–prey discrete model of logistic type. Chaos, Solitons and Fractals, 2005, 24, 85-101. | 5.1 | 34 |
| 9 | A method to discern complexity in two-dimensional patterns generated by coupled map lattices. Physica A: Statistical Mechanics and Its Applications, 2005, 355, 633-640. | 2.6 | 31 |
| 10 | Some features of the statistical complexity, Fisher–Shannon information and Bohr-like orbits in the quantum isotropic harmonic oscillator. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 265303. | 2.1 | 30 |
| 11 | Complex Behavior in a Discrete Coupled Logistic Model for the Symbiotic Interaction of Two Species. Mathematical Biosciences and Engineering, 2004, 1, 307-324. | 1.9 | 28 |
| 12 | Horseshoe implications. Physical Review E, 1993, 48, 4297-4304. | 2.1 | 26 |
| 13 | Mode-mode interaction for a $CO_2$ laser with imperfect O(2) symmetry. Physical Review A, 1993, 47, 500-509. | 2.5 | 23 |
| 14 | Alternative evaluation of statistical indicators in atoms: The non-relativistic and relativistic cases. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2549-2551. | 2.1 | 22 |
| 15 | A chaotic gas-like model for trading markets. Journal of Computational Science, 2010, 1, 24-32. | 2.9 | 20 |
| 16 | The limit cycles of Liénard equations in the strongly nonlinear regime. Chaos, Solitons and Fractals, 2000, 11, 747-756. | 5.1 | 16 |
| 17 | Pareto and Boltzmann–Gibbs behaviors in a deterministic multi-agent system. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 4637-4642. | 2.6 | 16 |
| 18 | Exponential wealth distribution in a random market. A rigorous explanation. Journal of Mathematical Analysis and Applications, 2012, 386, 195-204. | 1.0 | 15 |

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|---|---------|----|-----------| 
| 19 | Dynamics of maps with a global multiplicative coupling. Chaos, Solitons and Fractals, 1991, 1, 511-528. | 5.1 | 14 |
| 20 | Nonlinear interaction of transverse modes in a $CO_2$laser. Physical Review A, 1994, 49, 4916-4921. | 2.5 | 14 |
| 21 | COMPLEX PATTERNS ON THE PLANE: DIFFERENT TYPES OF BASIN FRACTALIZATION IN A TWO-DIMENSIONAL MAPPING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 287-310. | 1.7 | 14 |
| 22 | A geometrical derivation of the Boltzmann factor. American Journal of Physics, 2008, 76, 780-781. | 0.7 | 14 |
| 23 | Calculation of statistical entropic measures in a model of solids. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2288-2291. | 2.1 | 14 |
| 24 | A model of characteristic earthquakes and its implications for regional seismicity. Terra Nova, 2004, 16, 116-120. | 2.1 | 11 |
| 25 | A model of coupled maps for economic dynamics. European Physical Journal: Special Topics, 2007, 143, 241-243. | 2.6 | 11 |
| 26 | Complexity Invariance by Replication in the Quantum Square Well. Open Systems and Information Dynamics, 2009, 16, 423-427. | 1.2 | 10 |
| 27 | The homotopy analysis method and the Liénard equation. International Journal of Computer Mathematics, 2011, 88, 121-134. | 1.8 | 10 |
| 28 | Statistical measures and magic numbers in metal clusters. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1674-1676. | 2.1 | 9 |
| 29 | Derivation of the Maxwellian distribution from the microcanonical ensemble. American Journal of Physics, 2007, 75, 752-753. | 0.7 | 8 |
| 30 | Awaking and sleeping of a complex network. Neural Networks, 2007, 20, 102-108. | 5.9 | 8 |
| 31 | Transition from Pareto to Boltzmann–Gibbs behavior in a deterministic economic model. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 3521-3526. | 2.6 | 8 |
| 32 | Periodic and chaotic events in a discrete model of logistic type for the competitive interaction of two species. Chaos, Solitons and Fractals, 2009, 41, 334-347. | 5.1 | 8 |
| 33 | Evidence of Magic Numbers in Nuclei by Statistical Indicators. Open Systems and Information Dynamics, 2010, 17, 279-286. | 1.2 | 8 |
| 34 | Exponential wealth distribution : a new approach from functional iteration theory. ESAIM: Proceedings and Surveys, 2012, 36, 189-196. | 0.4 | 8 |
| 35 | Statistical measures and the Klein tunneling in single-layer graphene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1005-1009. | 2.1 | 8 |
| 36 | Formulas for the Amplitude of the van der Pol Limit Cycle through the Homotopy Analysis Method. Scholarly Research Exchange, 2009, 2009, 1-7. | 0.2 | 8 |

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|---|---------|----|-----------|
| 37 | Transition between two oscillation modes. Physical Review E, 1997, 55, R3820-R3823. | 2.1 | 7 |
| 38 | Equilibrium distributions and relaxation times in gaslike economic models: An analytical derivation. Physical Review E, 2011, 83, 036108. | 2.1 | 7 |
| 39 | A new model for ideal gases. Decay to the Maxwellian distribution. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 2600-2607. | 2.6 | 7 |
| 40 | Symmetry induced oscillations in four-dimensional models deriving from the van der Pol equation. Chaos, Solitons and Fractals, 2004, 21, 55-61. | 5.1 | 6 |
| 41 | Extremum complexity distribution of a monodimensional ideal gas out of equilibrium. Physica A: Statistical Mechanics and Its Applications, 2007, 382, 523-530. | 2.6 | 6 |
| 42 | Equiprobability, Entropy, Gamma Distributions and Other Geometrical Questions in Multi-Agent Systems. Entropy, 2009, 11, 959-971. | 2.2 | 6 |
| 43 | Statistical Complexity and Fisher-Shannon Information: Applications. , 2011, , 65-127. | | 6 |
| 44 | TRANSITION FROM EXPONENTIAL TO POWER LAW INCOME DISTRIBUTIONS IN A CHAOTIC MARKET. International Journal of Modern Physics C, 2011, 22, 21-33. | 1.7 | 5 |
| 45 | Study of a quantum scattering process by means of entropic measures. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 2556-2560. | 2.1 | 5 |
| 46 | Detecting synchronization in spatially extended discrete systems by complexity measurements. Discrete Dynamics in Nature and Society, 2005, 2005, 337-342. | 0.9 | 4 |
| 47 | Approximating the amplitude and form of limit cycles in the weakly nonlinear regime of Liénard systems. Chaos, Solitons and Fractals, 2007, 34, 1307-1317. | 5.1 | 4 |
| 48 | DYNAMICS OF TWO LOGISTIC MAPS WITH A MULTIPLICATIVE COUPLING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1992, 02, 421-425. | 1.7 | 3 |
| 49 | Registering seconds with a conic clock. Chaos, Solitons and Fractals, 2005, 23, 67-72. | 5.1 | 3 |
| 50 | DIRECTED RANDOM MARKETS: CONNECTIVITY DETERMINES MONEY. International Journal of Modern Physics C, 2013, 24, 1250088. | 1.7 | 3 |
| 51 | Order in binary sequences and the routes to chaos. Chaos, Solitons and Fractals, 2006, 27, 1316-1320. | 5.1 | 2 |
| 52 | Symmetry pattern transition in cellular automata with complex behavior. Chaos, Solitons and Fractals, 2008, 37, 638-642. | 5.1 | 2 |
| 53 | Modelling user's activity in a real-world complex network. International Journal of Computer Mathematics, 2008, 85, 1287-1298. | 1.8 | 2 |
| 54 | Extremum complexity in the monodimensional ideal gas: The piecewise uniform density distribution approximation. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4364-4378. | 2.6 | 2 |

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|---|---------|-----|-----------|
| 55 | Statistical magnitudes and the chiral tunneling in bilayer graphene: Influence of evanescent waves. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 1122-1126. | 2.1 | 2 |
| 56 | Statistical Complexity. Applications in Electronic Systems. Journal of Theoretical and Computational Science, 2015, 02, . | 0.1 | 2 |
| 57 | A Binary approach to the Lorenz model. Chaos, Solitons and Fractals, 1997, 8, 1-6. | 5.1 | 1 |
| 58 | Economic Models with Chaotic Money Exchange. Lecture Notes in Computer Science, 2009, , 43-52. | 1.3 | 1 |
| 59 | Logistic Models for Symbiosis, Predator-Prey, and Competition. , 2008, , 838-847. | | 1 |
| 60 | Registering seconds with a conic clock. Chaos, Solitons and Fractals, 2004, 23, 67-67. | 5.1 | 0 |
| 61 | Indirect Allee effect, bistability and chaotic oscillations in a predator–prey discrete model of logistic type. Chaos, Solitons and Fractals, 2005, 24, 85-101. | 5.1 | 0 |
| 62 | Geometrical Derivation of Equilibrium Distributions in Some Stochastic Systems. , 2012, , . | | 0 |
| 63 | A Nonlinear Map for the Decay to Equilibrium of Ideal Gases. Springer Proceedings in Mathematics and Statistics, 2014, , 133-140. | 0.2 | 0 |
| 64 | Complexity and Stochastic Synchronization in Coupled Map Lattices and Cellular Automata. , 0, , . | | 0 |
| 65 | Heisenberg uncertainty relation and statistical measures in the square well. Communications in Numerical Analysis, 0, 2012, 1-7. | 0.1 | 0 |
| 66 | Complex Systems with Trivial Dynamics. Springer Proceedings in Complexity, 2013, , 57-65. | 0.3 | 0 |
| 67 | Random Market Models with an H-Theorem. Springer Proceedings in Mathematics and Statistics, 2015, , 215-226. | 0.2 | 0 |