Marcus Aloizio Martinez de Aguiar

List of Publications by Year
in descending order

112	2,565	186209	233338
papers	citations	28 h-index	45 g-index

116	116	116	2768
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Biodiversity, Species Interactions and Ecological Networks in a Fragmented World. Advances in Ecological Research, 2012, 46, 89-210.	1.4	284
2	Global patterns of speciation and diversity. Nature, 2009, 460, 384-387.	13.7	166
3	The Missing Part of Seed Dispersal Networks: Structure and Robustness of Bat-Fruit Interactions. PLoS ONE, 2011, 6, e17395.	1.1	116
4	The modularity of seed dispersal: differences in structure and robustness between batâ€“ and birdâ€“fruit networks. Oecologia, 2011, 167, 131-40.	0.9	111
5	Bifurcations of periodic trajectories in non-integrable Hamiltonian systems with two degrees of freedom: Numerical and analytical results. Annals of Physics, 1987, 180, 167-205.	1.0	96
6	Evolution in spatial predatorâ€“prey models and the â€œprudent predatorâ€: The inadequacy of steadyâ€state organism fitness and the concept of individual and group selection. Complexity, 2008, 13, 23-44.	0.9	69
7	Complex Trajectories in the Quartic Oscillator and Its Semiclassical Coherent-State Propagator. Annals of Physics, 1996, 252, 458-478.	1.0	67
8	Spectral analysis and the dynamic response of complex networks. Physical Review E, 2005, 71, 016106.	0.8	67
9	Chaos in a spin-boson system: Classical analysis. Annals of Physics, 1992, 216, 291-312.	1.0	63
10	Synchronisation and stability in river metapopulation networks. Ecology Letters, 2014, 17, 273-283.	3.0	62
11	Phase-Space Approach to the Tunnel Effect: A New Semiclassical Traversal Time. Physical Review Letters, 1997, 79, 3323-3326.	2.9	53
12	Voting contagion: Modeling and analysis of a century of U.S. presidential elections. PLoS ONE, 2017, 12, e0177970.	1.1	48
13	Multilevel and kin selection in a connected world. Nature, 2010, 463, E8-E9.	13.7	44
14	Evolution and stability of ring species. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5080-5084.	3.3	44
15	Anticipating Economic Market Crises Using Measures of Collective Panic. PLoS ONE, 2015, 10, e0131871.	1.1	42
16	Semiclassical approximations based on complex trajectories. Physical Review E, 2004, 69, 066204.	0.8	41
17	Pleistocene megafaunal interaction networks became more vulnerable after human arrival. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151367.	1.2	40
18	Invasion and Extinction in the Mean Field Approximation for a Spatial Host-Pathogen Model. Journal of Statistical Physics, 2004, 114, 1417-1451.	0.5	39

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19	Build-up mechanisms determining the topology of mutualistic networks. Journal of Theoretical Biology, 2007, 249, 181-189.	0.8	37
20	The indirect paths to cascading effects of extinctions in mutualistic networks. Ecology, 2020, 101, e03080.	1.5	37
21	Chaos and pattern formation in a spatial tritrophic food chain. Ecological Modelling, 2006, 191, 291-303.	1.2	35
22	Chaotic signature in the motion of coupled carbon nanotube oscillators. Nanotechnology, 2005, 16, 583-589.	1.3	34
23	The semiclassical coherent state propagator for systems with spin. Journal of Physics A, 2006, 39, 3085-3097.	1.6	32
24	Mean-field approximation to a spatial host-pathogen model. Physical Review E, 2003, 67, 047102.	0.8	30
25	Semiclassical propagation of wavepackets with complex and real trajectories. Journal of Physics A, 2005, 38, 4645-4664.	1.6	30
26	Predicting Economic Market Crises Using Measures of Collective Panic. SSRN Electronic Journal, 0, , .	0.4	30
27	Turing patterns and apparent competition in predator-prey food webs on networks. Physical Review E, 2012, 86, 056203.	0.8	30
28	Dynamical Response of Networks Under External Perturbations: Exact Results. Journal of Statistical Physics, 2015, 159, 221-230.	0.5	30
29	Spontaneous pattern formation and genetic invasion in locally mating and competing populations. Physical Review E, 2002, 65, 051919.	0.8	29
30	Reply to ÂComment on ÂÂSemiclassical approximations in phase space with coherent statesÂÂÂ. Journal of Physics A, 2002, 35, 9493-9497.	1.6	28
31	Random initial condition in small Barabasi-Albert networks and deviations from the scale-free behavior. Physical Review E, 2005, 71, 037101.	0.8	25
32	Global synchronization of partially forced Kuramoto oscillators on networks. Physica A: Statistical Mechanics and Its Applications, 2019, 514, 487-496.	1.2	24
33	Solving the boundary value problem for finite Kirchhoff rods. Physica D: Nonlinear Phenomena, 2003, 181, 53-69.	1.3	23
34	Quantum linear mutual information and classical correlations in globally pure bipartite systems. Physica A: Statistical Mechanics and Its Applications, 2004, 338, 458-470.	1.2	23
35	Moran model as a dynamical process on networks and its implications for neutral speciation. Physical Review E, 2011, 84, 031901.	0.8	23
36	The shape of the competition and carrying capacity kernels affects the likelihood of disruptive selection. Journal of Theoretical Biology, 2009, 259, 5-11.	0.8	22

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37	Conditions for neutral speciation via isolation by distance. Journal of Theoretical Biology, 2013, 335, 51-56.	0.8	22
38	Synchronization and spatial patterns in forced swarmalators. Chaos, 2020, 30, 053112.	1.0	22
39	Coevolution Creates Complex Mosaics across Large Landscapes. American Naturalist, 2019, 194, 217-229.	1.0	21
40	Semiclassical approximations to the coherent-state propagator for a particle in a box. Physical Review A, 1996, 54, 1808-1819.	1.0	17
41	Quantum-classical correspondence in the phase control of multiphoton dissociation by two-color laser pulses. Physical Review A, 2008, 77, .	1.0	16
42	Network analyses support the role of prey preferences in shaping resource use patterns within five animal populations. Oikos, 2016, 125, 492-501.	1.2	16
43	Semiclassical propagation of coherent states using complex and real trajectories. Physical Review A, 2005, 72, .	1.0	15
44	Speciation in the Derridaâ€“Higgs model with finite genomes and spatial populations. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 085602.	0.7	15
45	Revealing biases in the sampling of ecological interaction networks. PeerJ, 2019, 7, e7566.	0.9	15
46	Coherent state path integrals in the Weyl representation. Journal of Physics A, 2006, 39, 13465-13482.	1.6	14
47	Semiclassical propagator for SU(n) coherent states. Journal of Mathematical Physics, 2011, 52, .	0.5	14
48	Uniform Approximation for the Coherent-State Propagator Using a Conjugate Application of the Bargmann Representation. Physical Review Letters, 2005, 95, 050405.	2.9	13
49	Classical dissipation and asymptotic equilibrium via interaction with chaotic systems. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 333-350.	1.2	13
50	Searching for Modular Structure in Complex Phenotypes: Inferences from Network Theory. Evolutionary Biology, 2009, 36, 416.	0.5	13
51	An initial value representation for the coherent state propagator with complex trajectories. Chemical Physics, 2010, 370, 42-50.	0.9	13
52	Modular structure in C. elegans neural network and its response to external localized stimuli. Physica A: Statistical Mechanics and Its Applications, 2019, 533, 122051.	1.2	13
53	Modeling neutral viral mutations in the spread of SARS-CoV-2 epidemics. PLoS ONE, 2021, 16, e0255438.	1.1	13
54	The role of sex separation in neutral speciation. Theoretical Ecology, 2013, 6, 213-223.	0.4	12

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55	Comment on ÂSemiclassical approximations in phase space with coherent statesÂ. Journal of Physics A, 2003, 36, 9795-9796.	1.6	11
56	A regular semiclassical approximation for the propagation of wave packets with complex trajectories. Journal of Physics A, 2005, 38, 9317-9339.	1.6	11
57	Pattern formation, outbreaks, and synchronization in food chains with two and three species. Physical Review E, 2007, 75, 061908.	0.8	11
58	Scars of the Wigner Function. Physical Review Letters, 2001, 86, 59-62.	2.9	10
59	Entanglement and chaos in a square billiard with a magnetic field. Physical Review E, 2004, 70, 045201.	0.8	10
60	Resonant helical deformations in nonhomogeneous Kirchhoff filaments. Physica A: Statistical Mechanics and Its Applications, 2005, 352, 547-557.	1.2	10
61	The mutationâ€“drift balance in spatially structured populations. Journal of Theoretical Biology, 2016, 402, 9-17.	0.8	10
62	Short-range interactions in a two-electron system:â€ƒEnergy levels and magnetic properties. Physical Review B, 2002, 66, .	1.1	9
63	Energy dissipation via coupling with a finite chaotic environment. Physical Review E, 2011, 83, 061112.	0.8	9
64	Multiconfigurational quantum propagation with trajectory-guided generalized coherent states. Journal of Chemical Physics, 2016, 144, 094106.	1.2	9
65	Semiclassical coherent-state propagator via path integrals with intermediate states of variable width. Physical Review A, 2003, 68, .	1.0	8
66	Analytically solvable model of probabilistic network dynamics. Physical Review E, 2005, 72, 067102.	0.8	8
67	Initial value representation for the SU(n) semiclassical propagator. Journal of Chemical Physics, 2011, 134, 234105.	1.2	8
68	The network organization of protein interactions in the spliceosome is reproduced by the simple rules of food-web models. Scientific Reports, 2015, 5, 14865.	1.6	8
69	Signatures of Microevolutionary Processes in Phylogenetic Patterns. Systematic Biology, 2018, 68, 131-144.	2.7	8
70	Generalized coherent states for the double-well potential. Journal of Physics A, 2003, 36, 5773-5786.	1.6	7
71	Hostâ€“parasitoid persistence over variable spatioâ€temporally susceptible habitats: bottomâ€“up effects of ephemeral resources. Oikos, 2012, 121, 1665-1679.	1.2	7
72	Diploid versus haploid models of neutral speciation. Journal of Biological Physics, 2016, 42, 235-245.	0.7	7

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73	Modeling Mito-nuclear Compatibility and Its Role in Species Identification. Systematic Biology, 2021, 70, 133-144.	2.7	7
74	Complexity reduction in the 3D Kuramoto model. Chaos, Solitons and Fractals, 2021, 149, 111090.	2.5	7
75	Robustness of spontaneous pattern formation in spatially distributed genetic populations. Brazilian Journal of Physics, 2003, 33, 514-520.	0.7	7
76	Ottâ€“Antonsen ansatz for the D-dimensional Kuramoto model: A constructive approach. Chaos, 2021, 31, 113141.	1.0	7
77	Semiclassical Husimi functions for spin systems. Physical Review A, 2005, 71, .	1.0	6
78	Quantum dissipation and decoherence via interaction with low-dimensional chaos: A Feynman-Vernon approach. Physical Review A, 2006, 74, .	1.0	6
79	Semiclassical tunnelling of wavepackets with real trajectories. Physica Scripta, 2007, 75, 363-373.	1.2	6
80	Energy transfer dynamics and thermalization of two oscillators interacting via chaos. Physical Review E, 2012, 85, 041119.	0.8	6
81	Patch exploitation strategies of parasitoids: The role of sex ratio and forager's interference in structuring metapopulations. Ecological Modelling, 2012, 230, 11-21.	1.2	6
82	Phase space flow in the Husimi representation. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 485304.	0.7	6
83	Binary dynamics on star networks under external perturbations. Physical Review E, 2015, 92, 042812.	0.8	6
84	Quantifying the effects of quarantine using an IBM SEIR model on scalefree networks. Chaos, Solitons and Fractals, 2020, 138, 109999.	2.5	6
85	Toward a theory of topopatric speciation: The role of genetic assortative mating. Physica A: Statistical Mechanics and Its Applications, 2014, 409, 35-47.	1.2	5
86	Error catastrophe in populations under similarity-essential recombination. Journal of Theoretical Biology, 2015, 374, 48-53.	0.8	5
87	Gene flow and metacommunity arrangement affects coevolutionary dynamics at the mutualismâ€“antagonism interface. Journal of the Royal Society Interface, 2017, 14, 20160989.	1.5	5
88	Registering the evolutionary history in individual-based models of speciation. Physica A: Statistical Mechanics and Its Applications, 2018, 510, 1-14.	1.2	5
89	Trace formula for systems with spin from the coherent state propagator. Journal of Mathematical Physics, 2007, 48, 112103.	0.5	4
90	A conjugate for the Bargmann representation. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 105301.	0.7	4

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91	A genetic approach to the rock-paper-scissors game. Journal of Theoretical Biology, 2017, 421, 146-152.	0.8	4
92	Opinion Dynamics on Networks under Correlated Disordered External Perturbations. Journal of Statistical Physics, 2018, 173, 54-76.	0.5	4
93	Sympatric speciation based on pure assortative mating. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 155601.	0.7	4
94	Scientific visualization of PoincarÃ©maps. Computers and Graphics, 1998, 22, 209-216.	1.4	3
95	Controlling phase space caustics in the semiclassical coherent state propagator. Annals of Physics, 2008, 323, 654-672.	1.0	3
96	Synchronization and stability in noisy population dynamics. Physical Review E, 2008, 77, 022903.	0.8	3
97	The role of predator overlap in the robustness and extinction of a four species predatorâ€“prey network. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 4725-4733.	1.2	3
98	Impacts of enemyâ€mediated effects and the additivity of interactions in an insect trophic system. Population Ecology, 2013, 55, 11-26.	0.7	3
99	Topological structures in the Husimi flow. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 065301.	0.7	3
100	Realized trophic niche driven by apparent competition: an example with marsupials. Biotropica, 2017, 49, 832-837.	0.8	3
101	A new form of path integral for the coherent states representation and its semiclassical limit. Brazilian Journal of Physics, 2005, 35, 175-183.	0.7	2
102	A dynamical analysis of allele frequencies in populations evolving under assortative mating and mutations. Physica A: Statistical Mechanics and Its Applications, 2015, 421, 54-68.	1.2	2
103	Barriers to gene flow and ring species formation. Evolution; International Journal of Organic Evolution, 2017, 71, 442-448.	1.1	2
104	Allopatry increases the balance of phylogenetic trees during radiation under neutral speciation. Ecography, 2020, 43, 1487-1498.	2.1	2
105	Demographic Processes in Spatially Structured Host-Parasitoid Systems. , 2014, , 11-38.		2
106	Evaluation of the semiclassical coherent state propagator in the presence of phase space caustics. Journal of Physics: Conference Series, 2008, 99, 012016.	0.3	1
107	Home range evolution and its implication in population outbreaks. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 5661-5677.	1.6	1
108	Robustness against extinction by stochastic sex determination in small populations. Physical Review E, 2012, 86, 041104.	0.8	1

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109	A semiclassical trace formula for the canonical partition function of one-dimensional systems. Physica A: Statistical Mechanics and Its Applications, 2007, 380, 211-225.	1.2	0
110	Suppression of Fermi acceleration in composite particles. Physica D: Nonlinear Phenomena, 2016, 331, 81-88.	1.3	0
111	Coevolution in sexually reproducing populations of predators and prey. Ecological Modelling, 2016, 337, 168-175.	1.2	0
112	Shannon information criterion for low-high diversity transition in Moran and voter models. Physical Review E, 2021, 104, 024315.	0.8	0