

# Federico Morã;n Abad

## List of Publications by Year in descending order

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73  
papers

3,078  
citations

361413

20  
h-index

161849

54  
g-index

77  
all docs

77  
docs citations

77  
times ranked

3878  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of secondary structure of proteins from UV circular dichroism spectra using an unsupervised learning neural network. <i>Protein Engineering, Design and Selection</i> , 1993, 6, 383-390.	2.1	916
2	Reductive genome evolution in <i>Buchnera aphidicola</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 581-586.	7.1	461
3	Low-Resolution Structures of Proteins in Solution Retrieved from X-Ray Scattering with a Genetic Algorithm. <i>Biophysical Journal</i> , 1998, 74, 2760-2775.	0.5	284
4	Reconstruction of protein form with X-ray solution scattering and a genetic algorithm. <i>Journal of Molecular Biology</i> , 2000, 299, 1289-1302.	4.2	136
5	Proteinotopic feature maps. <i>Neurocomputing</i> , 1994, 6, 443-454.	5.9	128
6	MIDER: Network Inference with Mutual Information Distance and Entropy Reduction. <i>PLoS ONE</i> , 2014, 9, e96732.	2.5	99
7	SOMCD: Method for evaluating protein secondary structure from UV circular dichroism spectra. <i>Proteins: Structure, Function and Bioinformatics</i> , 2001, 42, 460-470.	2.6	76
8	Onset of birhythmicity in a regulated biochemical system. <i>Biophysical Chemistry</i> , 1984, 20, 149-156.	2.8	61
9	A Simple Self-Maintaining Metabolic System: Robustness, Autocatalysis, Bistability. <i>PLoS Computational Biology</i> , 2010, 6, e1000872.	3.2	52
10	Noise-Controlled Self-Replicating Patterns. <i>Physical Review Letters</i> , 2003, 91, 238301.	7.8	51
11	Best practices in bioinformatics training for life scientists. <i>Briefings in Bioinformatics</i> , 2013, 14, 528-537.	6.5	51
12	Structural studies on histones H1. Circular dichroism and difference spectroscopy of the histones H1 and their trypsin-resistant cores from calf thymus and from the fruit fly <i>Ceratitidis capitata</i> . <i>Biochemistry</i> , 1980, 19, 4080-4087.	2.5	45
13	Condensation of DNA by the C-terminal domain of histone H1 A circular dichroism study. <i>Biophysical Chemistry</i> , 1985, 22, 125-129.	2.8	42
14	A SOM prototype-based cluster analysis methodology. <i>Expert Systems With Applications</i> , 2017, 88, 14-28.	7.6	34
15	Complex dynamics of a catalytic network having faulty replication into error-species. <i>Physica D: Nonlinear Phenomena</i> , 1993, 63, 21-40.	2.8	29
16	Dynamics of a biochemical system with multiple oscillatory domains as a clue for multiple modes of neuronal oscillations. <i>European Biophysics Journal</i> , 1988, 15, 277-287.	2.2	28
17	Characterization of the European Sea Bass ( <i>Dicentrarchus labrax</i> ) Gonadal Transcriptome During Sexual Development. <i>Marine Biotechnology</i> , 2019, 21, 359-373.	2.4	28
18	Memory effects and oscillations in single-molecule kinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 12548-12555.	7.1	25

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19	Simulating a Model of Metabolic Closure. <i>Biological Theory</i> , 2013, 8, 383-390.	1.5	24
20	Large-scale emergent properties of an autocatalytic reaction-diffusion model subject to noise. <i>Physical Review E</i> , 2003, 68, 066114.	2.1	21
21	A model of an autocatalytic network formed by error-prone self-replicative species. <i>Bulletin of Mathematical Biology</i> , 1993, 55, 385-415.	1.9	20
22	Crowdsourced direct-to-consumer genomic analysis of a family quartet. <i>BMC Genomics</i> , 2015, 16, 910.	2.8	20
23	Finding complex oscillatory phenomena in biochemical systems An empirical approach. <i>Biophysical Chemistry</i> , 1988, 29, 211-217.	2.8	19
24	Cooperative interaction of the C-terminal domain of histone H1 with DNA. <i>Biophysical Chemistry</i> , 1991, 39, 145-152.	2.8	19
25	A novel representation of genomic sequences for taxonomic clustering and visualization by means of self-organizing maps. <i>Bioinformatics</i> , 2015, 31, 736-744.	4.1	19
26	Multi-Criteria Optimization of Regulation in Metabolic Networks. <i>PLoS ONE</i> , 2012, 7, e41122.	2.5	19
27	A generalized Fisher equation and its utility in chemical kinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 12777-12781.	7.1	18
28	Influence of the hypercyclic organization on the error threshold. <i>Journal of Theoretical Biology</i> , 1987, 127, 393-402.	1.7	17
29	Simulation of plasticity in the adult visual cortex. <i>Biological Cybernetics</i> , 2001, 84, 445-451.	1.3	17
30	Realistic Three Dimensional Fitness Landscapes Generated by Self Organizing Maps for the Analysis of Experimental HIV-1 Evolution. <i>PLoS ONE</i> , 2014, 9, e88579.	2.5	17
31	C1 Proteins: a Class of High-Mobility-Group Non-histone Chromosomal Proteins from the Fruit Fly <i>Ceratitis capitata</i> . <i>FEBS Journal</i> , 1982, 123, 165-170.	0.2	16
32	SARS-CoV-2 Mutant Spectra at Different Depth Levels Reveal an Overwhelming Abundance of Low Frequency Mutations. <i>Pathogens</i> , 2022, 11, 662.	2.8	16
33	Analysis of Students' Behavior Through User Clustering in Online Learning Settings, Based on Self Organizing Maps Neural Networks. <i>IEEE Access</i> , 2021, 9, 132592-132608.	4.2	15
34	Spatiotemporal patterns driven by autocatalytic internal reaction noise. <i>Journal of Chemical Physics</i> , 2005, 122, 214701.	3.0	13
35	Title is missing!. <i>Neural Processing Letters</i> , 1998, 8, 55-65.	3.2	12
36	Size matters: Influence of stochasticity on the self-maintenance of a simple model of metabolic closure. <i>Journal of Theoretical Biology</i> , 2012, 300, 143-151.	1.7	12

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37	Studies on evolutionary and selective properties of hypercycles using a Monte Carlo method. <i>Journal of Molecular Evolution</i> , 1987, 26, 294-300.	1.8	11
38	Transition and Transit Time Distributions for Time Dependent Reactions with Application to Biochemical Networks. <i>Journal of Physical Chemistry B</i> , 1997, 101, 9410-9419.	2.6	11
39	Neutrality condition and response law for nonlinear reaction-diffusion equations, with application to population genetics. <i>Physical Review E</i> , 2002, 65, 061110.	2.1	10
40	Lifetimes and onâ€“off distributions for single-molecule kinetics. Stochastic approach and extraction of information from experimental data. <i>Chemical Physics</i> , 2003, 287, 83-90.	1.9	10
41	Coexistence of multiple propagating wave-fronts in a regulated enzyme reaction model: link with birhythmicity and multi-threshold excitability. <i>Biophysical Chemistry</i> , 1998, 74, 197-207.	2.8	9
42	Dynamic renormalization group and noise induced transitions in a reaction diffusion model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 334, 67-77.	2.6	9
43	Functional, fractal nonlinear response with application to rate processes with memory, allometry, and population genetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 4798-4803.	7.1	9
44	Kinetic laws, phaseâ€“phase expansions, renormalization group, and INR calibration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 6465-6470.	7.1	9
45	Excitability with multiple thresholds. <i>Biophysical Chemistry</i> , 1985, 23, 71-77.	2.8	8
46	Receptive Field Map Development by Anti-Hebbian Learning. <i>Neural Networks</i> , 1997, 10, 1037-1052.	5.9	8
47	H-Theorem for Lifetime Distributions of Active Intermediates in Nonequilibrium Chemical Systems with Stable Limit Cycles. <i>Journal of Physical Chemistry B</i> , 1998, 102, 4598-4611.	2.6	8
48	Use of a Generalized Fisher Equation for Global Optimization in Chemical Kinetics. <i>Journal of Physical Chemistry A</i> , 2011, 115, 8426-8436.	2.5	8
49	A Two-Level, Intramutant Spectrum Haplotype Profile of Hepatitis C Virus Revealed by Self-Organized Maps. <i>Microbiology Spectrum</i> , 2021, 9, e0145921.	3.0	8
50	Energetically Plausible Model of a Self-Maintaining Protocellular System. <i>Bulletin of Mathematical Biology</i> , 2007, 69, 1423-1445.	1.9	7
51	Stoichiometric analysis of self-maintaining metabolisms. <i>Journal of Theoretical Biology</i> , 2008, 252, 427-432.	1.7	7
52	Tools-4-Metatool (T4M): Online suite of web-tools to process stoichiometric network analysis data from Metatool. <i>BioSystems</i> , 2011, 105, 169-172.	2.0	7
53	Modelling knowledge strategy for solving the DNA sequence annotation problem through CommonKADS methodology. <i>Expert Systems With Applications</i> , 2013, 40, 3943-3952.	7.6	7
54	Transit Time Distribution for Biochemical Networks Far from Equilibrium:â€“ Amplification of the Probability of Net Transformation Due to Multiple Reflections. <i>Journal of Physical Chemistry B</i> , 1999, 103, 3965-3974.	2.6	6

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55	Response theory for random channel kinetics in complex systems. Application to lifetime distributions of active intermediates. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 278, 504-525.	2.6	6
56	Consequences of imperfect mixing the Gray-Scott model. <i>Physical Review E</i> , 2006, 74, 057102.	2.1	6
57	iAnn: an event sharing platform for the life sciences. <i>Bioinformatics</i> , 2013, 29, 1919-1921.	4.1	6
58	DELAYED RESPONSE IN TRACER EXPERIMENTS AND FRAGMENT-CARRIER APPROACH TO TRANSIT TIME DISTRIBUTIONS IN NONLINEAR CHEMICAL KINETICS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2002, 12, 2599-2618.	1.7	5
59	Incremental parameter evaluation from incomplete data with application to the population pharmacology of anticoagulants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 4627-4632.	7.1	5
60	Expert system for clustering prokaryotic species by their metabolic features. <i>Expert Systems With Applications</i> , 2013, 40, 6185-6194.	7.6	5
61	Chaotic oscillations, dissipation and mirror symmetry breaking in a chiral catalytic network. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 27214-27223.	2.8	5
62	ECCB/JBI 2005. <i>Bioinformatics</i> , 2005, 21, ii1-ii2.	4.1	4
63	Complex noise in diffusion-limited reactions of replicating and competing species. <i>Physical Review E</i> , 2006, 73, 066109.	2.1	4
64	An algorithm to study the evolution and selection of auto replicative molecules. <i>Computers &amp; Chemistry</i> , 1984, 8, 303-307.	1.2	3
65	Kinetic analysis of $\tilde{T}$ -DNA structure formation induced by histone H1 and its C-terminal domain. <i>Biophysical Chemistry</i> , 1989, 33, 133-141.	2.8	3
66	Complex reaction noise in a molecular quasispecies model. <i>Chemical Physics Letters</i> , 2006, 423, 54-58.	2.6	3
67	Species Connectivities and Reaction Mechanisms from Neutral Response Experiments. <i>Journal of Physical Chemistry A</i> , 2007, 111, 1844-1851.	2.5	3
68	Designing a Simulation Model of a Self-Maintaining Cellular System. <i>Lecture Notes in Computer Science</i> , 1999, , 379-388.	1.3	2
69	Effective Medium Approximation of Taylor Transport in Systems with Static Disorder. <i>Journal of Physical Chemistry B</i> , 2001, 105, 11710-11718.	2.6	2
70	Compartmentation in replicator models. <i>Lecture Notes in Computer Science</i> , 1995, , 116-127.	1.3	2
71	Aggregation of the histone h1 from the fruit fly <i>Ceratitis capitata</i> through disulphide bridges. Studies on their complexes with DNA. <i>International Journal of Biochemistry &amp; Cell Biology</i> , 1985, 17, 665-675.	0.5	1
72	Interaction of the c-terminal domain of the histone H1 with DNA. <i>Biochemical Pharmacology</i> , 1988, 37, 1841-1842.	4.4	0

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73	A neural network model for plasticity in adult striate cortex. Lecture Notes in Computer Science, 1995, , 108-113.	1.3	0