Susanna C Manrubia

List of Publications by Year
in descending order

122 papers	4,636 citations	94433 37 h-index	123424 61 g-index
132 all docs	132 docs citations	132 times ranked	3542 citing authors

#	Article	IF	Citations
1	Individual risk-aversion responses tune epidemics to critical transmissibility (<i>R</i> = 1). Royal Society Open Science, 2022, 9, 211667.	2.4	9
2	The simple emergence of complex molecular function. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, .	3.4	3
3	The long and winding road to understanding organismal construction. Physics of Life Reviews, 2022, 42, 19-24.	2.8	0
4	Unresolved advantages of multipartitism in spatially structured environments. Virus Evolution, 2021, 7, veab004.	4.9	4
5	From genotypes to organisms: State-of-the-art and perspectives of a cornerstone in evolutionary dynamics. Physics of Life Reviews, 2021, 38, 55-106.	2.8	49
6	The turning point and end of an expanding epidemic cannot be precisely forecast. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26190-26196.	7.1	117
7	Populations of genetic circuits are unable to find the fittest solution in a multilevel genotypeâ€“phenotype map. Journal of the Royal Society Interface, 2020, 17, 20190843.	3.4	17
8	The Uncertain Future in How a Virus Spreads. Physics Magazine, 2020, 13, .	0.1	2
9	Epistasis between cultural traits causes paradigm shifts in cultural evolution. Royal Society Open Science, 2020, 7, 191813.	2.4	3
10	Fat tails and black swans: Exact results for multiplicative processes with resets. Chaos, 2020, 30, 033104.	2.5	9
11	Parsimonious Scenario for the Emergence of Viroid-Like Replicons De Novo. Viruses, 2019, 11, 425.	3.3	12
12	Evolutionary Dynamics in the RNA Bacteriophage QÎ² Depends on the Pattern of Change in Selective Pressures. Pathogens, 2019, 8, 80.	2.8	8
13	Endemicity and prevalence of multipartite viruses under heterogeneous between-host transmission. PLoS Computational Biology, 2019, 15, e1006876.	3.2	10
14	Adding levels of complexity enhances robustness and evolvability in a multilevel genotypeâ€“phenotype map. Journal of the Royal Society Interface, 2018, 15, 20170516.	3.4	19
15	Statistical theory of phenotype abundance distributions: A test through exact enumeration of genotype spaces. Europhysics Letters, 2018, 123, 28001.	2.0	24
16	Limited role of spatial self-structuring in emergent trade-offs during pathogen evolution. Scientific Reports, 2018, 8, 12476.	3.3	4
17	Differences in adaptive dynamics determine the success of virus variants that propagate together. Virus Evolution, 2018, 4, vex043.	4.9	11
18	On the networked architecture of genotype spaces and its critical effects on molecular evolution. Open Biology, 2018, 8, .	3.6	41

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19	Theoretical approaches to disclosing the emergence and adaptive advantages of multipartite viruses. Current Opinion in Virology, 2018, 33, 89-95.	5.4	18
20	Internal Disequilibria and Phenotypic Diversification during Replication of Hepatitis C Virus in a Noncoevolving Cellular Environment. Journal of Virology, 2017, 91, .	3.4	42
21	Enumerating secondary structures and structural moieties for circular RNAs. Journal of Theoretical Biology, 2017, 419, 375-382.	1.7	19
22	Distribution of genotype network sizes in sequence-to-structure genotypeâ€"phenotype maps. Journal of the Royal Society Interface, 2017, 14, 20160976.	3.4	30
23	The space of genotypes is a network of networks: implications for evolutionary and extinction dynamics. Scientific Reports, 2017, 7, 13813.	3.3	16
24	Multipartite viruses: adaptive trick or evolutionary treat?. Npj Systems Biology and Applications, 2017, 3, 34.	3.0	62
25	Disentangling the effects of selection and loss bias on gene dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5616-E5624.	7.1	44
26	Adaptive multiscapes: an up-to-date metaphor to visualize molecular adaptation. Biology Direct, 2017, 12, 7.	4.6	22
27	The vast unknown microbial biosphere. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6585-6587.	7.1	29
28	Demography-based adaptive network model reproduces the spatial organization of human linguistic groups. Physical Review E, 2015, 92, 062811.	2.1	1
29	Dynamical community structure of populations evolving on genotype networks. Chaos, Solitons and Fractals, 2015, 72, 99-106.	5.1	13
30	New patterns in human biogeography revealed by networks of contacts between linguistic groups. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142947.	2.6	5
31	Tipping points and early warning signals in the genomic composition of populations induced by environmental changes. Scientific Reports, 2015, 5, 9664.	3.3	10
32	Getting to Know Viral Evolutionary Strategies: Towards the Next Generation of Quasispecies Models. Current Topics in Microbiology and Immunology, 2015, 392, 201-217.	1.1	5
33	Evolution on neutral networks accelerates the ticking rate of the molecular clock. Journal of the Royal Society Interface, 2015, 12, 20141010.	3.4	23
34	Large-Scale Genomic Analysis Suggests a Neutral Punctuated Dynamics of Transposable Elements in Bacterial Genomes. PLoS Computational Biology, 2014, 10, e1003680.	3.2	32
35	River density and landscape roughness are universal determinants of linguistic diversity. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20133029.	2.6	27
36	toyLIFE: a computational framework to study the multi-level organisation of the genotype-phenotype map. Scientific Reports, 2014, 4, 7549.	3.3	22

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37	Efficient HIV-1 inhibition by a 16 nt-long RNA aptamer designed by combining in vitro selection and in silico optimisation strategies. Scientific Reports, 2014, 4, 6242.	3.3	34
38	WhatÊ¼s in a name?. Physics of Life Reviews, 2013, 10, 424-425.	2.8	0
39	SHAPE MATTERS: EFFECT OF POINT MUTATIONS ON RNA SECONDARY STRUCTURE. International Journal of Modeling, Simulation, and Scientific Computing, 2013, 16, 1250052.	1.4	5
40	EMERGENCE AND SELECTION OF BIOMODULES: STEPS IN THE ASSEMBLY OF A PROTOCELL. World Scientific Lecture Notes in Complex Systems, 2013, , 323-343.	0.1	0
41	Evolutionary dynamics of genome segmentation in multipartite viruses. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 3812-3819.	2.6	54
42	The impact of quasispecies dynamics on the use of therapeutics. Trends in Microbiology, 2012, 20, 595-603.	7.7	48
43	Modelling viral evolution and adaptation: challenges and rewards. Current Opinion in Virology, 2012, 2, 531-537.	5.4	17
44	Neutral networks and chemical function in RNA. Physics of Life Reviews, 2012, 9, 277-278.	2.8	2
45	Role of Demographic Dynamics and Conflict in the Population-Area Relationship for Human Languages. PLoS ONE, 2012, 7, e40137.	2.5	6
46	Tempo and mode of inhibitorâ€"mutagen antiviral therapies: A multidisciplinary approach. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16008-16013.	7.1	38
47	Influence of Mutagenesis and Viral Load on the Sustained Low-Level Replication of an RNA Virus. Journal of Molecular Biology, 2011, 407, 60-78.	4.2	25
48	Viral Genome Segmentation Can Result from a Trade-Off between Genetic Content and Particle Stability. PLoS Genetics, 2011, 7, e1001344.	3.5	95
49	Topological Structure of the Space of Phenotypes: The Case of RNA Neutral Networks. PLoS ONE, 2011, 6, e26324.	2.5	72
50	Motif frequency and evolutionary search times in RNA populations. Journal of Theoretical Biology, 2011, 280, 117-126.	1.7	14
51	Struggle for Space: Viral Extinction through Competition for Cells. Physical Review Letters, 2011, 106, 028104.	7.8	17
52	Severe Hindrance of Viral Infection Propagation in Spatially Extended Hosts. PLoS ONE, 2011, 6, e23358.	2.5	11
53	Phenotypic effect of mutations in evolving populations of RNA molecules. BMC Evolutionary Biology, 2010, 10, 46.	3.2	22
54	Variable Mutation Rates as an Adaptive Strategy in Replicator Populations. PLoS ONE, 2010, 5, e11186.	2.5	18

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55	Pathways to extinction: beyond the error threshold. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 1943-1952.	4.0	57
56	Neutral networks of genotypes: evolution behind the curtain. Arbor, 2010, 186, 1051-1064.	0.3	3
57	Populations of RNA Molecules as Computational Model for Evolution. , 2010, , 67-79.		0
58	Evolutionary dynamics on networks of selectively neutral genotypes: Effects of topology and sequence stability. Physical Review E, 2009, 80, 066112.	2.1	30
59	Stochastic extinction of viral infectivity through the action of defectors. Europhysics Letters, 2009, 85, 18001.	2.0	34
60	Potential Benefits of Sequential Inhibitor-Mutagen Treatments of RNA Virus Infections. PLoS Pathogens, 2009, 5, e1000658.	4.7	68
61	The dawn of the RNA World: Toward functional complexity through ligation of random RNA oligomers. Rna, 2009, 15, 743-749.	3.5	89
62	A trade-off between neutrality and adaptability limits the optimization of viral quasispecies. Journal of Theoretical Biology, 2009, 261, 148-155.	1.7	17
63	Topological properties of phylogenetic trees in evolutionary models. European Physical Journal B, 2009, 70, 583-592.	1.5	17
64	On the structural repertoire of pools of short, random RNA sequences. Journal of Theoretical Biology, 2008, 252, 750-763.	1.7	43
65	Fractal properties of isolines at varying altitude revealing different dominant geological processes on Earth. Journal of Geophysical Research, 2008, 113, .	3.3	13
66	Effects of Spatial Competition on the Diversity of a Quasispecies. Physical Review Letters, 2008, 100, 038106.	7.8	19
67	Out-of-equilibrium competitive dynamics of quasispecies. Europhysics Letters, 2007, 77, 38001.	2.0	9
68	Collective properties of evolving molecular quasispecies. BMC Evolutionary Biology, 2007, 7, 110.	3.2	36
69	Evolution of fast mutating replicatorsâ€"RNA viruses and the RNA world. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 80-83.	2.6	1
70	Viral evolution. Physics of Life Reviews, 2006, 3, 65-92.	2.8	48
71	Spiders: Water-Driven Erosive Structures in the Southern Hemisphere of Mars. Astrobiology, 2006, 6, 651-667.	3.0	11
72	Long-range transport and universality classes in in vitro viral infection spread. Europhysics Letters, 2006, 74, 547-553.	2.0	12

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73	Modular evolution and increase of functional complexity in replicating RNA molecules. Rna, 2006, 13, 97-107.	3.5	44
74	Eukaryotic Community Distribution and Its Relationship to Water Physicochemical Parameters in an Extreme Acidic Environment, Rìo Tinto (Southwestern Spain). Applied and Environmental Microbiology, 2006, 72, 5325-5330.	3.1	126
75	Population Bottlenecks in Quasispecies Dynamics. , 2006, 299, 141-170.		67
76	Biodiversity in model ecosystems, I: coexistence conditions for competing species. Journal of Theoretical Biology, 2005, 235, 521-530.	1.7	77
77	Biodiversity in model ecosystems, II: species assembly and food web structure. Journal of Theoretical Biology, 2005, 235, 531-539.	1.7	28
78	Reconstructing evolutionary relationships from functional data: a consistent classification of organisms based on translation inhibition response. Molecular Phylogenetics and Evolution, 2005, 34, 371-381.	2.7	15
79	Suppression of viral infectivity through lethal defection. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 4448-4452.	7.1	170
80	Foot-and-Mouth Disease Virus Evolution: Exploring Pathways Towards Virus Extinction. Current Topics in Microbiology and Immunology, 2005, 288, 149-173.	1.1	35
81	High mutation rates, bottlenecks, and robustness of RNA viral quasispecies. Gene, 2005, 347, 273-282.	2.2	84
82	Quasispecies dynamics and RNA virus extinction. Virus Research, 2005, 107, 129-139.	2.2	93
83	Evolutionary Transition toward Defective RNAs That Are Infectious by Complementation. Journal of Virology, 2004, 78, 11678-11685.	3.4	150
84	Supercritical branching processes and the role of fluctuations under exponential population growth. Journal of Theoretical Biology, 2003, 225, 497-505.	1.7	1
85	Resistance of virus to extinction on bottleneck passages: Study of a decaying and fluctuating pattern of fitness loss. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10830-10835.	7.1	109
86	Fitness Distributions in Exponentially Growing Asexual Populations. Physical Review Letters, 2003, 90, 188102.	7.8	33
87	Motif selection in a model of evolving replicators: The role of surfaces and limited transport in network topology. Europhysics Letters, 2003, 64, 557-563.	2.0	11
88	Genealogy in the Era of Genomics. American Scientist, 2003, 91, 158.	0.1	15
89	Modeling Viral Genome Fitness Evolution Associated with Serial Bottleneck Events: Evidence of Stationary States of Fitness. Journal of Virology, 2002, 76, 8675-8681.	3.4	58
90	At the Boundary between Biological and Cultural Evolution: The Origin of Surname Distributions. Journal of Theoretical Biology, 2002, 216, 461-477.	1.7	44

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91	Scaling of voids and fractality in the galaxy distribution. Monthly Notices of the Royal Astronomical Society, 2002, 335, 977-983.	4.4	22
92	Globally coupled logistic maps as dynamical glasses. Europhysics Letters, 2001, 53, 451-457.	2.0	20
93	Replica-symmetry breaking in dynamical glasses. European Physical Journal B, 2001, 23, 497-508.	1.5	4
94	Vertical transmission of culture and the distribution of family names. Physica A: Statistical Mechanics and Its Applications, 2001, 295, 1-8.	2.6	90
95	Diversity Patterns from Ecological Models at Dynamical Equilibrium. Journal of Theoretical Biology, 2001, 212, 11-34.	1.7	18
96	ON THE FRACTAL NATURE OF ECOLOGICAL AND MACROEVOLUTIONARY DYNAMICS. Fractals, 2001, 09, 1-16.	3.7	9
97	Small-world behaviour in a system of mobile elements. Europhysics Letters, 2001, 53, 693-699.	2.0	28
98	Shape of Ecological Networks. Physical Review Letters, 2001, 86, 4418-4421.	7.8	49
99	On the Genealogy of a Population of Biparental Individuals. Journal of Theoretical Biology, 2000, 203, 303-315.	1.7	48
100	Distribution of repetitions of ancestors in genealogical trees. Physica A: Statistical Mechanics and Its Applications, 2000, 281, 1-16.	2.6	23
101	Very long transients in globally coupled maps. Europhysics Letters, 2000, 50, 580-586.	2.0	19
102	SYNCHRONIZATION AND CLUSTERING IN COUPLED SAW-TOOTH MAPS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 2465-2478.	1.7	1
103	Statistical Properties of Genealogical Trees. Physical Review Letters, 1999, 82, 1987-1990.	7.8	39
104	TRANSIENT DYNAMICS AND SCALING PHENOMENA IN URBAN GROWTH. Fractals, 1999, 07, 1-8.	3.7	24
105	Mutual synchronization and clustering in randomly coupled chaotic dynamical networks. Physical Review E, 1999, 60, 1579-1589.	2.1	102
106	Criticality and scaling in evolutionary ecology. Trends in Ecology and Evolution, 1999, 14, 156-160.	8.7	167
107	Stochastic multiplicative processes with reset events. Physical Review E, 1999, 59, 4945-4948.	2.1	106
108	Intermittency model for urban development. Physical Review E, 1998, 58, 295-302.	2.1	48

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109	Zanette and Manrubia Reply:. Physical Review Letters, 1998, 80, 4831-4831.	7.8	5
110	A Simple Model of Large Scale Organization in Evolution. International Journal of Modern Physics C, 1998, 09, 1025-1032.	1.7	13
111	Long-Range Correlations in the Fossil Record and the Fractal Nature of Macroevolution. International Journal of Modeling, Simulation, and Scientific Computing, 1998, 01, 255-266.	1.4	11
112	Role of Intermittency in Urban Development: A Model of Large-Scale City Formation. Physical Review Letters, 1997, 79, 523-526.	7.8	148
113	Aftershock series of event February 18, 1996: An interpretation in terms of self-organized criticality. Journal of Geophysical Research, 1997, 102, 27407-27420.	3.3	25
114	Criticality and unpredictability in macroevolution. Physical Review E, 1997, 55, 4500-4507.	2.1	24
115	Self-similarity of extinction statistics in the fossil record. Nature, 1997, 388, 764-767.	27.8	156
116	On Forest Spatial Dynamics with Gap Formation. Journal of Theoretical Biology, 1997, 187, 159-164.	1.7	40
117	Extinction: bad genes or weak chaos?. Proceedings of the Royal Society B: Biological Sciences, 1996, 263, 1407-1413.	2.6	37
118	Phase transitions and complex systems: <i>Simple, nonlinear models capture complex systems at the edge of chaos</i>. Complexity, 1996, 1, 13-26.	1.6	92
119	Self-organized criticality in rainforest dynamics. Chaos, Solitons and Fractals, 1996, 7, 523-541.	5.1	29
120	Extinction and self-organized criticality in a model of large-scale evolution. Physical Review E, 1996, 54, R42-R45.	2.1	118
121	Are rainforests self-organized in a critical state?. Journal of Theoretical Biology, 1995, 173, 31-40.	1.7	146
122	Self-similarity in rain forests: Evidence for a critical state. Physical Review E, 1995, 51, 6250-6253.	2.1	41