

Gui-Quan Sun

List of Publications by Citations

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124
papers

3,651
citations

35
h-index

56
g-index

132
ext. papers

4,302
ext. citations

3.2
avg, IF

6.05
L-index

#	Paper	IF	Citations
124	Mathematical modeling of population dynamics with Allee effect. <i>Nonlinear Dynamics</i> , 2016 , 85, 1-12	5	229
123	Pattern transitions in spatial epidemics: Mechanisms and emergent properties. <i>Physics of Life Reviews</i> , 2016 , 19, 43-73	2.1	174
122	Influence of isolation degree of spatial patterns on persistence of populations. <i>Nonlinear Dynamics</i> , 2016 , 83, 811-819	5	114
121	Global analysis of an SIS model with an infective vector on complex networks. <i>Nonlinear Analysis: Real World Applications</i> , 2012 , 13, 543-557	2.1	112
120	Transmission dynamics of cholera: Mathematical modeling and control strategies. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017 , 45, 235-244	3.7	108
119	Effects of time delay and space on herbivore dynamics: linking inducible defenses of plants to herbivore outbreak. <i>Scientific Reports</i> , 2015 , 5, 11246	4.9	104
118	Pattern formation of an epidemic model with diffusion. <i>Nonlinear Dynamics</i> , 2012 , 69, 1097-1104	5	98
117	Coupling dynamics of epidemic spreading and information diffusion on complex networks. <i>Applied Mathematics and Computation</i> , 2018 , 332, 437-448	2.7	97
116	Predator cannibalism can give rise to regular spatial pattern in a predator-prey system. <i>Nonlinear Dynamics</i> , 2009 , 58, 75-84	5	91
115	Pattern formation of a spatial predator-prey system. <i>Applied Mathematics and Computation</i> , 2012 , 218, 11151-11162	2.7	88
114	Analysis of rabies in China: transmission dynamics and control. <i>PLoS ONE</i> , 2011 , 6, e20891	3.7	86
113	Immunity of multiplex networks via acquaintance vaccination. <i>Europhysics Letters</i> , 2015 , 112, 48002	1.6	74
112	Spatial dynamics in a predator-prey model with Beddington-DeAngelis functional response. <i>Physical Review E</i> , 2012 , 85, 021924	2.4	74
111	How events determine spreading patterns: information transmission via internal and external influences on social networks. <i>New Journal of Physics</i> , 2015 , 17, 113045	2.9	70
110	Influence of time delay and nonlinear diffusion on herbivore outbreak. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014 , 19, 1507-1518	3.7	68
109	Transmission dynamics of COVID-19 in Wuhan, China: effects of lockdown and medical resources. <i>Nonlinear Dynamics</i> , 2020 , 101, 1-13	5	67
108	Pattern formation in a spatial S-I model with non-linear incidence rates. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007 , 2007, P11011-P11011	1.9	66

107	Spatial patterns of a predator-prey model with cross diffusion. <i>Nonlinear Dynamics</i> , 2012 , 69, 1631-1638	5	62
106	Dynamical complexity of a spatial predator-prey model with migration. <i>Ecological Modelling</i> , 2008 , 219, 248-255	3	61
105	Transmission dynamics of a multi-group brucellosis model with mixed cross infection in public farm. <i>Applied Mathematics and Computation</i> , 2014 , 237, 582-594	2.7	60
104	Impact of media coverage on epidemic spreading in complex networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013 , 392, 5824-5835	3.3	59
103	Pattern dynamics of a Gierer-Meinhardt model with spatial effects. <i>Nonlinear Dynamics</i> , 2017 , 88, 1385-1396	3.9	56
102	Global stability for a sheep brucellosis model with immigration. <i>Applied Mathematics and Computation</i> , 2014 , 246, 336-345	2.7	55
101	Modeling seasonal rabies epidemics in China. <i>Bulletin of Mathematical Biology</i> , 2012 , 74, 1226-51	2.1	55
100	Effects of feedback regulation on vegetation patterns in semi-arid environments. <i>Applied Mathematical Modelling</i> , 2018 , 61, 200-215	4.5	52
99	Self-organized wave pattern in a predator-prey model. <i>Nonlinear Dynamics</i> , 2010 , 60, 265-275	5	47
98	The role of noise in a predator-prey model with Allee effect. <i>Journal of Biological Physics</i> , 2009 , 35, 185-966	9.6	46
97	Stability and Hopf bifurcation in a delayed competition system. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2009 , 70, 658-670	1.3	46
96	Influence of infection rate and migration on extinction of disease in spatial epidemics. <i>Journal of Theoretical Biology</i> , 2010 , 264, 95-103	2.3	46
95	Nonlinear dynamic and pattern bifurcations in a model for spatial patterns in young mussel beds. <i>Journal of the Royal Society Interface</i> , 2009 , 6, 705-18	4.1	44
94	Assessing reappearance factors of H7N9 avian influenza in China. <i>Applied Mathematics and Computation</i> , 2017 , 309, 192-204	2.7	40
93	Analysis of COVID-19 transmission in Shanxi Province with discrete time imported cases. <i>Mathematical Biosciences and Engineering</i> , 2020 , 17, 3710-3720	2.1	39
92	Modeling direct and indirect disease transmission using multi-group model. <i>Journal of Mathematical Analysis and Applications</i> , 2017 , 446, 1292-1309	1.1	36
91	Influence of removable devices on computer worms: Dynamic analysis and control strategies. <i>Computers and Mathematics With Applications</i> , 2011 , 61, 1823-1829	2.7	36
90	Determination of original infection source of H7N9 avian influenza by dynamical model. <i>Scientific Reports</i> , 2014 , 4, 4846	4.9	35

89	SPATIAL PATTERN IN AN EPIDEMIC SYSTEM WITH CROSS-DIFFUSION OF THE SUSCEPTIBLE. <i>Journal of Biological Systems</i> , 2009 , 17, 141-152	1.6	33
88	Rich dynamics in a predator-prey model with both noise and periodic force. <i>BioSystems</i> , 2010 , 100, 14-22	1.9	32
87	The Driving Force for 2014 Dengue Outbreak in Guangdong, China. <i>PLoS ONE</i> , 2016 , 11, e0166211	3.7	32
86	SPATIAL PATTERN IN A PREDATOR-PREY SYSTEM WITH BOTH SELF- AND CROSS-DIFFUSION. <i>International Journal of Modern Physics C</i> , 2009 , 20, 71-84	1.1	31
85	Sensitivity assessment and optimal economic evaluation of a new COVID-19 compartmental epidemic model with control interventions. <i>Chaos, Solitons and Fractals</i> , 2021 , 146, 110885	9.3	31
84	Modeling the transmission dynamics of Ebola virus disease in Liberia. <i>Scientific Reports</i> , 2015 , 5, 13857	4.9	30
83	Modeling and analyzing of botnet interactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011 , 390, 347-358	3.3	30
82	Spatial dynamics of a vegetation model in an arid flat environment. <i>Nonlinear Dynamics</i> , 2013 , 73, 2207-2219		29
81	Modeling the influence of information on the coevolution of contact networks and the dynamics of infectious diseases. <i>Physica D: Nonlinear Phenomena</i> , 2012 , 241, 1512-1517	3.3	29
80	Bifurcation and chaos in an epidemic model with nonlinear incidence rates. <i>Applied Mathematics and Computation</i> , 2010 , 216, 1226-1234	2.7	29
79	Prediction and control of brucellosis transmission of dairy cattle in Zhejiang Province, China. <i>PLoS ONE</i> , 2014 , 9, e108592	3.7	29
78	Rich dynamics in a spatial predator-prey model with delay. <i>Applied Mathematics and Computation</i> , 2015 , 256, 540-550	2.7	28
77	Chaos induced by breakup of waves in a spatial epidemic model with nonlinear incidence rate. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2008 , 2008, P08011	1.9	28
76	Modeling the Transmission of Middle East Respirator Syndrome Corona Virus in the Republic of Korea. <i>PLoS ONE</i> , 2015 , 10, e0144778	3.7	28
75	Epidemic dynamics on semi-directed complex networks. <i>Mathematical Biosciences</i> , 2013 , 246, 242-51	3.9	24
74	Modelling and analysis of influenza A (H1N1) on networks. <i>BMC Public Health</i> , 2011 , 11 Suppl 1, S9	4.1	24
73	Effect of time delay on pattern dynamics in a spatial epidemic model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 412, 137-148	3.3	22
72	Effect of noise on the pattern formation in an epidemic model. <i>Numerical Methods for Partial Differential Equations</i> , 2010 , 26, 1168-1179	2.5	21

71	Spatial dynamics of an epidemic model with nonlocal infection. <i>Applied Mathematics and Computation</i> , 2020 , 377, 125158	2.7	20
70	Epidemical dynamics of SIS pair approximation models on regular and random networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 410, 144-153	3.3	20
69	Pattern formation of an epidemic model with time delay. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 403, 100-109	3.3	20
68	Influence of reciprocal links in social networks. <i>PLoS ONE</i> , 2014 , 9, e103007	3.7	20
67	Mathematical modeling of COVID-19 transmission: the roles of intervention strategies and lockdown. <i>Mathematical Biosciences and Engineering</i> , 2020 , 17, 5961-5986	2.1	20
66	Pattern Dynamics of an SIS Epidemic Model with Nonlocal Delay. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2019 , 29, 1950027	2	19
65	Model-Based Evaluation of Strategies to Control Brucellosis in China. <i>International Journal of Environmental Research and Public Health</i> , 2017 , 14,	4.6	19
64	Bifurcation analysis of a delayed epidemic model. <i>Applied Mathematics and Computation</i> , 2010 , 216, 753-767	3.7	19
63	Phase transition in spatial epidemics using cellular automata with noise. <i>Ecological Research</i> , 2011 , 26, 333-340	1.9	18
62	Global dynamics of a predator-prey system modeling by metaphysiological approach. <i>Applied Mathematics and Computation</i> , 2016 , 283, 369-384	2.7	17
61	An analysis of transmission dynamics of drug-resistant disease on scale-free networks. <i>Applied Mathematics and Computation</i> , 2013 , 222, 177-189	2.7	17
60	Optimal control and comprehensive cost-effectiveness analysis for COVID-19.. <i>Results in Physics</i> , 2022 , 33, 105177	3.7	16
59	Transmission dynamics of brucellosis: Mathematical modelling and applications in China. <i>Computational and Structural Biotechnology Journal</i> , 2020 , 18, 3843-3860	6.8	15
58	Epidemic dynamics on information-driven adaptive networks. <i>Chaos, Solitons and Fractals</i> , 2018 , 108, 196-204	9.3	15
57	A Deterministic Model for Q Fever Transmission Dynamics within Dairy Cattle Herds: Using Sensitivity Analysis and Optimal Controls. <i>Computational and Mathematical Methods in Medicine</i> , 2020 , 2020, 6820608	2.8	14
56	Markov-based solution for information diffusion on adaptive social networks. <i>Applied Mathematics and Computation</i> , 2020 , 380, 125286	2.7	14
55	MODELING THE TRANSMISSION DYNAMICS OF DAIRY CATTLE BRUCELLOSIS IN JILIN PROVINCE, CHINA. <i>Journal of Biological Systems</i> , 2014 , 22, 533-554	1.6	13
54	Pattern dynamics in a Gierer-Meinhardt model with a saturating term. <i>Applied Mathematical Modelling</i> , 2017 , 46, 476-491	4.5	12

53	Adaptive Regulation of Nitrate Transceptor NRT1.1 in Fluctuating Soil Nitrate Conditions. <i>IScience</i> , 2018 , 2, 41-50	6.1	12
52	Interaction between prey and mutually interfering predator in prey reserve habitat: Pattern formation and the TuringHopf bifurcation. <i>Journal of the Franklin Institute</i> , 2018 , 355, 7466-7489	4	10
51	Dynamic behavior of a discrete modified Ricker & BevertonHolt model. <i>Computers and Mathematics With Applications</i> , 2009 , 57, 1400-1412	2.7	10
50	Non-seasonal and seasonal relapse model for Q fever disease with comprehensive cost-effectiveness analysis. <i>Results in Physics</i> , 2021 , 22, 103889	3.7	10
49	How demography-driven evolving networks impact epidemic transmission between communities. <i>Journal of Theoretical Biology</i> , 2015 , 382, 309-19	2.3	9
48	Organization of biogeochemical nitrogen pathways with switch-like adjustment in fluctuating soil redox conditions. <i>Royal Society Open Science</i> , 2017 , 4, 160768	3.3	8
47	The influence of mask use on the spread of COVID-19 during pandemic in New York City.. <i>Results in Physics</i> , 2022 , 34, 105224	3.7	8
46	Interactions of diffusion and nonlocal delay give rise to vegetation patterns in semi-arid environments. <i>Applied Mathematics and Computation</i> , 2021 , 399, 126038	2.7	8
45	Mathematical modeling and mechanisms of pattern formation in ecological systems: a review. <i>Nonlinear Dynamics</i> , 2021 , 104, 1677-1696	5	8
44	Qualitative analysis of a diffusive CrowleyMartin predatorprey model: the role of nonlinear predator harvesting. <i>Nonlinear Dynamics</i> , 2019 , 98, 1169-1189	5	7
43	MEASUREMENT OF SELF-ORGANIZATION IN ARID ECOSYSTEMS. <i>Journal of Biological Systems</i> , 2010 , 18, 495-508	1.6	7
42	TRAVELING PATTERN INDUCED BY MIGRATION IN AN EPIDEMIC MODEL. <i>Journal of Biological Systems</i> , 2009 , 17, 319-328	1.6	7
41	Spatiotemporal dynamics of a vegetation model with nonlocal delay in semi-arid environment. <i>Nonlinear Dynamics</i> , 2020 , 99, 3407-3420	5	7
40	Pattern Dynamics in a Spatial Predator-Prey System with Allee Effect. <i>Abstract and Applied Analysis</i> , 2013 , 2013, 1-12	0.7	6
39	EXISTENCE OF TRAVELLING WAVES IN NONLINEAR SI EPIDEMIC MODELS. <i>Journal of Biological Systems</i> , 2009 , 17, 643-657	1.6	6
38	EMERGENT TURING PATTERN IN EPIDEMIC SPREADING USING CELLULAR AUTOMATON. <i>International Journal of Modern Physics B</i> , 2011 , 25, 4605-4613	1.1	6
37	Pattern formation in a spatial plant-wrack model with tide effect on the wrack. <i>Journal of Biological Physics</i> , 2010 , 36, 161-74	1.6	6
36	Mathematical Modelling and Sensitivity Assessment of COVID-19 Outbreak for Ghana and Egypt. <i>SSRN Electronic Journal</i> ,	1	6

35	Feedforward Control of Plant Nitrate Transporter NRT1.1 Biphasic Adaptive Activity. <i>Biophysical Journal</i> , 2020 , 118, 898-908	2.9	6
34	Asymptotic analysis of schistosomiasis persistence in models with general functions. <i>Journal of the Franklin Institute</i> , 2016 , 353, 4772-4784	4	6
33	Information diffusion on communication networks based on Big Data analysis. <i>Electronic Library</i> , 2017 , 35, 745-757	1.5	5
32	Reinfection induced disease in a spatial SIRI model. <i>Journal of Biological Physics</i> , 2011 , 37, 133-40	1.6	5
31	EMERGENCE OF POWER-LAW IN SPATIAL EPIDEMICS USING CELLULAR AUTOMATION. <i>International Journal of Modern Physics C</i> , 2010 , 21, 983-989	1.1	5
30	Global Dynamics of a Multi-group SEIR Epidemic Model with Infection Age. <i>Chinese Annals of Mathematics Series B</i> , 2021 , 42, 833-860	0.4	5
29	A non-Markovian SIR network model with fixed infectious period and preventive rewiring. <i>Computers and Mathematics With Applications</i> , 2018 , 75, 3884-3902	2.7	4
28	Noise induced pattern transition in a vegetation model. <i>Applied Mathematics and Computation</i> , 2013 , 221, 463-468	2.7	4
27	The Impact of Population Migration on the Spread of COVID-19: A Case Study of Guangdong Province and Hunan Province in China. <i>Frontiers in Physics</i> , 2020 , 8,	3.9	4
26	Predator-prey interaction system with mutually interfering predator: role of feedback control. <i>Applied Mathematical Modelling</i> , 2020 , 87, 222-244	4.5	4
25	Improved prediction model for flood-season rainfall based on a nonlinear dynamics-statistic combined method. <i>Chaos, Solitons and Fractals</i> , 2020 , 140, 110160	9.3	4
24	Transmission analysis of COVID-19 with discrete time imported cases: Tianjin and Chongqing as cases. <i>Infectious Disease Modelling</i> , 2021 , 6, 618-631	15.7	4
23	Dynamic analysis of a plant-water model with spatial diffusion. <i>Journal of Differential Equations</i> , 2022 , 329, 395-430	2.1	4
22	Existence of periodic positive solutions for a competitive system with two parameters. <i>Journal of Difference Equations and Applications</i> , 2014 , 20, 341-353	1	3
21	PDE-constrained optimal control approach for the approximation of an inverse Cauchy problem. <i>Inverse Problems and Imaging</i> , 2015 , 9, 791-814	2.1	3
20	Roles of edge weights on epidemic spreading dynamics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016 , 456, 228-234	3.3	3
19	Periodic solutions of a spatiotemporal predator-prey system with additional food. <i>Chaos, Solitons and Fractals</i> , 2016 , 91, 350-359	9.3	3
18	Biochemical interactions between HIV-1 integrase and reverse transcriptase. <i>FEBS Letters</i> , 2013 , 587, 425-9	3.8	2

17	Positive periodic solutions of an epidemic model with seasonality. <i>Scientific World Journal, The</i> , 2013 , 2013, 470646	2.2	2
16	Mutation-Induced Long-Range Allosteric Interactions in the Spike Protein Determine the Infectivity of SARS-CoV-2 Emerging Variants. <i>ACS Omega</i> , 2021 , 6, 31312-31327	3.9	2
15	COVID-19 Propagation Prediction and Assessment Method with Imported Cases and Infection Generations: Shanxi Province as a Case		2
14	Pattern dynamics of a delayed eco-epidemiological model with disease in the predator. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2017 , 10, 1025-1042	2.8	2
13	COVID-19 Reverse Prediction and Assessment on the Diamond Princess Cruise Ship. <i>Frontiers in Physics</i> , 2020 , 8,	3.9	2
12	Effects of global warming on pattern dynamics of vegetation: Wuwei in China as a case. <i>Applied Mathematics and Computation</i> , 2021 , 390, 125666	2.7	2
11	Inspiration of the biological behavior of Physarum polycephalum on mathematical modeling: Comment on "Does being multi-headed make you better at solving problems? A survey of Physarum-based models and computations" by C. Gao et al. <i>Physics of Life Reviews</i> , 2019 , 29, 38-40	2.1	1
10	Disease control framework based on spatial epidemiology: Reply to comments on "Pattern transitions in spatial epidemics: Mechanisms and emergent properties". <i>Physics of Life Reviews</i> , 2016 , 19, 103-106	2.1	1
9	How to identify the most effective control measures based on disease-behavior coupled mechanisms?: Comment on "Coupled disease-behavior dynamics on complex networks: A review" by Z. Wang et al. <i>Physics of Life Reviews</i> , 2015 , 15, 30-1	2.1	1
8	SPATIAL COMPLEXITY OF A PREDATOR-PREY MODEL WITH BOTH NOISE AND DIFFUSION. <i>Fluctuation and Noise Letters</i> , 2012 , 11, 1250006	1.2	1
7	Effect of mobility and predator switching on the dynamical behavior of a predator-prey model. <i>Chaos, Solitons and Fractals</i> , 2020 , 132, 109584	9.3	1
6	Impacts of Climate Change on Biological Dynamics. <i>Discrete Dynamics in Nature and Society</i> , 2016 , 2016, 1-2	1.1	1
5	Effects of climate change on vegetation patterns in Hulun Buir Grassland. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2022 , 597, 127275	3.3	1
4	Competition between awareness and epidemic spreading in homogeneous networks with demography. <i>Applied Mathematics and Computation</i> , 2022 , 420, 126875	2.7	0
3	Allosteric regulation of glutamate dehydrogenase deamination activity. <i>Scientific Reports</i> , 2020 , 10, 165239	3.9	0
2	Nonlocal interactions between vegetation induce spatial patterning. <i>Applied Mathematics and Computation</i> , 2022 , 428, 127061	2.7	0
1	Global Dynamics of Infectious Disease with Arbitrary Distributed Infectious Period on Complex Networks. <i>Discrete Dynamics in Nature and Society</i> , 2014 , 2014, 1-9	1.1	