Gui-Quan Sun

List of Publications by Year
in descending order

129 papers	5,011 citations	81743 39 h-index	106150 65 g-index
132 all docs	132 docs citations	132 times ranked	2829 citing authors

#	Article	IF	Citations
1	Interactions of time delay and spatial diffusion induce the periodic oscillation of the vegetation system. Discrete and Continuous Dynamical Systems - Series B, 2022, 27, 2147.	0.5	22
2	Competition between awareness and epidemic spreading in homogeneous networks with demography. Applied Mathematics and Computation, 2022, 420, 126875.	1.4	5
3	Optimal control and comprehensive cost-effectiveness analysis for COVID-19. Results in Physics, 2022, 33, 105177.	2.0	99
4	Linking the Pattern Structures to System Robustness Based on Dynamical Models and Statistical Method. Frontiers in Physics, 2022, 10, .	1.0	1
5	The influence of mask use on the spread of COVID-19 during pandemic in New York City. Results in Physics, 2022, 34, 105224.	2.0	41
6	Interactions of periodic birth and shearing induce outbreak of Brucellosis in Inner Mongolia. International Journal of Biomathematics, 2022, 15, .	1.5	5
7	Effects of climate change on vegetation patterns in Hulun Buir Grassland. Physica A: Statistical Mechanics and Its Applications, 2022, 597, 127275.	1.2	10
8	Modeling the cost of antiâ€predator strategy in a predatorâ€prey system: The roles of indirect effect. Mathematical Methods in the Applied Sciences, 2022, 45, 4365-4396.	1.2	10
9	Nonlocal interactions between vegetation induce spatial patterning. Applied Mathematics and Computation, 2022, 428, 127061.	1.4	14
10	Dynamic analysis of a plant-water model with spatial diffusion. Journal of Differential Equations, 2022, 329, 395-430.	1.1	36
11	Transmission dynamics of brucellosis in Jilin province, China: Effects of different control measures. Communications in Nonlinear Science and Numerical Simulation, 2022, 114, 106702.	1.7	19
12	Effects of global warming on pattern dynamics of vegetation: Wuwei in China as a case. Applied Mathematics and Computation, 2021, 390, 125666.	1.4	12
13	Transmission analysis of COVID-19 with discrete time imported cases: Tianjin and Chongqing as cases. Infectious Disease Modelling, 2021, 6, 618-631.	1.2	9
14	Mathematical modeling and mechanisms of pattern formation in ecological systems: a review. Nonlinear Dynamics, 2021, 104, 1677-1696.	2.7	33
15	Non-seasonal and seasonal relapse model for Q fever disease with comprehensive cost-effectiveness analysis. Results in Physics, 2021, 22, 103889.	2.0	30
16	Sensitivity assessment and optimal economic evaluation of a new COVID-19 compartmental epidemic model with control interventions. Chaos, Solitons and Fractals, 2021, 146, 110885.	2.5	80
17	Interactions of diffusion and nonlocal delay give rise to vegetation patterns in semi-arid environments. Applied Mathematics and Computation, 2021, 399, 126038.	1.4	27
18	Global Dynamics of a Multi-group SEIR Epidemic Model with Infection Age. Chinese Annals of Mathematics Series B, 2021, 42, 833-860.	0.2	23

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19	Mutation-Induced Long-Range Allosteric Interactions in the Spike Protein Determine the Infectivity of SARS-CoV-2 Emerging Variants. ACS Omega, 2021, 6, 31305-31320.	1.6	8
20	Feedforward Control of Plant Nitrate Transporter NRT1.1 Biphasic Adaptive Activity. Biophysical Journal, 2020, 118, 898-908.	0.2	10
21	Effect of mobility and predator switching on the dynamical behavior of a predator-prey model. Chaos, Solitons and Fractals, 2020, 132, 109584.	2.5	5
22	COVID-19 Reverse Prediction and Assessment on the Diamond Princess Cruise Ship. Frontiers in Physics, 2020, 8, .	1.0	2
23	Improved prediction model for flood-season rainfall based on a nonlinear dynamics-statistic combined method. Chaos, Solitons and Fractals, 2020, 140, 110160.	2.5	17
24	Allosteric regulation of glutamate dehydrogenase deamination activity. Scientific Reports, 2020, 10, 16523.	1.6	8
25	Transmission dynamics of brucellosis: Mathematical modelling and applications in China. Computational and Structural Biotechnology Journal, 2020, 18, 3843-3860.	1.9	29
26	Transmission dynamics of COVID-19 in Wuhan, China: effects of lockdown and medical resources. Nonlinear Dynamics, 2020, 101, 1981-1993.	2.7	119
27	Spatial dynamics of an epidemic model with nonlocal infection. Applied Mathematics and Computation, 2020, 377, 125158.	1.4	39
28	A Deterministic Model for Q Fever Transmission Dynamics within Dairy Cattle Herds: Using Sensitivity Analysis and Optimal Controls. Computational and Mathematical Methods in Medicine, 2020, 2020, 1-18.	0.7	29
29	Markov-based solution for information diffusion on adaptive social networks. Applied Mathematics and Computation, 2020, 380, 125286.	1.4	29
30	Spatiotemporal dynamics of a vegetation model with nonlocal delay in semi-arid environment. Nonlinear Dynamics, 2020, 99, 3407-3420.	2.7	19
31	Predatorâ€“prey interaction system with mutually interfering predator: role of feedback control. Applied Mathematical Modelling, 2020, 87, 222-244.	2.2	7
32	The Impact of Population Migration on the Spread of COVID-19: A Case Study of Guangdong Province and Hunan Province in China. Frontiers in Physics, 2020, 8, .	1.0	9
33	Analysis of COVID-19 transmission in Shanxi Province with discrete time imported cases. Mathematical Biosciences and Engineering, 2020, 17, 3710-3720.	1.0	63
34	Mathematical modeling of COVID-19 transmission: the roles of intervention strategies and lockdown. Mathematical Biosciences and Engineering, 2020, 17, 5961-5986.	1.0	50
35	Transmission dynamics in infectious diseases. Mathematical Biosciences and Engineering, 2020, 17, 2820-2821.	1.0	0
36	Qualitative analysis of a diffusive Crowleyâ€“Martin predatorâ€“prey model: the role of nonlinear predator harvesting. Nonlinear Dynamics, 2019, 98, 1169-1189.	2.7	17

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37	Inspiration of the biological behavior of Physarum polycephalum on mathematical modeling. Physics of Life Reviews, 2019, 29, 38-40.	1.5	1
38	Pattern Dynamics of an SIS Epidemic Model with Nonlocal Delay. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950027.	0.7	24
39	A non-Markovian SIR network model with fixed infectious period and preventive rewiring. Computers and Mathematics With Applications, 2018, 75, 3884-3902.	1.4	9
40	Adaptive Regulation of Nitrate Transceptor NRT1.1 in Fluctuating Soil Nitrate Conditions. IScience, 2018, 2, 41-50.	1.9	18
41	Coupling dynamics of epidemic spreading and information diffusion on complex networks. Applied Mathematics and Computation, 2018, 332, 437-448.	1.4	141
42	Epidemic dynamics on information-driven adaptive networks. Chaos, Solitons and Fractals, 2018, 108, 196-204.	2.5	25
43	Effects of feedback regulation on vegetation patterns in semi-arid environments. Applied Mathematical Modelling, 2018, 61, 200-215.	2.2	80
44	Interaction between prey and mutually interfering predator in prey reserve habitat: Pattern formation and the Turingâ€“Hopf bifurcation. Journal of the Franklin Institute, 2018, 355, 7466-7489.	1.9	22
45	Pattern dynamics of a Gierer–Meinhardt model with spatial effects. Nonlinear Dynamics, 2017, 88, 1385-1396.	2.7	67
46	Pattern dynamics in a Gierer–Meinhardt model with a saturating term. Applied Mathematical Modelling, 2017, 46, 476-491.	2.2	31
47	Assessing reappearance factors of H7N9 avian influenza in China. Applied Mathematics and Computation, 2017, 309, 192-204.	1.4	52
48	Organization of biogeochemical nitrogen pathways with switch-like adjustment in fluctuating soil redox conditions. Royal Society Open Science, 2017, 4, 160768.	1.1	8
49	Information diffusion on communication networks based on Big Data analysis. Electronic Library, 2017, 35, 745-757.	0.8	6
50	Transmission dynamics of cholera: Mathematical modeling and control strategies. Communications in Nonlinear Science and Numerical Simulation, 2017, 45, 235-244.	1.7	138
51	Modeling direct and indirect disease transmission using multi-group model. Journal of Mathematical Analysis and Applications, 2017, 446, 1292-1309.	0.5	58
52	Model-Based Evaluation of Strategies to Control Brucellosis in China. International Journal of Environmental Research and Public Health, 2017, 14, 295.	1.2	31
53	Pattern dynamics of a delayed eco-epidemiological model with disease in the predator. Discrete and Continuous Dynamical Systems - Series S, 2017, 10, 1025-1042.	0.6	4
54	Impacts of Climate Change on Biological Dynamics. Discrete Dynamics in Nature and Society, 2016, 2016, 1-2.	0.5	2

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55	The Driving Force for 2014 Dengue Outbreak in Guangdong, China. PLoS ONE, 2016, 11, e0166211.	1.1	35
56	Roles of edge weights on epidemic spreading dynamics. Physica A: Statistical Mechanics and Its Applications, 2016, 456, 228-234.	1.2	3
57	Asymptotic analysis of schistosomiasis persistence in models with general functions. Journal of the Franklin Institute, 2016, 353, 4772-4784.	1.9	8
58	Periodic solutions of a spatiotemporal predator-prey system with additional food. Chaos, Solitons and Fractals, 2016, 91, 350-359.	2.5	5
59	Pattern transitions in spatial epidemics: Mechanisms and emergent properties. Physics of Life Reviews, 2016, 19, 43-73.	1.5	202
60	Disease control framework based on spatial epidemiology: Reply to comments on â€œPattern transitions in spatial epidemics: Mechanisms and emergent propertiesâ€• Physics of Life Reviews, 2016, 19, 103-106.	1.5	1
61	Global dynamics of a predatorâ€“prey system modeling by metaphysiological approach. Applied Mathematics and Computation, 2016, 283, 369-384.	1.4	18
62	Influence of isolation degree of spatial patterns on persistence of populations. Nonlinear Dynamics, 2016, 83, 811-819.	2.7	118
63	Mathematical modeling of population dynamics with Allee effect. Nonlinear Dynamics, 2016, 85, 1-12.	2.7	278
64	How to identify the most effective control measures based on diseaseâ€“behavior coupled mechanisms?. Physics of Life Reviews, 2015, 15, 30-31.	1.5	1
65	Modeling the transmission dynamics of Ebola virus disease in Liberia. Scientific Reports, 2015, 5, 13857.	1.6	39
66	Effects of time delay and space on herbivore dynamics: linking inducible defenses of plants to herbivore outbreak. Scientific Reports, 2015, 5, 11246.	1.6	110
67	How events determine spreading patterns: information transmission via internal and external influences on social networks. New Journal of Physics, 2015, 17, 113045.	1.2	90
68	Immunity of multiplex networks via acquaintance vaccination. Europhysics Letters, 2015, 112, 48002.	0.7	82
69	Rich dynamics in a spatial predatorâ€“prey model with delay. Applied Mathematics and Computation, 2015, 256, 540-550.	1.4	34
70	How demography-driven evolving networks impact epidemic transmission between communities. Journal of Theoretical Biology, 2015, 382, 309-319.	0.8	13
71	Modeling the Transmission of Middle East Respirator Syndrome Corona Virus in the Republic of Korea. PLoS ONE, 2015, 10, e0144778.	1.1	42
72	PDE-constrained optimal control approach for the approximation of an inverse Cauchy problem. Inverse Problems and Imaging, 2015, 9, 791-814.	0.6	3

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73	MODELING THE TRANSMISSION DYNAMICS OF DAIRY CATTLE BRUCELLOSIS IN JILIN PROVINCE, CHINA. Journal of Biological Systems, 2014, 22, 533-554.	0.5	18
74	Existence of periodic positive solutions for a competitive system with two parameters. Journal of Difference Equations and Applications, 2014, 20, 341-353.	0.7	3
75	Global stability for a sheep brucellosis model with immigration. Applied Mathematics and Computation, 2014, 246, 336-345.	1.4	66
76	Global Dynamics of Infectious Disease with Arbitrary Distributed Infectious Period on Complex Networks. Discrete Dynamics in Nature and Society, 2014, 2014, 1-9.	0.5	0
77	Pattern formation of an epidemic model with time delay. Physica A: Statistical Mechanics and Its Applications, 2014, 403, 100-109.	1.2	30
78	Transmission dynamics of a multi-group brucellosis model with mixed cross infection in public farm. Applied Mathematics and Computation, 2014, 237, 582-594.	1.4	81
79	Effect of time delay on pattern dynamics in a spatial epidemic model. Physica A: Statistical Mechanics and Its Applications, 2014, 412, 137-148.	1.2	24
80	Epidemical dynamics of SIS pair approximation models on regular and random networks. Physica A: Statistical Mechanics and Its Applications, 2014, 410, 144-153.	1.2	20
81	Influence of time delay and nonlinear diffusion on herbivore outbreak. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 1507-1518.	1.7	72
82	Determination of Original Infection Source of H7N9 Avian Influenza by Dynamical Model. Scientific Reports, 2014, 4, 4846.	1.6	49
83	Influence of Reciprocal Links in Social Networks. PLoS ONE, 2014, 9, e103007.	1.1	27
84	Prediction and Control of Brucellosis Transmission of Dairy Cattle in Zhejiang Province, China. PLoS ONE, 2014, 9, e108592.	1.1	40
85	Spatial dynamics of a vegetation model in an arid flat environment. Nonlinear Dynamics, 2013, 73, 2207-2219.	2.7	36
86	Epidemic dynamics on semi-directed complex networks. Mathematical Biosciences, 2013, 246, 242-251.	0.9	31
87	Noise induced pattern transition in a vegetation model. Applied Mathematics and Computation, 2013, 221, 463-468.	1.4	4
88	Biochemical interactions between HIVâ€1 integrase and reverse transcriptase. FEBS Letters, 2013, 587, 425-429.	1.3	3
89	An analysis of transmission dynamics of drug-resistant disease on scale-free networks. Applied Mathematics and Computation, 2013, 222, 177-189.	1.4	19
90	Impact of media coverage on epidemic spreading in complex networks. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 5824-5835.	1.2	74

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91	Pattern Dynamics in a Spatial Predator-Prey System with Allee Effect. Abstract and Applied Analysis, 2013, 2013, 1-12.	0.3	6
92	Positive Periodic Solutions of an Epidemic Model with Seasonality. Scientific World Journal, The, 2013, 2013, 1-10.	0.8	2
93	SPATIAL COMPLEXITY OF A PREDATORâ€“PREY MODEL WITH BOTH NOISE AND DIFFUSION. Fluctuation and Noise Letters, 2012, 11, 1250006.	1.0	1
94	Modeling the influence of information on the coevolution of contact networks and the dynamics of infectious diseases. Physica D: Nonlinear Phenomena, 2012, 241, 1512-1517.	1.3	32
95	Pattern formation of a spatial predatorâ€“prey system. Applied Mathematics and Computation, 2012, 218, 11151-11162.	1.4	94
96	Spatial dynamics in a predator-prey model with Beddington-DeAngelis functional response. Physical Review E, 2012, 85, 021924.	0.8	98
97	Pattern formation of an epidemic model with diffusion. Nonlinear Dynamics, 2012, 69, 1097-1104.	2.7	125
98	Spatial patterns of a predator-prey model with cross diffusion. Nonlinear Dynamics, 2012, 69, 1631-1638.	2.7	75
99	Modeling Seasonal Rabies Epidemics in China. Bulletin of Mathematical Biology, 2012, 74, 1226-1251.	0.9	62
100	Global analysis of an SIS model with an infective vector on complex networks. Nonlinear Analysis: Real World Applications, 2012, 13, 543-557.	0.9	133
101	Analysis of Rabies in China: Transmission Dynamics and Control. PLoS ONE, 2011, 6, e20891.	1.1	104
102	Reinfection induced disease in a spatial SIRI model. Journal of Biological Physics, 2011, 37, 133-140.	0.7	10
103	Phase transition in spatial epidemics using cellular automata with noise. Ecological Research, 2011, 26, 333-340.	0.7	19
104	Modelling and analysis of influenza A (H1N1) on networks. BMC Public Health, 2011, 11, S9.	1.2	31
105	Influence of removable devices on computer worms: Dynamic analysis and control strategies. Computers and Mathematics With Applications, 2011, 61, 1823-1829.	1.4	39
106	Modeling and analyzing of botnet interactions. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 347-358.	1.2	39
107	EMERGENT TURING PATTERN IN EPIDEMIC SPREADING USING CELLULAR AUTOMATON. International Journal of Modern Physics B, 2011, 25, 4605-4613.	1.0	6
108	Pattern formation in a spatial plant-wrack model with tide effect on the wrack. Journal of Biological Physics, 2010, 36, 161-174.	0.7	7

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109	Self-organized wave pattern in a predator-prey model. Nonlinear Dynamics, 2010, 60, 265-275.	2.7	53
110	Effect of noise on the pattern formation in an epidemic model. Numerical Methods for Partial Differential Equations, 2010, 26, 1168-1179.	2.0	23
111	Influence of infection rate and migration on extinction of disease in spatial epidemics. Journal of Theoretical Biology, 2010, 264, 95-103.	0.8	50
112	Bifurcation analysis of a delayed epidemic model. Applied Mathematics and Computation, 2010, 216, 753-767.	1.4	22
113	Bifurcation and chaos in an epidemic model with nonlinear incidence rates. Applied Mathematics and Computation, 2010, 216, 1226-1234.	1.4	37
114	Rich dynamics in a predatorâ€“prey model with both noise and periodic force. BioSystems, 2010, 100, 14-22.	0.9	34
115	MEASUREMENT OF SELF-ORGANIZATION IN ARID ECOSYSTEMS. Journal of Biological Systems, 2010, 18, 495-508.	0.5	7
116	EMERGENCE OF POWER-LAW IN SPATIAL EPIDEMICS USING CELLULAR AUTOMATION. International Journal of Modern Physics C, 2010, 21, 983-989.	0.8	5
117	TRAVELING PATTERN INDUCED BY MIGRATION IN AN EPIDEMIC MODEL. Journal of Biological Systems, 2009, 17, 319-328.	0.5	8
118	EXISTENCE OF TRAVELLING WAVES IN NONLINEAR SI EPIDEMIC MODELS. Journal of Biological Systems, 2009, 17, 643-657.	0.5	6
119	SPATIAL PATTERN IN A PREDATOR-PREY SYSTEM WITH BOTH SELF- AND CROSS-DIFFUSION. International Journal of Modern Physics C, 2009, 20, 71-84.	0.8	38
120	SPATIAL PATTERN IN AN EPIDEMIC SYSTEM WITH CROSS-DIFFUSION OF THE SUSCEPTIBLE. Journal of Biological Systems, 2009, 17, 141-152.	0.5	37
121	Nonlinear dynamic and pattern bifurcations in a model for spatial patterns in young mussel beds. Journal of the Royal Society Interface, 2009, 6, 705-718.	1.5	50
122	Predator cannibalism can give rise to regular spatial pattern in a predatorâ€“prey system. Nonlinear Dynamics, 2009, 58, 75-84.	2.7	103
123	The role of noise in a predatorâ€“prey model with Allee effect. Journal of Biological Physics, 2009, 35, 185-196.	0.7	57
124	Stability and Hopf bifurcation in a delayed competition system. Nonlinear Analysis: Theory, Methods & Applications, 2009, 70, 658-670.	0.6	60
125	Dynamic behavior of a discrete modified Ricker & Bevertonâ€“Holt model. Computers and Mathematics With Applications, 2009, 57, 1400-1412.	1.4	13
126	Dynamical complexity of a spatial predatorâ€“prey model with migration. Ecological Modelling, 2008, 219, 248-255.	1.2	69

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127	Chaos induced by breakup of waves in a spatial epidemic model with nonlinear incidence rate. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P08011.	0.9	41
128	Pattern formation in a spatialSâ€“Imodel with non-linear incidence rates. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P11011-P11011.	0.9	73
129	Mathematical Modelling and Sensitivity Assessment of COVID-19 Outbreak for Ghana and Egypt. SSRN Electronic Journal, 0, , .	0.4	8