

# Rui Liu

## List of Publications by Year in descending order

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Version: 2024-02-01

62  
papers

2,860  
citations

257450  
24  
h-index

197818  
49  
g-index

63  
all docs

63  
docs citations

63  
times ranked

2243  
citing authors

#	ARTICLE	IF	CITATIONS
1	Detecting early-warning signals for sudden deterioration of complex diseases by dynamical network biomarkers. Scientific Reports, 2012, 2, 342.	3.3	494
2	Identifying critical state of complex diseases by single-sample Kullback-Leibler divergence. BMC Genomics, 2020, 21, 87.	2.8	334
3	Early Diagnosis of Complex Diseases by Molecular Biomarkers, Network Biomarkers, and Dynamical Network Biomarkers. Medicinal Research Reviews, 2014, 34, 455-478.	10.5	252
4	Identifying critical transitions and their leading biomolecular networks in complex diseases. Scientific Reports, 2012, 2, 813.	3.3	155
5	Detecting tissue-specific early warning signals for complex diseases based on dynamical network biomarkers: study of type 2 diabetes by cross-tissue analysis. Briefings in Bioinformatics, 2014, 15, 229-243.	6.5	119
6	Mode selectivity in methane dissociative chemisorption on Ni(111). Chemical Science, 2013, 4, 3249.	7.4	115
7	Quantifying critical states of complex diseases using single-sample dynamic network biomarkers. PLoS Computational Biology, 2017, 13, e1005633.	3.2	90
8	Mode Selectivity for a "Central" Barrier Reaction: Eight-Dimensional Quantum Studies of the $O(^3P) + CH_4 \rightarrow OH + CH_3$ Reaction on an Ab Initio Potential Energy Surface. Journal of Physical Chemistry Letters, 2012, 3, 3776-3780.	4.6	87
9	Identifying critical transitions of complex diseases based on a single sample. Bioinformatics, 2014, 30, 1579-1586.	4.1	82
10	Identifying early-warning signals of critical transitions with strong noise by dynamical network markers. Scientific Reports, 2015, 5, 17501.	3.3	80
11	Rotational mode specificity in the $Cl + CHD_3 \rightarrow HCl + CD_3$ reaction. Journal of Chemical Physics, 2014, 141, 074310.	3.0	75
12	Detecting early-warning signals of type 1 diabetes and its leading biomolecular networks by dynamical network biomarkers. BMC Medical Genomics, 2013, 6, S8.	1.5	74
13	Dynamical network biomarkers for identifying critical transitions and their driving networks of biologic processes. Quantitative Biology, 2013, 1, 105-114.	0.5	62
14	Hunt for the tipping point during endocrine resistance process in breast cancer by dynamic network biomarkers. Journal of Molecular Cell Biology, 2019, 11, 649-664.	3.3	57
15	An eight-dimensional quantum mechanical Hamiltonian for $X + YCZ_3$ system and its applications to $H + CH_4$ reaction. Journal of Chemical Physics, 2012, 137, 174113.	3.0	53
16	Single-sample landscape entropy reveals the imminent phase transition during disease progression. Bioinformatics, 2020, 36, 1522-1532.	4.1	53
17	Detecting critical state before phase transition of complex biological systems by hidden Markov model. Bioinformatics, 2016, 32, 2143-2150.	4.1	50
18	Autoreservoir computing for multistep ahead prediction based on the spatiotemporal information transformation. Nature Communications, 2020, 11, 4568.	12.8	49

#	ARTICLE	IF	CITATIONS
19	Deciphering early development of complex diseases by progressive module network. <i>Methods</i> , 2014, 67, 334-343.	3.8	42
20	Detecting early warning signals of influenza outbreak based on dynamic network marker. <i>Journal of Cellular and Molecular Medicine</i> , 2019, 23, 395-404.	3.6	40
21	NLP based congestive heart failure case finding: A prospective analysis on statewide electronic medical records. <i>International Journal of Medical Informatics</i> , 2015, 84, 1039-1047.	3.3	38
22	Detecting the tipping points in a three-state model of complex diseases by temporal differential networks. <i>Journal of Translational Medicine</i> , 2017, 15, 217.	4.4	37
23	Identifying critical differentiation state of MCF-7 cells for breast cancer by dynamical network biomarkers. <i>Frontiers in Genetics</i> , 2015, 6, 252.	2.3	33
24	Edge biomarkers for classification and prediction of phenotypes. <i>Science China Life Sciences</i> , 2014, 57, 1103-1114.	4.9	30
25	Dynamical network biomarkers: Theory and applications. <i>Gene</i> , 2022, 808, 145997.	2.2	29
26	Mechanism of acute lung injury due to phosgene exposition and its protection by cafeic acid phenethyl ester in the rat. <i>Experimental and Toxicologic Pathology</i> , 2013, 65, 311-318.	2.1	27
27	Predicting local COVID-19 outbreaks and infectious disease epidemics based on landscape network entropy. <i>Science Bulletin</i> , 2021, 66, 2265-2270.	9.0	24
28	Identifying Critical State of Complex Diseases by Single-Sample-Based Hidden Markov Model. <i>Frontiers in Genetics</i> , 2019, 10, 285.	2.3	21
29	Dynamic Network Biomarker of Pre-Exhausted CD8+ T Cells Contributed to T Cell Exhaustion in Colorectal Cancer. <i>Frontiers in Immunology</i> , 2021, 12, 691142.	4.8	19
30	Some new nonlinear wave solutions for two (3+1)-dimensional equations. <i>Applied Mathematics and Computation</i> , 2015, 260, 397-411.	2.2	17
31	Defining and characterizing the critical transition state prior to the type 2 diabetes disease. <i>PLoS ONE</i> , 2017, 12, e0180937.	2.5	16
32	scGET: Predicting Cell Fate Transition During Early Embryonic Development by Single-cell Graph Entropy. <i>Genomics, Proteomics and Bioinformatics</i> , 2021, 19, 461-474.	6.9	16
33	Oleic Acid Attenuates Ang II (Angiotensin II)-Induced Cardiac Remodeling by Inhibiting FGF23 (Fibroblast) Tj ETQq1,1,0.784314 rgBT /Ov	2.7	14
34	Cerebrospinal fluid protein dynamic driver network: At the crossroads of brain tumorigenesis. <i>Methods</i> , 2015, 83, 36-43.	3.8	11
35	Collective fluctuation implies imminent state transition. <i>Physics of Life Reviews</i> , 2021, 37, 103-107.	2.8	9
36	Some new results on explicit traveling wave solutions of $K(m, n)$ equation. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2010, 13, 633-646.	0.9	9

#	ARTICLE	IF	CITATIONS
37	Vec2image: an explainable artificial intelligence model for the feature representation and classification of high-dimensional biological data by vector-to-image conversion. Briefings in Bioinformatics, 2022, 23, .	6.5	9
38	COEXISTENCE OF MULTIFARIOUS EXACT NONLINEAR WAVE SOLUTIONS FOR GENERALIZED b-EQUATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 3193-3208.	1.7	8
39	Bifurcations of Solitary Waves of a Simple Equation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2050138.	1.7	8
40	Development of a dynamic network biomarkers method and its application for detecting the tipping point of prior disease development. Computational and Structural Biotechnology Journal, 2022, 20, 1189-1197.	4.1	8
41	Identifying the critical states of complex diseases by the dynamic change of multivariate distribution. Briefings in Bioinformatics, 2022, 23, .	6.5	8
42	Single-Sample Node Entropy for Molecular Transition in Pre-deterioration Stage of Cancer. Frontiers in Bioengineering and Biotechnology, 2020, 8, 809.	4.1	7
43	Identifying pre-outbreak signals of hand, foot and mouth disease based on landscape dynamic network marker. BMC Infectious Diseases, 2021, 21, 6.	2.9	7
44	Forecasting the COVID-19 transmission in Italy based on the minimum spanning tree of dynamic region network. PeerJ, 2021, 9, e11603.	2.0	7
45	Single-cell transcriptomics reveal DHX9 in mature B cell as a dynamic network biomarker before lymph node metastasis in CRC. Molecular Therapy - Oncolytics, 2021, 22, 495-506.	4.4	7
46	Several new types of solitary wave solutions for the generalized Camassa-Holm-Degasperis-Procesi equation. Communications on Pure and Applied Analysis, 2010, 9, 77-90.	0.8	7
47	SOME COMMON EXPRESSIONS AND NEW BIFURCATION PHENOMENA FOR NONLINEAR WAVES IN A GENERALIZED mKdV EQUATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1330007.	1.7	6
48	The explicit periodic wave solutions and their limit forms for a generalized b-equation. Acta Mathematicae Applicatae Sinica, 2016, 32, 513-528.	0.7	6
49	Rapid diagnosis and comprehensive bacteria profiling of sepsis based on cell-free DNA. Journal of Translational Medicine, 2020, 18, 5.	4.4	6
50	Blow-up solutions for a case of b-family equations. Acta Mathematica Scientia, 2020, 40, 910-920.	1.0	6
51	A ten-dimensional quantum dynamics model for the X + YCAB2 reaction: Application to H + CH4 reaction. Journal of Chemical Physics, 2020, 153, 224119.	3.0	6
52	Intrinsic entropy model for feature selection of scRNA-seq data. Journal of Molecular Cell Biology, 2022, 14, .	3.3	6
53	A quantitative method to project the probability of the end of an epidemic: Application to the COVID-19 outbreak in Wuhan, 2020. Journal of Theoretical Biology, 2022, 545, 111149.	1.7	6
54	Identifying the critical states and dynamic network biomarkers of cancers based on network entropy. Journal of Translational Medicine, 2022, 20, .	4.4	6

#	ARTICLE	IF	CITATIONS
55	Detecting the outbreak of influenza based on the shortest path of dynamic city network. PeerJ, 2020, 8, e9432.	2.0	5
56	Bifurcations and Exact Solutions in a Nonlinear Wave Equation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950098.	1.7	4
57	Real-Time Forecast of Influenza Outbreak Using Dynamic Network Marker Based on Minimum Spanning Tree. BioMed Research International, 2020, 2020, 1-11.	1.9	4
58	Existence and critical speed of traveling wave fronts in a modified vector disease model with distributed delay. Journal of Dynamical and Control Systems, 2012, 18, 355-378.	0.8	3
59	Some Explicit Expressions and Interesting Bifurcation Phenomena for Nonlinear Waves in Generalized Zakharov Equations. Abstract and Applied Analysis, 2013, 2013, 1-19.	0.7	3
60	Traveling wave solutions in n-dimensional delayed nonlocal diffusion system with mixed quasimonotonicity. Analysis and Applications, 2015, 13, 23-43.	2.2	1
61	Existence and Asymptotic Behavior of Traveling Wave Fronts for a Time-Delayed Degenerate Diffusion Equation. Abstract and Applied Analysis, 2013, 2013, 1-20.	0.7	0
62	CSF protein dynamic driver network: At the crossroads of brain tumorigenesis. , 2014, , .		0