

Timothy D Sauer

List of Publications by Year in descending order

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91
papers

6,369
citations

117453

34
h-index

66788

78
g-index

92
all docs

92
docs citations

92
times ranked

3683
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive ensemble Kalman filtering of non-linear systems. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 65, 20331.	0.8	53
2	Identifiability of Infection Model Parameters Early in an Epidemic. <i>SIAM Journal on Control and Optimization</i> , 2022, 60, S27-S48.	1.1	9
3	Global Assimilation of Remotely Sensed Leaf Area Index: The Impact of Updating More State Variables Within a Land Surface Model. <i>Frontiers in Water</i> , 2022, 3, .	1.0	5
4	The Joint Assimilation of Remotely Sensed Leaf Area Index and Surface Soil Moisture into a Land Surface Model. <i>Remote Sensing</i> , 2022, 14, 437.	1.8	12
5	A synthetic experiment to investigate the potential of assimilating LAI through direct insertion in a land surface model. <i>Journal of Hydrology X</i> , 2020, 9, 100063.	0.8	6
6	Poisson Kalman filter for disease surveillance. <i>Physical Review Research</i> , 2020, 2, .	1.3	6
7	The influence of assimilating leaf area index in a land surface model on global water fluxes and storages. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 3775-3788.	1.9	6
8	Correcting observation model error in data assimilation. <i>Chaos</i> , 2019, 29, 053102.	1.0	10
9	Changes in Ugandan Climate Rainfall at the Village and Forest Level. <i>Scientific Reports</i> , 2018, 8, 3551.	1.6	27
10	Tracking intracellular dynamics through extracellular measurements. <i>PLoS ONE</i> , 2018, 13, e0205031.	1.1	8
11	Limits on reconstruction of dynamics in networks. <i>Physical Review E</i> , 2018, 98, 022318.	0.8	6
12	Correlation between System and Observation Errors in Data Assimilation. <i>Monthly Weather Review</i> , 2018, 146, 2913-2931.	0.5	6
13	Density estimation on manifolds with boundary. <i>Computational Statistics and Data Analysis</i> , 2017, 107, 1-17.	0.7	23
14	Kalman-Takens filtering in the presence of dynamical noise. <i>European Physical Journal: Special Topics</i> , 2017, 226, 3239-3250.	1.2	19
15	Effects of symmetry on the structural controllability of neural networks: A perspective. , 2016, 2016, 5785-5790.		2
16	Ensemble Kalman Filtering without a Model. <i>Physical Review X</i> , 2016, 6, .	2.8	40
17	Local kernels and the geometric structure of data. <i>Applied and Computational Harmonic Analysis</i> , 2016, 40, 439-469.	1.1	55
18	Predicting chaotic time series with a partial model. <i>Physical Review E</i> , 2015, 92, 010902.	0.8	26

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19	Observability and Controllability of Nonlinear Networks: The Role of Symmetry. <i>Physical Review X</i> , 2015, 5, .	2.8	100
20	Reconstructing neural dynamics using data assimilation with multiple models. <i>Europhysics Letters</i> , 2014, 107, 68005.	0.7	16
21	Computational solution of stochastic differential equations. <i>Wiley Interdisciplinary Reviews: Computational Statistics</i> , 2013, 5, 362-371.	2.1	25
22	Real-time tracking of neuronal network structure using data assimilation. <i>Physical Review E</i> , 2013, 88, 052715.	0.8	49
23	Time-Scale Separation from Diffusion-Mapped Delay Coordinates. <i>SIAM Journal on Applied Dynamical Systems</i> , 2013, 12, 618-649.	0.7	67
24	Convergence of periodically forced rank-type equations. <i>Journal of Difference Equations and Applications</i> , 2012, 18, 417-429.	0.7	2
25	Numerical Solution of Stochastic Differential Equations in Finance. , 2012, , 529-550.		36
26	Rainfall drives hydrocephalus in East Africa. <i>Journal of Neurosurgery: Pediatrics</i> , 2012, 10, 161-167.	0.8	27
27	Observability of neuronal network motifs. , 2012, 2012, .		4
28	Prediction of single neuron spiking activity using an optimized nonlinear dynamic model. , 2012, 2012, 2543-6.		0
29	Detecting connectivity changes in neuronal networks. <i>Journal of Neuroscience Methods</i> , 2012, 209, 388-397.	1.3	26
30	Convergence of rank-type equations. <i>Applied Mathematics and Computation</i> , 2011, 217, 4540-4547.	1.4	4
31	Homologous control of protein signaling networks. <i>Journal of Theoretical Biology</i> , 2011, 279, 29-43.	0.8	0
32	Global convergence of max-type equations. <i>Journal of Difference Equations and Applications</i> , 2011, 17, 1-8.	0.7	12
33	Observing periodically forced systems of difference equations. <i>Journal of Difference Equations and Applications</i> , 2010, 16, 269-273.	0.7	0
34	Data assimilation for heterogeneous networks: The consensus set. <i>Physical Review E</i> , 2009, 79, 051909.	0.8	21
35	Augmented sparse reconstruction of protein signaling networks. <i>Journal of Theoretical Biology</i> , 2008, 255, 40-52.	0.8	12
36	Kalman filter control of a model of spatiotemporal cortical dynamics. <i>Journal of Neural Engineering</i> , 2008, 5, 1-8.	1.8	97

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37	Reconstructing the topology of sparsely connected dynamical networks. <i>Physical Review E</i> , 2008, 77, 026103.	0.8	137
38	Functional dissipation microarrays for classification. <i>Pattern Recognition</i> , 2007, 40, 3393-3400.	5.1	0
39	Multivariate linear discrimination of seizures. <i>Clinical Neurophysiology</i> , 2005, 116, 545-551.	0.7	43
40	Neuronal spatiotemporal pattern discrimination: The dynamical evolution of seizures. <i>NeuroImage</i> , 2005, 28, 1043-1055.	2.1	106
41	Computer arithmetic and sensitivity of natural measure. <i>Journal of Difference Equations and Applications</i> , 2005, 11, 669-676.	0.7	3
42	Reconstruction of Shared Nonlinear Dynamics in a Network. <i>Physical Review Letters</i> , 2004, 93, 198701.	2.9	28
43	Four-dimensional ensemble Kalman filtering. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2004, 56, 273-277.	0.8	129
44	Chaotic itinerancy based on attractors of one-dimensional maps. <i>Chaos</i> , 2003, 13, 947-952.	1.0	16
45	Shadowing breakdown and large errors in dynamical simulations of physical systems. <i>Physical Review E</i> , 2002, 65, 036220.	0.8	53
46	Early Seizure Detection. <i>Journal of Clinical Neurophysiology</i> , 2001, 18, 259-268.	0.9	128
47	Formulas for the Eckmann-Ruelle Matrix. , 2001, , 323-336.		1
48	Reconstructing chaotic dynamics through spike filters. <i>Physical Review E</i> , 1999, 59, 2911-2917.	0.8	22
49	Reconstructing the Jacobian from Data with Observational Noise. <i>Physical Review Letters</i> , 1999, 83, 1331-1334.	2.9	22
50	Continued Fractions Hierarchy of Rotation Numbers in Planar Dynamics. <i>Physical Review Letters</i> , 1999, 83, 3629-3632.	2.9	3
51	Predicting Chaos Most of the Time from Embeddings with Self-Intersections. <i>Physical Review Letters</i> , 1998, 80, 1410-1413.	2.9	23
52	Spurious Lyapunov Exponents in Attractor Reconstruction. <i>Physical Review Letters</i> , 1998, 81, 4341-4344.	2.9	35
53	Chaotic Stochastic Resonance: Noise-Enhanced Reconstruction of Attractors. <i>Physical Review Letters</i> , 1997, 79, 1030-1033.	2.9	33
54	Correlation dimension of attractors through interspike intervals. <i>Physical Review E</i> , 1997, 55, 287-290.	0.8	52

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55	Extracting unstable periodic orbits from chaotic time series data. <i>Physical Review E</i> , 1997, 55, 5398-5417.	0.8	102
56	Are the dimensions of a set and its image equal under typical smooth functions?. <i>Ergodic Theory and Dynamical Systems</i> , 1997, 17, 941-956.	0.4	45
57	How Long Do Numerical Chaotic Solutions Remain Valid?. <i>Physical Review Letters</i> , 1997, 79, 59-62.	2.9	143
58	System identification for chaotic integrate-and-fire dynamics. <i>International Journal of Intelligent Systems</i> , 1997, 12, 255-265.	3.3	4
59	Detecting Unstable Periodic Orbits in Chaotic Experimental Data. <i>Physical Review Letters</i> , 1996, 76, 4705-4708.	2.9	140
60	Detecting dynamical interdependence and generalized synchrony through mutual prediction in a neural ensemble. <i>Physical Review E</i> , 1996, 54, 6708-6724.	0.8	344
61	Detecting nonlinear dynamics in spatio-temporal systems, examples from ecological models. <i>Physica D: Nonlinear Phenomena</i> , 1996, 96, 321-333.	1.3	21
62	Tests for nonlinearity in short stationary time series. <i>Chaos</i> , 1995, 5, 118-126.	1.0	27
63	Looking for chaos in brain slices. <i>Journal of Neuroscience Methods</i> , 1995, 59, 41-48.	1.3	18
64	Interspike interval embedding of chaotic signals. <i>Chaos</i> , 1995, 5, 127-132.	1.0	64
65	Obstructions to Shadowing When a Lyapunov Exponent Fluctuates about Zero. <i>Physical Review Letters</i> , 1994, 73, 1927-1930.	2.9	149
66	Stochastic versus deterministic variability in simple neuronal circuits: I. Monosynaptic spinal cord reflexes. <i>Biophysical Journal</i> , 1994, 67, 671-683.	0.2	64
67	Stochastic versus deterministic variability in simple neuronal circuits: II. Hippocampal slice. <i>Biophysical Journal</i> , 1994, 67, 684-691.	0.2	51
68	Reconstruction of dynamical systems from interspike intervals. <i>Physical Review Letters</i> , 1994, 72, 3811-3814.	2.9	232
69	Estimating correlation dimension from a chaotic time series: when does plateau onset occur?. <i>Physica D: Nonlinear Phenomena</i> , 1993, 69, 404-424.	1.3	170
70	Plateau onset for correlation dimension: When does it occur?. <i>Physical Review Letters</i> , 1993, 70, 3872-3875.	2.9	145
71	Prevalence. An addendum to: "Prevalence: a translation-invariant $\hat{\epsilon}$ -almost every TM on infinite-dimensional spaces" [Bull. Amer. Math. Soc. (N.S.) 27 (1992), no. 2, 217-238; MR1161274 (93k:28018)]. <i>Bulletin of the American Mathematical Society</i> , 1993, 28, 306-307.	0.8	41
72	Prevalence: a translation-invariant $\hat{\epsilon}$ -almost every TM on infinite-dimensional spaces. <i>Bulletin of the American Mathematical Society</i> , 1992, 27, 217-238.	0.8	285

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73	A noise reduction method for signals from nonlinear systems. <i>Physica D: Nonlinear Phenomena</i> , 1992, 58, 193-201.	1.3	132
74	Embedology. <i>Journal of Statistical Physics</i> , 1991, 65, 579-616.	0.5	1,895
75	Rigorous verification of trajectories for the computer simulation of dynamical systems. <i>Nonlinearity</i> , 1991, 4, 961-979.	0.6	91
76	Shadowing of physical trajectories in chaotic dynamics: Containment and refinement. <i>Physical Review Letters</i> , 1990, 65, 1527-1530.	2.9	210
77	Lyapunov partition functions for the dimensions of chaotic sets. <i>Physical Review A</i> , 1989, 39, 4212-4222.	1.0	25
78	The Cheater's Homotopy: An Efficient Procedure for Solving Systems of Polynomial Equations. <i>SIAM Journal on Numerical Analysis</i> , 1989, 26, 1241-1251.	1.1	81
79	Rotation numbers of periodic orbits in the Hénon map. <i>Communications in Mathematical Physics</i> , 1988, 120, 105-119.	1.0	17
80	Numerically determining solutions of systems of polynomial equations. <i>Bulletin of the American Mathematical Society</i> , 1988, 18, 173-177.	0.8	20
81	Homotopy Method for General λ -Matrix Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1988, 9, 528-536.	0.7	25
82	Numerical Solution of a Class of Deficient Polynomial Systems. <i>SIAM Journal on Numerical Analysis</i> , 1987, 24, 435-451.	1.1	57
83	The random product homotopy and deficient polynomial systems. <i>Numerische Mathematik</i> , 1987, 51, 481-500.	0.9	35
84	Homotopy method for generalized eigenvalue problems $Ax = \lambda Bx$. <i>Linear Algebra and Its Applications</i> , 1987, 91, 65-74.	0.4	30
85	Codimension-two subvarieties of \mathbb{P}^n with the cohomology of a complete intersection. <i>Mathematische Zeitschrift</i> , 1985, 188, 143-147.	0.4	1
86	Smoothing projectively Cohen-Macaulay space curves. <i>Mathematische Annalen</i> , 1985, 272, 83-90.	0.7	25
87	A Note on the Cayley-Bacharach Property. <i>Bulletin of the London Mathematical Society</i> , 1985, 17, 239-242.	0.4	1
88	The number of equations defining points in general position. <i>Pacific Journal of Mathematics</i> , 1985, 120, 199-213.	0.2	4
89	Nonstable Reflexive Sheaves on \mathbb{P}^3 . <i>Transactions of the American Mathematical Society</i> , 1984, 281, 633.	0.5	13
90	Nonstable reflexive sheaves on \mathbb{P}^3 . <i>Transactions of the American Mathematical Society</i> , 1984, 281, 633-655.	0.5	10

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91	Attenuated Embedding Estimators for Speech Signals. , 0, , .		0