

J Nathan Kutz

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

182
papers

7,660
citations

39
h-index

85
g-index

196
ext. papers

11,090
ext. citations

3.8
avg, IF

7.13
L-index

#	Paper	IF	Citations
182	Discovering governing equations from data by sparse identification of nonlinear dynamical systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 3932-7	11.5	1026
181	On dynamic mode decomposition: Theory and applications. <i>Journal of Computational Dynamics</i> , 2014 , 1, 391-421	2.6	587
180	Data-driven discovery of partial differential equations. <i>Science Advances</i> , 2017 , 3, e1602614	14.3	439
179	Dynamic Mode Decomposition 2016 ,		342
178	Deep learning in fluid dynamics. <i>Journal of Fluid Mechanics</i> , 2017 , 814, 1-4	3.7	294
177	Dynamic Mode Decomposition with Control. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016 , 15, 142-168	6.8	284
176	Deep learning for universal linear embeddings of nonlinear dynamics. <i>Nature Communications</i> , 2018 , 9, 4950	17.4	258
175	Bose-Einstein condensates in standing waves: the cubic nonlinear Schrödinger equation with a periodic potential. <i>Physical Review Letters</i> , 2001 , 86, 1402-5	7.4	255
174	Data-Driven Science and Engineering: Machine Learning, Dynamical Systems, and Control 2019 ,		247
173	Extracting spatial-temporal coherent patterns in large-scale neural recordings using dynamic mode decomposition. <i>Journal of Neuroscience Methods</i> , 2016 , 258, 1-15	3	193
172	Chaos as an intermittently forced linear system. <i>Nature Communications</i> , 2017 , 8, 19	17.4	170
171	Koopman Invariant Subspaces and Finite Linear Representations of Nonlinear Dynamical Systems for Control. <i>PLoS ONE</i> , 2016 , 11, e0150171	3.7	160
170	Multiresolution Dynamic Mode Decomposition. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016 , 15, 713-735	2.8	146
169	. <i>IEEE Transactions on Molecular, Biological, and Multi-Scale Communications</i> , 2016 , 2, 52-63	2.3	144
168	Data-driven discovery of coordinates and governing equations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 22445-22451	11.5	135
167	Mode-Locked Soliton Lasers. <i>SIAM Review</i> , 2006 , 48, 629-678	7.4	135
166	Sensory biology. Flower discrimination by pollinators in a dynamic chemical environment. <i>Science</i> , 2014 , 344, 1515-8	33.3	129

165	Data-Driven Sparse Sensor Placement for Reconstruction: Demonstrating the Benefits of Exploiting Known Patterns. <i>IEEE Control Systems</i> , 2018 , 38, 63-86	2.9	123
164	Compressive sensing based machine learning strategy for characterizing the flow around a cylinder with limited pressure measurements. <i>Physics of Fluids</i> , 2013 , 25, 127102	4.4	92
163	Variable Projection Methods for an Optimized Dynamic Mode Decomposition. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018 , 17, 380-416	2.8	82
162	Sidelobe Canceling for Reconfigurable Holographic Metamaterial Antenna. <i>IEEE Transactions on Antennas and Propagation</i> , 2015 , 63, 1881-1886	4.9	81
161	Compressed sensing and dynamic mode decomposition. <i>Journal of Computational Dynamics</i> , 2015 , 2, 165-191	2.6	81
160	Data-Driven Identification of Parametric Partial Differential Equations. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 643-660	2.8	73
159	Compressive Sensing and Low-Rank Libraries for Classification of Bifurcation Regimes in Nonlinear Dynamical Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2014 , 13, 1716-1732	2.8	71
158	Spectral analysis of fluid flows using sub-Nyquist-rate PIV data. <i>Experiments in Fluids</i> , 2014 , 55, 1	2.5	68
157	Generalizing Koopman Theory to Allow for Inputs and Control. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018 , 17, 909-930	2.8	64
156	Theory of passive harmonic mode-locking using waveguide arrays. <i>Optics Express</i> , 2008 , 16, 636-50	3.3	60
155	Transition dynamics for multi-pulsing in mode-locked lasers. <i>Optics Express</i> , 2009 , 17, 23137-46	3.3	59
154	Passive mode-locking by use of waveguide arrays. <i>Optics Letters</i> , 2005 , 30, 2013-5	3	58
153	Enhanced Supercontinuum Generation through Dispersion-Management. <i>Optics Express</i> , 2005 , 13, 3989-98	3.3	56
152	Dynamic mode decomposition for financial trading strategies. <i>Quantitative Finance</i> , 2016 , 16, 1643-1655	1.6	55
151	Discovery of Nonlinear Multiscale Systems: Sampling Strategies and Embeddings. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 312-333	2.8	54
150	Sparse identification of nonlinear dynamics for rapid model recovery. <i>Chaos</i> , 2018 , 28, 063116	3.3	50
149	Compressed dynamic mode decomposition for background modeling. <i>Journal of Real-Time Image Processing</i> , 2019 , 16, 1479-1492	1.9	49
148	Sparse Identification of Nonlinear Dynamics with Control (SINDYc)**SLB acknowledges support from the U.S. Air Force Center of Excellence on Nature Inspired Flight Technologies and Ideas (FA9550-14-1-0398). JLP thanks Bill and Melinda Gates for their active support of the Institute of Disease Modeling and their sponsorship through the Global Good Fund. JTK acknowledges support from the U.S. Air Force Office of Scientific Research (FA9550-9-0174). <i>IFAC-PapersOnLine</i> , 2016 , 49, 710-715	0.7	43

147	. <i>IEEE Access</i> , 2019 , 7, 1404-1423	3.5	42
146	Self-Tuning Fiber Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014 , 20, 464-471	3.8	42
145	Renin-Angiotensin-Aldosterone System Inhibition Increases Podocyte Derivation from Cells of Renin Lineage. <i>Journal of the American Society of Nephrology: JASN</i> , 2016 , 27, 3611-3627	12.7	42
144	Extremum-Seeking Control of a Mode-Locked Laser. <i>IEEE Journal of Quantum Electronics</i> , 2013 , 49, 852-861	3.6	41
143	Nonlinear model reduction for dynamical systems using sparse sensor locations from learned libraries. <i>Physical Review E</i> , 2015 , 92, 033304	2.4	39
142	Nonlinear Model Order Reduction via Dynamic Mode Decomposition. <i>SIAM Journal of Scientific Computing</i> , 2017 , 39, B778-B796	2.6	37
141	Randomized Dynamic Mode Decomposition. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 1867-1891	3.9	34
140	Low-dimensional functionality of complex network dynamics: neurosensory integration in the <i>Caenorhabditis Elegans</i> connectome. <i>Physical Review E</i> , 2014 , 89, 052805	2.4	31
139	Shallow neural networks for fluid flow reconstruction with limited sensors. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020 , 476, 20200097	2.4	29
138	Predicting shim gaps in aircraft assembly with machine learning and sparse sensing. <i>Journal of Manufacturing Systems</i> , 2018 , 48, 87-95	9.1	29
137	Environment identification in flight using sparse approximation of wing strain. <i>Journal of Fluids and Structures</i> , 2017 , 70, 162-180	3.1	28
136	Generalized Master Equation for High-Energy Passive Mode-Locking: The Sinusoidal Ginzburg-Landau Equation. <i>IEEE Journal of Quantum Electronics</i> , 2011 , 47, 705-714	2	28
135	Dual lineage tracing shows that glomerular parietal epithelial cells can transdifferentiate toward the adult podocyte fate. <i>Kidney International</i> , 2019 , 96, 597-611	9.9	27
134	Intracavity dynamics in high-power mode-locked fiber lasers. <i>Physical Review A</i> , 2010 , 81,	2.6	25
133	Time-Delay Observables for Koopman: Theory and Applications. <i>SIAM Journal on Applied Dynamical Systems</i> , 2020 , 19, 886-917	2.8	23
132	The Proper Orthogonal Decomposition for Dimensionality Reduction in Mode-Locked Lasers and Optical Systems. <i>International Journal of Optics</i> , 2012 , 2012, 1-18	0.9	23
131	High-energy mode-locked fiber lasers using multiple transmission filters and a genetic algorithm. <i>Optics Express</i> , 2013 , 21, 6526-37	3.3	23
130	Structural Load Estimation Using Machine Vision and Surface Crack Patterns for Shear-Critical RC Beams and Slabs. <i>Journal of Computing in Civil Engineering</i> , 2018 , 32, 04018024	5	22

129	Identifying critical regions for spike propagation in axon segments. <i>Journal of Computational Neuroscience</i> , 2014 , 36, 141-55	1.4	22
128	SINDy-PI: a robust algorithm for parallel implicit sparse identification of nonlinear dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020 , 476, 20200279 ^{2.4}	2.4	22
127	Greedy Sensor Placement With Cost Constraints. <i>IEEE Sensors Journal</i> , 2019 , 19, 2642-2656	4	22
126	Dynamic Mode Decomposition for Compressive System Identification. <i>AIAA Journal</i> , 2020 , 58, 561-574	2.1	22
125	Applied Koopman Theory for Partial Differential Equations and Data-Driven Modeling of Spatio-Temporal Systems. <i>Complexity</i> , 2018 , 2018, 1-16	1.6	21
124	Spatiotemporal Feedback and Network Structure Drive and Encode Caenorhabditis elegans Locomotion. <i>PLoS Computational Biology</i> , 2017 , 13, e1005303	5	20
123	Mode-locked rotating detonation waves: Experiments and a model equation. <i>Physical Review E</i> , 2020 , 101, 013106	2.4	19
122	Classification of Spatiotemporal Data via Asynchronous Sparse Sampling: Application to Flow around a Cylinder. <i>Multiscale Modeling and Simulation</i> , 2016 , 14, 823-838	1.8	19
121	Light-bullet routing and control with planar waveguide arrays. <i>Optics Express</i> , 2010 , 18, 11671-82	3.3	19
120	Modeling thermodynamic trends of rotating detonation engines. <i>Physics of Fluids</i> , 2020 , 32, 126102	4.4	19
119	Sex-related differences in intrinsic brain dynamism and their neurocognitive correlates. <i>NeuroImage</i> , 2019 , 202, 116116	7.9	18
118	Compound effects of aging and experimental FSGS on glomerular epithelial cells. <i>Aging</i> , 2017 , 9, 524-546	6.6	18
117	A Unified Sparse Optimization Framework to Learn Parsimonious Physics-Informed Models From Data. <i>IEEE Access</i> , 2020 , 8, 169259-169271	3.5	18
116	Methods for data-driven multiscale model discovery for materials. <i>JPhys Materials</i> , 2019 , 2, 044002	4.2	17
115	Forecasting dengue fever in Brazil: An assessment of climate conditions. <i>PLoS ONE</i> , 2019 , 14, e0220106	3.7	17
114	Waveguide Array Fiber Laser. <i>IEEE Photonics Journal</i> , 2012 , 4, 1438-1442	1.8	17
113	Inferring connectivity in networked dynamical systems: Challenges using Granger causality. <i>Physical Review E</i> , 2016 , 94, 032220	2.4	17
112	Traveling Wave Model for Frequency Comb Generation in Single-Section Quantum Well Diode Lasers. <i>IEEE Journal of Quantum Electronics</i> , 2017 , 53, 1-11	2	16

111	Sparsity enabled cluster reduced-order models for control. <i>Journal of Computational Physics</i> , 2018 , 352, 388-409	4.1	16
110	Discovering time-varying aerodynamics of a prototype bridge by sparse identification of nonlinear dynamical systems. <i>Physical Review E</i> , 2019 , 100, 022220	2.4	15
109	Dimensionality reduction and reduced-order modeling for traveling wave physics. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 385-400	2.3	15
108	Discovery of Physics From Data: Universal Laws and Discrepancies. <i>Frontiers in Artificial Intelligence</i> , 2020 , 3, 25	3	15
107	Deep model predictive flow control with limited sensor data and online learning. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 577-591	2.3	15
106	Dual transmission filters for enhanced energy in mode-locked fiber lasers. <i>Optics Express</i> , 2011 , 19, 23408-319	3.3	15
105	Numerical differentiation of noisy data: A unifying multi-objective optimization framework. <i>IEEE Access</i> , 2020 , 8, 196865-196877	3.5	15
104	Data-driven discovery of Koopman eigenfunctions for control. <i>Machine Learning: Science and Technology</i> , 2021 , 2, 035023	5.1	15
103	Learning dominant physical processes with data-driven balance models. <i>Nature Communications</i> , 2021 , 12, 1016	17.4	14
102	Discovering Conservation Laws from Data for Control 2018 ,		14
101	Multilevel Mapping of Sexual Dimorphism in Intrinsic Functional Brain Networks. <i>Frontiers in Neuroscience</i> , 2019 , 13, 332	5.1	13
100	Diagnostic tools for evaluating the impact of Focal Axonal Swellings arising in neurodegenerative diseases and/or traumatic brain injury. <i>Journal of Neuroscience Methods</i> , 2015 , 253, 233-43	3	13
99	Compromised axonal functionality after neurodegeneration, concussion and/or traumatic brain injury. <i>Journal of Computational Neuroscience</i> , 2014 , 37, 317-32	1.4	13
98	Multi-resolution Dynamic Mode Decomposition for Foreground/Background Separation and Object Tracking 2015 ,		13
97	Data-driven inference of network connectivity for modeling the dynamics of neural codes in the insect antennal lobe. <i>Frontiers in Computational Neuroscience</i> , 2014 , 8, 70	3.5	13
96	Dynamic mode decomposition for plasma diagnostics and validation. <i>Review of Scientific Instruments</i> , 2018 , 89, 053501	1.7	12
95	Dynamic mode decomposition for multiscale nonlinear physics. <i>Physical Review E</i> , 2019 , 99, 063311	2.4	11
94	Randomized model order reduction. <i>Advances in Computational Mathematics</i> , 2019 , 45, 1251-1271	1.6	11

93	Impact of Spectral Filtering on Multipulsing Instability in Mode-Locked Fiber Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018 , 24, 1-9	3.8	11
92	Deep learning models for global coordinate transformations that linearise PDEs. <i>European Journal of Applied Mathematics</i> , 2021 , 32, 515-539	1	11
91	Reaction time impairments in decision-making networks as a diagnostic marker for traumatic brain injuries and neurological diseases. <i>Journal of Computational Neuroscience</i> , 2017 , 42, 323-347	1.4	10
90	Theory and Simulation of Passive Multifrequency Mode-Locking With Waveguide Arrays. <i>IEEE Journal of Quantum Electronics</i> , 2008 , 44, 976-983	2	10
89	Optimized Sampling for Multiscale Dynamics. <i>Multiscale Modeling and Simulation</i> , 2019 , 17, 117-136	1.8	9
88	Poincaré maps for multiscale physics discovery and nonlinear Floquet theory. <i>Physica D: Nonlinear Phenomena</i> , 2020 , 408, 132479	3.3	9
87	Neural Activity Measures and Their Dynamics. <i>SIAM Journal on Applied Mathematics</i> , 2012 , 72, 1260-1291	1.8	9
86	Toward Stable, General Machine-Learned Models of the Atmospheric Chemical System. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032759	4.4	9
85	Multi-Fidelity Sensor Selection: Greedy Algorithms to Place Cheap and Expensive Sensors With Cost Constraints. <i>IEEE Sensors Journal</i> , 2020 , 1-1	4	9
84	Putting a bug in ML: The moth olfactory network learns to read MNIST. <i>Neural Networks</i> , 2019 , 118, 54-64	4.1	8
83	Optimizing Waveguide Array Mode-Locking for High-Power Fiber Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 220-231	3.8	8
82	Nonlinear control of networked dynamical systems. <i>IEEE Transactions on Network Science and Engineering</i> , 2021 , 8, 174-189	4.9	8
81	Compressed Singular Value Decomposition for Image and Video Processing 2017 ,		7
80	Dynamics of a Low-Dimensional Model for Short Pulse Mode Locking. <i>Photonics</i> , 2015 , 2, 865-882	2.2	7
79	A reaction-diffusion model of cholinergic retinal waves. <i>PLoS Computational Biology</i> , 2014 , 10, e1003953	5	7
78	Herpes simplex virus-2 genital tract shedding is not predictable over months or years in infected persons. <i>PLoS Computational Biology</i> , 2014 , 10, e1003922	5	7
77	Data-Driven Approximations of Dynamical Systems Operators for Control. <i>Lecture Notes in Control and Information Sciences</i> , 2020 , 197-234	0.5	7
76	Biological Mechanisms for Learning: A Computational Model of Olfactory Learning in the Moth, With Applications to Neural Nets. <i>Frontiers in Computational Neuroscience</i> , 2018 , 12, 102	3.5	7

75	Modern Koopman Theory for Dynamical Systems. <i>SIAM Review</i> , 2022 , 64, 229-340	7.4	7
74	Unsupervised learning of control signals and their encodings in whole-brain recordings. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20200459	4.1	6
73	Sensor Selection With Cost Constraints for Dynamically Relevant Bases. <i>IEEE Sensors Journal</i> , 2020 , 20, 11674-11687	4	6
72	Sidelobe canceling on a reconfigurable holographic metamaterial antenna 2014 ,		6
71	Spatiotemporal mode locking in quadratic nonlinear media. <i>Physical Review E</i> , 2020 , 102, 022205	2.4	6
70	Optimal Sensor and Actuator Selection using Balanced Model Reduction. <i>IEEE Transactions on Automatic Control</i> , 2021 , 1-1	5.9	6
69	Selecting and Evaluating Representative Days for Generation Expansion Planning 2018 ,		6
68	Data-Driven Aerospace Engineering: Reframing the Industry with Machine Learning. <i>AIAA Journal</i> , 1-26	2.1	6
67	Data-driven spatiotemporal modal decomposition for time frequency analysis. <i>Applied and Computational Harmonic Analysis</i> , 2020 , 49, 771-790	3.1	5
66	Functionality and Robustness of Injured Connectomic Dynamics in <i>C. elegans</i> : Linking Behavioral Deficits to Neural Circuit Damage. <i>PLoS Computational Biology</i> , 2017 , 13, e1005261	5	5
65	Deep reinforcement learning for optical systems: A case study of mode-locked lasers. <i>Machine Learning: Science and Technology</i> , 2020 , 1, 045013	5.1	5
64	Computer visionBased damage and stress state estimation for reinforced concrete and steel fiberreinforced concrete panels. <i>Structural Health Monitoring</i> , 2020 , 19, 1645-1665	4.4	5
63	Inferring causal networks of dynamical systems through transient dynamics and perturbation. <i>Physical Review E</i> , 2020 , 102, 042309	2.4	5
62	Feedback through graph motifs relates structure and function in complex networks. <i>Physical Review E</i> , 2018 , 98,	2.4	5
61	Semiconductor Diode Laser Mode-Locking by a Waveguide Array. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016 , 22, 34-39	3.8	4
60	Modeling cognitive deficits following neurodegenerative diseases and traumatic brain injuries with deep convolutional neural networks. <i>Brain and Cognition</i> , 2018 , 123, 154-164	2.7	4
59	Machine learning and air quality modeling 2017 ,		4
58	DeepGreen: deep learning of GreenS functions for nonlinear boundary value problems. <i>Scientific Reports</i> , 2021 , 11, 21614	4.9	4

57	Structured time-delay models for dynamical systems with connections to Frenet-Serret frame.. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021 , 477, 20210097 ²⁻⁴	2.4	4
56	Sparse identification of slow timescale dynamics. <i>Physical Review E</i> , 2020 , 102, 022204	2.4	4
55	Centering Data Improves the Dynamic Mode Decomposition. <i>SIAM Journal on Applied Dynamical Systems</i> , 2020 , 19, 1920-1955	2.8	4
54	Data-driven modeling of rotating detonation waves. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	4
53	SINDy-BVP: Sparse identification of nonlinear dynamics for boundary value problems. <i>Physical Review Research</i> , 2021 , 3,	3.9	4
52	Including inputs and control within equation-free architectures for complex systems. <i>European Physical Journal: Special Topics</i> , 2016 , 225, 2413-2434	2.3	4
51	Nonlinear Control in the Nematode. <i>Frontiers in Computational Neuroscience</i> , 2020 , 14, 616639	3.5	4
50	Symmetries Constrain Dynamics in a Family of Balanced Neural Networks. <i>Journal of Mathematical Neuroscience</i> , 2017 , 7, 10	2.4	3
49	Smoothing and parameter estimation by soft-adherence to governing equations. <i>Journal of Computational Physics</i> , 2019 , 398, 108860	4.1	3
48	Data-Driven discovery of governing physical laws and their parametric dependencies in engineering, physics and biology 2017 ,		3
47	Fixed-point attractor for chirp in nonlinear waveguide arrays. <i>Physical Review A</i> , 2012 , 85,	2.6	3
46	Stable numerical schemes for nonlinear dispersive equations with counter-propagation and gain dynamics. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019 , 36, 3263	1.7	3
45	Cognitive and behavioral deficits arising from neurodegeneration and traumatic brain injury: a model for the underlying role of focal axonal swellings in neuronal networks with plasticity. <i>Journal of Systems and Integrative Neuroscience</i> , 2016 , 2, 114-121	2.9	3
44	Deeptime: a Python library for machine learning dynamical models from time series data. <i>Machine Learning: Science and Technology</i> ,	5.1	3
43	Neurosensory network functionality and data-driven control. <i>Current Opinion in Systems Biology</i> , 2019 , 13, 31-36	3.2	3
42	Bagging, optimized dynamic mode decomposition for robust, stable forecasting with spatial and temporal uncertainty quantification. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380,	3	3
41	Frequency Comb Generation at 800 nm in Waveguide Array Quantum Well Diode Lasers. <i>IEEE Journal of Quantum Electronics</i> , 2020 , 56, 1-9	2	2
40	Engineering structural robustness in power grid networks susceptible to community desynchronization. <i>Applied Network Science</i> , 2019 , 4,	2.9	2

39	Complex Algorithms for Data-Driven Model Learning in Science and Engineering. <i>Complexity</i> , 2019 , 2019, 1-3	1.6	2
38	Mode Locking in the Few-Femtosecond Regime Using Waveguide Arrays and the Coupled Short-Pulse Equations. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012 , 18, 113-118	3.8	2
37	Adaptive Dimensionality-Reduction for Time-Stepping in Differential and Partial Differential Equations. <i>Numerical Mathematics</i> , 2017 , 10, 872-894	1.5	2
36	Generating and routing light-bullets using slab waveguide arrays. <i>Optical and Quantum Electronics</i> , 2012 , 44, 247-253	2.4	2
35	Singular Value Decomposition (SVD) 2019 , 3-46		2
34	Data-Driven Stabilization of Periodic Orbits. <i>IEEE Access</i> , 2021 , 9, 43504-43521	3.5	2
33	Sparsifying priors for Bayesian uncertainty quantification in model discovery.. <i>Royal Society Open Science</i> , 2022 , 9, 211823	3.3	2
32	PyNumDiff: A Python package for numerical differentiation of noisy time-series data. <i>Journal of Open Source Software</i> , 2022 , 7, 4078	5.2	2
31	Ensemble-SINDy: Robust sparse model discovery in the low-data, high-noise limit, with active learning and control.. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2022 , 478, 20210904	2.4	2
30	Slow-gamma frequencies are optimally guarded against effects of neurodegenerative diseases and traumatic brain injuries. <i>Journal of Computational Neuroscience</i> , 2019 , 47, 1-16	1.4	1
29	Data-Driven Dynamical Systems 2019 , 229-275		1
28	Linear Control Theory 2019 , 276-320		1
27	Example-Based Super-Resolution Fluorescence Microscopy. <i>Scientific Reports</i> , 2018 , 8, 5700	4.9	1
26	Estimating Memory Deterioration Rates Following Neurodegeneration and Traumatic Brain Injuries in a Hopfield Network Model. <i>Frontiers in Neuroscience</i> , 2017 , 11, 623	5.1	1
25	Parsimony as the ultimate regularizer for physics-informed machine learning. <i>Nonlinear Dynamics</i> , 2022 , 107, 1801	5	1
24	Principal component trajectories for modeling spectrally continuous dynamics as forced linear systems.. <i>Physical Review E</i> , 2022 , 105, 015312	2.4	1
23	Sparsity and Compressed Sensing 2019 , 84-114		1
22	Eckhaus Instability in Laser Cavities with Harmonically Swept Filters. <i>Journal of Lightwave Technology</i> , 2021 , 1-1	4	1

21	Extraction of Instantaneous Frequencies and Amplitudes in Nonstationary Time-Series Data. <i>IEEE Access</i> , 2021 , 9, 83453-83466	3.5	1
20	Multiscale physics of rotating detonation waves: Autosolitons and modulational instabilities. <i>Physical Review E</i> , 2021 , 104, 024210	2.4	1
19	Deep learning of conjugate mappings. <i>Physica D: Nonlinear Phenomena</i> , 2021 , 427, 133008	3.3	1
18	A Toolkit for Data-Driven Discovery of Governing Equations in High-Noise Regimes. <i>IEEE Access</i> , 2022 , 10, 31210-31234	3.5	1
17	Automatic differentiation to simultaneously identify nonlinear dynamics and extract noise probability distributions from data. <i>Machine Learning: Science and Technology</i> , 2022 , 3, 015031	5.1	1
16	Data-Driven Control 2019 , 345-372		0
15	Reduced Order Models (ROMs) 2019 , 375-402		0
14	Machine learning and feature engineering for predicting pulse presence during chest compressions. <i>Royal Society Open Science</i> , 2021 , 8, 210566	3.3	0
13	Sex-related differences in brain dynamism at rest as neural correlates of positive and negative valence system constructs. <i>Cognitive Neuroscience</i> , 2021 , 12, 131-154	1.7	0
12	A dynamic, ensemble learning approach to forecast dengue fever epidemic years in Brazil using weather and population susceptibility cycles. <i>Journal of the Royal Society Interface</i> , 2021 , 18, 20201006	4.1	0
11	Fourier and Wavelet Transforms 2019 , 47-83		0
10	Regression and Model Selection 2019 , 117-153		0
9	Stochastically Forced Ensemble Dynamic Mode Decomposition for Forecasting and Analysis of Near-Periodic Systems. <i>IEEE Access</i> , 2022 , 10, 33440-33448	3.5	0
8	Integrated Evolutionary Learning: An Artificial Intelligence Approach to Joint Learning of Features and Hyperparameters for Optimized, Explainable Machine Learning.. <i>Frontiers in Artificial Intelligence</i> , 2022 , 5, 832530	3	0
7	Balanced Models for Control 2019 , 321-344		
6	Interpolation for Parametric ROMs 2019 , 403-435		
5	Spectral filtering for ultra-fast mode-locking in the normal dispersive regime. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 2130005-2130006	0.2	
4	Multi-frequency mode-locked lasers. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 1130305-1130306		

3 Clustering and Classification **2019**, 154-194

2 Neural Networks and Deep Learning **2019**, 195-226

1 Quantifying yeast colony morphologies with feature engineering from time-lapse photography..
Scientific Data, **2022**, 9, 216 8.2