J Nathan Kutz

List of Publications by Year
in descending order

190 papers	15,060 citations	41258 49 h-index	22764 112 g-index
196 all docs	196 docs citations	196 times ranked	7174 citing authors

#	Article	IF	Citations
1	Discovering governing equations from data by sparse identification of nonlinear dynamical systems. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3932-3937.	3.3	2,237
2	On dynamic mode decomposition: Theory and applications. Journal of Computational Dynamics, 2014, 1, 391-421.	0.4	1,023
3	Data-driven discovery of partial differential equations. Science Advances, 2017, 3, e1602614.	4.7	821
4	Deep learning for universal linear embeddings of nonlinear dynamics. Nature Communications, 2018, 9, 4950.	5.8	606
5	Dynamic Mode Decomposition with Control. SIAM Journal on Applied Dynamical Systems, 2016, 15, 142-161.	0.7	551
6	Deep learning in fluid dynamics. Journal of Fluid Mechanics, 2017, 814, 1-4.	1.4	518
7	Data-driven discovery of coordinates and governing equations. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22445-22451.	3.3	397
8	Koopman Invariant Subspaces and Finite Linear Representations of Nonlinear Dynamical Systems for Control. PLoS ONE, 2016, 11, e0150171.	1.1	325
9	Extracting spatialâ€“temporal coherent patterns in large-scale neural recordings using dynamic mode decomposition. Journal of Neuroscience Methods, 2016, 258, 1-15.	1.3	313
10	Chaos as an intermittently forced linear system. Nature Communications, 2017, 8, 19.	5.8	312
11	Bose-Einstein Condensates in Standing Waves: The Cubic Nonlinear SchrÃ¶dinger Equation with a Periodic Potential. Physical Review Letters, 2001, 86, 1402-1405.	2.9	280
12	Multiresolution Dynamic Mode Decomposition. SIAM Journal on Applied Dynamical Systems, 2016, 15, 713-735.	0.7	266
13	Data-Driven Sparse Sensor Placement for Reconstruction: Demonstrating the Benefits of Exploiting Known Patterns. IEEE Control Systems, 2018, 38, 63-86.	1.0	259
14	Inferring Biological Networks by Sparse Identification of Nonlinear Dynamics. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2016, 2, 52-63.	1.4	258
15	Modeâ€Locked Soliton Lasers. SIAM Review, 2006, 48, 629-678.	4.2	194
16	Generalizing Koopman Theory to Allow for Inputs and Control. SIAM Journal on Applied Dynamical Systems, 2018, 17, 909-930.	0.7	186
17	Flower discrimination by pollinators in a dynamic chemical environment. Science, 2014, 344, 1515-1518.	6.0	184
18	Data-Driven Identification of Parametric Partial Differential Equations. SIAM Journal on Applied Dynamical Systems, 2019, 18, 643-660.	0.7	167

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19	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. JNK acknowledges support from the U.S. Air Force Office of Scientific Research (FA9550-09-0174).. IFAC-PapersOnLine, 2016, 49, 710-715.	0.5	139
20	Variable Projection Methods for an Optimized Dynamic Mode Decomposition. SIAM Journal on Applied Dynamical Systems, 2018, 17, 380-416.	0.7	139
21	Compressive sensing based machine learning strategy for characterizing the flow around a cylinder with limited pressure measurements. Physics of Fluids, 2013, 25, .	1.6	127
22	Sidelobe Canceling for Reconfigurable Holographic Metamaterial Antenna. IEEE Transactions on Antennas and Propagation, 2015, 63, 1881-1886.	3.1	118
23	Dynamic mode decomposition for financial trading strategies. Quantitative Finance, 2016, 16, 1643-1655.	0.9	110
24	Compressed sensing and dynamic mode decomposition. Journal of Computational Dynamics, 2015, 2, 165-191.	0.4	110
25	Modern Koopman Theory for Dynamical Systems. SIAM Review, 2022, 64, 229-340.	4.2	109
26	Sparse identification of nonlinear dynamics for rapid model recovery. Chaos, 2018, 28, 063116.	1.0	103
27	Discovery of Nonlinear Multiscale Systems: Sampling Strategies and Embeddings. SIAM Journal on Applied Dynamical Systems, 2019, 18, 312-333.	0.7	97
28	Compressive Sensing and Low-Rank Libraries for Classification of Bifurcation Regimes in Nonlinear Dynamical Systems. SIAM Journal on Applied Dynamical Systems, 2014, 13, 1716-1732.	0.7	95
29	Shallow neural networks for fluid flow reconstruction with limited sensors. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200097.	1.0	95
30	Theory of passive harmonic mode-locking using waveguide arrays. Optics Express, 2008, 16, 636.	1.7	94
31	A Unified Framework for Sparse Relaxed Regularized Regression: SR3. IEEE Access, 2019, 7, 1404-1423.	2.6	90
32	Spectral analysis of fluid flows using sub-Nyquist-rate PIV data. Experiments in Fluids, 2014, 55, 1.	1.1	85
33	Compressed dynamic mode decomposition for background modeling. Journal of Real-Time Image Processing, 2019, 16, 1479-1492.	2.2	85
34	SINDy-PI: a robust algorithm for parallel implicit sparse identification of nonlinear dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200279.	1.0	85
35	Data-driven discovery of Koopman eigenfunctions for control. Machine Learning: Science and Technology, 2021, 2, 035023.	2.4	79
36	Transition dynamics for multi-pulsing in mode-locked lasers. Optics Express, 2009, 17, 23137.	1.7	77

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37	Passive mode-locking by use of waveguide arrays. Optics Letters, 2005, 30, 2013.	1.7	76
38	A Unified Sparse Optimization Framework to Learn Parsimonious Physics-Informed Models From Data. IEEE Access, 2020, 8, 169259-169271.	2.6	75
39	Enhanced Supercontinuum Generation through Dispersion-Management. Optics Express, 2005, 13, 3989.	1.7	74
40	Time-Delay Observables for Koopman: Theory and Applications. SIAM Journal on Applied Dynamical Systems, 2020, 19, 886-917.	0.7	72
41	Nonlinear Model Order Reduction via Dynamic Mode Decomposition. SIAM Journal of Scientific Computing, 2017, 39, B778-B796.	1.3	66
42	Ensemble-SINDy: Robust sparse model discovery in the low-data, high-noise limit, with active learning and control. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, 20210904.	1.0	65
43	Randomized Dynamic Mode Decomposition. SIAM Journal on Applied Dynamical Systems, 2019, 18, 1867-1891.	0.7	63
44	Extremum-Seeking Control of a Mode-Locked Laser. IEEE Journal of Quantum Electronics, 2013, 49, 852-861.	1.0	60
45	Self-Tuning Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 464-471.	1.9	58
46	Dynamic Mode Decomposition for Compressive System Identification. AIAA Journal, 2020, 58, 561-574.	1.5	57
47	Greedy Sensor Placement With Cost Constraints. IEEE Sensors Journal, 2019, 19, 2642-2656.	2.4	56
48	Nonlinear model reduction for dynamical systems using sparse sensor locations from learned libraries. Physical Review E, 2015, 92, 033304.	0.8	50
49	Renin-Angiotensin-Aldosterone System Inhibition Increases Podocyte Derivation from Cells of Renin Lineage. Journal of the American Society of Nephrology: JASN, 2016, 27, 3611-3627.	3.0	50
50	Predicting shim gaps in aircraft assembly with machine learning and sparse sensing. Journal of Manufacturing Systems, 2018, 48, 87-95.	7.6	49
51	Modeling thermodynamic trends of rotating detonation engines. Physics of Fluids, 2020, 32, .	1.6	47
52	Numerical Differentiation of Noisy Data: A Unifying Multi-Objective Optimization Framework. IEEE Access, 2020, 8, 196865-196877.	2.6	44
53	Dual lineage tracing shows that glomerular parietal epithelial cells can transdifferentiate toward theÂadult podocyte fate. Kidney International, 2019, 96, 597-611.	2.6	42
54	Deep model predictive flow control with limited sensor data and online learning. Theoretical and Computational Fluid Dynamics, 2020, 34, 577-591.	0.9	42

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55	Discovering time-varying aerodynamics of a prototype bridge by sparse identification of nonlinear dynamical systems. Physical Review E, 2019, 100, 022220.	0.8	41
56	Structural Load Estimation Using Machine Vision and Surface Crack Patterns for Shear-Critical RC Beams and Slabs. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	40
57	Forecasting dengue fever in Brazil: An assessment of climate conditions. PLoS ONE, 2019, 14, e0220106.	1.1	38
58	Methods for data-driven multiscale model discovery for materials. JPhys Materials, 2019, 2, 044002.	1.8	38
59	Discovery of Physics From Data: Universal Laws and Discrepancies. Frontiers in Artificial Intelligence, 2020, 3, 25.	2.0	38
60	Learning dominant physical processes with data-driven balance models. Nature Communications, 2021, 12, 1016.	5.8	38
61	Generalized Master Equation for High-Energy Passive Mode-Locking: The Sinusoidal Ginzburgâ€“Landau Equation. IEEE Journal of Quantum Electronics, 2011, 47, 705-714.	1.0	37
62	Low-dimensional functionality of complex network dynamics: Neurosensory integration in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="italic">Caenorhabditis</mml:mi><mml:mspace width="0.28em" /><mml:mi mathvariant="italic">elegans</mml:mi></mml:mrow></mml:math>connectome. Physical Review E, 2014, 89, 052805.	0.8	37
63	Data-Driven Aerospace Engineering: Reframing the Industry with Machine Learning. AIAA Journal, 0, , 1-26.	1.5	37
64	Deeptime: a Python library for machine learning dynamical models from time series data. Machine Learning: Science and Technology, 2022, 3, 015009.	2.4	37
65	Environment identification in flight using sparse approximation of wing strain. Journal of Fluids and Structures, 2017, 70, 162-180.	1.5	36
66	Applied Koopman Theory for Partial Differential Equations and Data-Driven Modeling of Spatio-Temporal Systems. Complexity, 2018, 2018, 1-16.	0.9	36
67	The Proper Orthogonal Decomposition for Dimensionality Reduction in Mode-Locked Lasers and Optical Systems. International Journal of Optics, 2012, 2012, 1-18.	0.6	33
68	Optimal Sensor and Actuator Selection Using Balanced Model Reduction. IEEE Transactions on Automatic Control, 2022, 67, 2108-2115.	3.6	33
69	Intracavity dynamics in high-power mode-locked fiber lasers. Physical Review A, 2010, 81, .	1.0	32
70	High-energy mode-locked fiber lasers using multiple transmission filters and a genetic algorithm. Optics Express, 2013, 21, 6526.	1.7	32
71	Mode-locked rotating detonation waves: Experiments and a model equation. Physical Review E, 2020, 101, 013106.	0.8	31
72	Deep learning models for global coordinate transformations that linearise PDEs. European Journal of Applied Mathematics, 2021, 32, 515-539.	1.4	31

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73	Identifying critical regions for spike propagation in axon segments. Journal of Computational Neuroscience, 2014, 36, 141-155.	0.6	29
74	Compound effects of aging and experimental FSGS on glomerular epithelial cells. Aging, 2017, 9, 524-546.	1.4	29
75	Inferring connectivity in networked dynamical systems: Challenges using Granger causality. Physical Review E, 2016, 94, 032220.	0.8	28
76	Dimensionality reduction and reduced-order modeling for traveling wave physics. Theoretical and Computational Fluid Dynamics, 2020, 34, 385-400.	0.9	28
77	Sex-related differences in intrinsic brain dynamism and their neurocognitive correlates. NeuroImage, 2019, 202, 116116.	2.1	27
78	DeepGreen: deep learning of Greenâ€™s functions for nonlinear boundary value problems. Scientific Reports, 2021, 11, 21614.	1.6	27
79	Multi-resolution Dynamic Mode Decomposition for Foreground/Background Separation and Object Tracking. , 2015, , .		26
80	Classification of Spatiotemporal Data via Asynchronous Sparse Sampling: Application to Flow around a Cylinder. Multiscale Modeling and Simulation, 2016, 14, 823-838.	0.6	26
81	Dynamic mode decomposition for plasma diagnostics and validation. Review of Scientific Instruments, 2018, 89, 053501.	0.6	26
82	Toward Stable, General Machineâ€Learned Models of the Atmospheric Chemical System. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032759.	1.2	25
83	Dual transmission filters for enhanced energy in mode-locked fiber lasers. Optics Express, 2011, 19, 23408.	1.7	24
84	Dynamic mode decomposition for multiscale nonlinear physics. Physical Review E, 2019, 99, 063311.	0.8	24
85	Sparsifying priors for Bayesian uncertainty quantification in model discovery. Royal Society Open Science, 2022, 9, 211823.	1.1	24
86	Light-bullet routing and control with planar waveguide arrays. Optics Express, 2010, 18, 11671.	1.7	23
87	Diagnostic tools for evaluating the impact of Focal Axonal Swellings arising in neurodegenerative diseases and/or traumatic brain injury. Journal of Neuroscience Methods, 2015, 253, 233-243.	1.3	23
88	Optimized Sampling for Multiscale Dynamics. Multiscale Modeling and Simulation, 2019, 17, 117-136.	0.6	23
89	Waveguide Array Fiber Laser. IEEE Photonics Journal, 2012, 4, 1438-1442.	1.0	22
90	Multilevel Mapping of Sexual Dimorphism in Intrinsic Functional Brain Networks. Frontiers in Neuroscience, 2019, 13, 332.	1.4	22

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91	SINDy-BVP: Sparse identification of nonlinear dynamics for boundary value problems. Physical Review Research, 2021, 3, .	1.3	22
92	Spatiotemporal Feedback and Network Structure Drive and Encode Caenorhabditis elegans Locomotion. PLoS Computational Biology, 2017, 13, e1005303.	1.5	22
93	Compromised axonal functionality after neurodegeneration, concussion and/or traumatic brain injury. Journal of Computational Neuroscience, 2014, 37, 317-332.	0.6	20
94	Traveling Wave Model for Frequency Comb Generation in Single-Section Quantum Well Diode Lasers. IEEE Journal of Quantum Electronics, 2017, 53, 1-11.	1.0	20
95	Centering Data Improves the Dynamic Mode Decomposition. SIAM Journal on Applied Dynamical Systems, 2020, 19, 1920-1955.	0.7	20
96	Multi-fidelity sensor selection: Greedy algorithms to place cheap and expensive sensors with cost constraints. IEEE Sensors Journal, 2020, , 1-1.	2.4	19
97	Sensor Selection With Cost Constraints for Dynamically Relevant Bases. IEEE Sensors Journal, 2020, 20, 11674-11687.	2.4	19
98	Data-Driven Approximations of Dynamical Systems Operators for Control. Lecture Notes in Control and Information Sciences, 2020, , 197-234.	0.6	19
99	Neural Activity Measures and Their Dynamics. SIAM Journal on Applied Mathematics, 2012, 72, 1260-1291.	0.8	18
100	Reaction time impairments in decision-making networks as a diagnostic marker for traumatic brain injuries and neurological diseases. Journal of Computational Neuroscience, 2017, 42, 323-347.	0.6	18
101	Impact of Spectral Filtering on Multipulsing Instability in Mode-Locked Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-9.	1.9	18
102	Sparsity enabled cluster reduced-order models for control. Journal of Computational Physics, 2018, 352, 388-409.	1.9	18
103	Discovering Conservation Laws from Data for Control. , 2018, , .		18
104	Data-driven inference of network connectivity for modeling the dynamics of neural codes in the insect antennal lobe. Frontiers in Computational Neuroscience, 2014, 8, 70.	1.2	17
105	Biological Mechanisms for Learning: A Computational Model of Olfactory Learning in the Manduca sexta Moth, With Applications to Neural Nets. Frontiers in Computational Neuroscience, 2018, 12, 102.	1.2	17
106	Randomized model order reduction. Advances in Computational Mathematics, 2019, 45, 1251-1271.	0.8	17
107	PoincarÃ© maps for multiscale physics discovery and nonlinear Floquet theory. Physica D: Nonlinear Phenomena, 2020, 408, 132479.	1.3	17
108	Automatic differentiation to simultaneously identify nonlinear dynamics and extract noise probability distributions from data. Machine Learning: Science and Technology, 2022, 3, 015031.	2.4	17

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109	Bagging, optimized dynamic mode decomposition for robust, stable forecasting with spatial and temporal uncertainty quantification. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, .	1.6	17
110	A dynamic, ensemble learning approach to forecast dengue fever epidemic years in Brazil using weather and population susceptibility cycles. Journal of the Royal Society Interface, 2021, 18, 20201006.	1.5	16
111	Deep reinforcement learning for optical systems: A case study of mode-locked lasers. Machine Learning: Science and Technology, 2020, 1, 045013.	2.4	15
112	Parsimony as the ultimate regularizer for physics-informed machine learning. Nonlinear Dynamics, 2022, 107, 1801-1817.	2.7	15
113	Feedback through graph motifs relates structure and function in complex networks. Physical Review E, 2018, 98, .	0.8	14
114	Nonlinear Control of Networked Dynamical Systems. IEEE Transactions on Network Science and Engineering, 2021, 8, 174-189.	4.1	14
115	Structured time-delay models for dynamical systems with connections to Frenetâ€“Serret frame. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20210097.	1.0	14
116	Compressed Singular Value Decomposition for Image and Video Processing. , 2017, , .		13
117	Putting a bug in ML: The moth olfactory network learns to read MNIST. Neural Networks, 2019, 118, 54-64.	3.3	13
118	Hierarchical deep learning of multiscale differential equation time-steppers. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, .	1.6	13
119	A Reaction-Diffusion Model of Cholinergic Retinal Waves. PLoS Computational Biology, 2014, 10, e1003953.	1.5	12
120	Theory and Simulation of Passive Multifrequency Mode-Locking With Waveguide Arrays. IEEE Journal of Quantum Electronics, 2008, 44, 976-983.	1.0	11
121	A new approach for determining optimal placement of PM_{2.5}air quality sensors: case study for the contiguous United States. Environmental Research Letters, 2022, 17, 034034.	2.2	11
122	Optimizing Waveguide Array Mode-Locking for High-Power Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 220-231.	1.9	10
123	Modeling cognitive deficits following neurodegenerative diseases and traumatic brain injuries with deep convolutional neural networks. Brain and Cognition, 2018, 123, 154-164.	0.8	10
124	Singular Value Decomposition (SVD). , 2019, , 3-46.		10
125	Computer visionâ€“based damage and stress state estimation for reinforced concrete and steel fiberâ€“reinforced concrete panels. Structural Health Monitoring, 2020, 19, 1645-1665.	4.3	10
126	Principal component trajectories for modeling spectrally continuous dynamics as forced linear systems. Physical Review E, 2022, 105, 015312.	0.8	10

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127	A Toolkit for Data-Driven Discovery of Governing Equations in High-Noise Regimes. IEEE Access, 2022, 10, 31210-31234.	2.6	10
128	PyNumDiff: A Python package for numerical differentiation of noisy time-series data. Journal of Open Source Software, 2022, 7, 4078.	2.0	10
129	Sidelobe canceling on a reconfigurable holographic metamaterial antenna. , 2014, , .		9
130	Sparse identification of slow timescale dynamics. Physical Review E, 2020, 102, 022204.	0.8	9
131	Inferring causal networks of dynamical systems through transient dynamics and perturbation. Physical Review E, 2020, 102, 042309.	0.8	9
132	Unsupervised learning of control signals and their encodings in Caenorhabditis elegans whole-brain recordings. Journal of the Royal Society Interface, 2020, 17, 20200459.	1.5	9
133	Data-driven spatiotemporal modal decomposition for time frequency analysis. Applied and Computational Harmonic Analysis, 2020, 49, 771-790.	1.1	9
134	Data-driven modeling of rotating detonation waves. Physical Review Fluids, 2021, 6, .	1.0	9
135	Dynamics of a Low-Dimensional Model for Short Pulse Mode Locking. Photonics, 2015, 2, 865-882.	0.9	8
136	Spatiotemporal mode locking in quadratic nonlinear media. Physical Review E, 2020, 102, 022205.	0.8	8
137	Multiscale physics of rotating detonation waves: Autosolitons and modulational instabilities. Physical Review E, 2021, 104, 024210.	0.8	8
138	Nonlinear Control in the Nematode C. elegans. Frontiers in Computational Neuroscience, 2020, 14, 616639.	1.2	8
139	Stochastically Forced Ensemble Dynamic Mode Decomposition for Forecasting and Analysis of Near-Periodic Systems. IEEE Access, 2022, 10, 33440-33448.	2.6	8
140	Herpes Simplex Virus-2 Genital Tract Shedding Is Not Predictable over Months or Years in Infected Persons. PLoS Computational Biology, 2014, 10, e1003922.	1.5	7
141	Functionality and Robustness of Injured Connectomic Dynamics in C. elegans: Linking Behavioral Deficits to Neural Circuit Damage. PLoS Computational Biology, 2017, 13, e1005261.	1.5	7
142	Selecting and Evaluating Representative Days for Generation Expansion Planning. , 2018, , .		7
143	Data-Driven Stabilization of Periodic Orbits. IEEE Access, 2021, 9, 43504-43521.	2.6	7
144	Machine learning and feature engineering for predicting pulse presence during chest compressions. Royal Society Open Science, 2021, 8, 210566.	1.1	7

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145	Including inputs and control within equation-free architectures for complex systems. European Physical Journal: Special Topics, 2016, 225, 2413-2434.	1.2	6
146	Data-Driven discovery of governing physical laws and their parametric dependencies in engineering, physics and biology. , 2017, , .		6
147	Machine learning and air quality modeling. , 2017, , .		6
148	Eckhaus Instability in Laser Cavities With Harmonically Swept Filters. Journal of Lightwave Technology, 2021, 39, 6531-6538.	2.7	6
149	Deep learning of conjugate mappings. Physica D: Nonlinear Phenomena, 2021, 427, 133008.	1.3	6
150	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. Journal of Systems and Integrative Neuroscience, 2016, 2, 114-121.	0.6	6
151	Integrated Evolutionary Learning: An Artificial Intelligence Approach to Joint Learning of Features and Hyperparameters for Optimized, Explainable Machine Learning. Frontiers in Artificial Intelligence, 2022, 5, 832530.	2.0	6
152	Semiconductor Diode Laser Mode-Locking by a Waveguide Array. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 34-39.	1.9	5
153	Smoothing and parameter estimation by soft-adherence to governing equations. Journal of Computational Physics, 2019, 398, 108860.	1.9	5
154	Extraction of Instantaneous Frequencies and Amplitudes in Nonstationary Time-Series Data. IEEE Access, 2021, 9, 83453-83466.	2.6	5
155	Stable numerical schemes for nonlinear dispersive equations with counter-propagation and gain dynamics. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 3263.	0.9	5
156	Fixed-point attractor for chirp in nonlinear waveguide arrays. Physical Review A, 2012, 85, .	1.0	4
157	Estimating Memory Deterioration Rates Following Neurodegeneration and Traumatic Brain Injuries in a Hopfield Network Model. Frontiers in Neuroscience, 2017, 11, 623.	1.4	4
158	Complex Algorithms for Data-Driven Model Learning in Science and Engineering. Complexity, 2019, 2019, 1-3.	0.9	4
159	Slow-gamma frequencies are optimally guarded against effects of neurodegenerative diseases and traumatic brain injuries. Journal of Computational Neuroscience, 2019, 47, 1-16.	0.6	4
160	Sex-related differences in brain dynamism at rest as neural correlates of positive and negative valence system constructs. Cognitive Neuroscience, 2020, 12, 1-24.	0.6	4
161	Symmetries Constrain Dynamics in a Family of Balanced Neural Networks. Journal of Mathematical Neuroscience, 2017, 7, 10.	2.4	3
162	Example-Based Super-Resolution Fluorescence Microscopy. Scientific Reports, 2018, 8, 5700.	1.6	3

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163	Linear Control Theory. , 2019, , 276-320.		3
164	Fourier and Wavelet Transforms. , 2019, , 47-83.		3
165	Neurosensory network functionality and data-driven control. Current Opinion in Systems Biology, 2019, 13, 31-36.	1.3	3
166	Frequency Comb Generation at 800 nm in Waveguide Array Quantum Well Diode Lasers. IEEE Journal of Quantum Electronics, 2020, 56, 1-9.	1.0	3
167	Robust trimmed <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mi>k</mml:mi></mml:math>-means. Pattern Recognition Letters, 2022, 161, 9-16.	2.6	3
168	Generating and routing light-bullets using slab waveguide arrays. Optical and Quantum Electronics, 2012, 44, 247-253.	1.5	2
169	Mode Locking in the Few-Femtosecond Regime Using Waveguide Arrays and the Coupled Short-Pulse Equations. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 113-118.	1.9	2
170	Adaptive Dimensionality-Reduction for Time-Stepping in Differential and Partial Differential Equations. Numerical Mathematics, 2017, 10, 872-894.	0.6	2
171	Engineering structural robustness in power grid networks susceptible to community desynchronization. Applied Network Science, 2019, 4, .	0.8	2
172	Data-Driven Dynamical Systems. , 2019, , 229-275.		2
173	Data-Driven Control. , 2019, , 345-372.		2
174	Reduced Order Models (ROMs). , 2019, , 375-402.		2
175	Sparsity and Compressed Sensing. , 2019, , 84-114.		2
176	Neural Networks and Deep Learning. , 2019, , 195-226.		2
177	Quantifying yeast colony morphologies with feature engineering from time-lapse photography. Scientific Data, 2022, 9, 216.	2.4	2
178	Regression and Model Selection. , 2019, , 117-153.		1
179	Built to Last: Functional and Structural Mechanisms in the Moth Olfactory Network Mitigate Effects of Neural Injury. Brain Sciences, 2021, 11, 462.	1.1	1
180	Spectral filtering for ultra-fast mode-locking in the normal dispersive regime. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2130005-2130006.	0.2	0

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181	Multi-frequency mode-locked lasers. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1130305-1130306.	0.2	0
182	Intracavity Dynamics in Mode-Locked Lasers. , 2010, , .		0
183	Control, routing and mode-locking generation of light bullets in planar waveguide arrays. , 2011, , .		0
184	Pulse compression and super-continuum generation using cascaded higher-order solitons. , 2011, , .		0
185	Pulse energy enhancement in mode locked lasers with cascaded nonlinear polarization rotation. , 2012, , .		0
186	Theoretical studies of frequency domain mode-locked fiber lasers. , 2013, , .		0
187	WKB analysis of Fourier domain mode locked fiber lasers. , 2013, , .		0
188	Balanced Models for Control. , 2019, , 321-344.		0
189	Interpolation for Parametric ROMs. , 2019, , 403-435.		0
190	Clustering and Classification. , 2019, , 154-194.		0