J Nathan Kutz

List of Publications by Year in Descending Order

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	Parsimony as the ultimate regularizer for physics-informed machine learning. *Nonlinear Dynamics*, **2022**, 107, 1801	5	1
181	Principal component trajectories for modeling spectrally continuous dynamics as forced linear systems.. *Physical Review E*, **2022**, 105, 015312	2.4	1
180	Stochastically Forced Ensemble Dynamic Mode Decomposition for Forecasting and Analysis of Near-Periodic Systems. *IEEE Access*, **2022**, 10, 33440-33448	3.5	0
179	A Toolkit for Data-Driven Discovery of Governing Equations in High-Noise Regimes. *IEEE Access*, **2022**, 10, 31210-31234	3.5	1
178	Sparsifying priors for Bayesian uncertainty quantification in model discovery.. *Royal Society Open Science*, **2022**, 9, 211823	3.3	2
177	PyNumDiff: A Python package for numerical differentiation of noisy time-series data. *Journal of Open Source Software*, **2022**, 7, 4078	5.2	2
176	Automatic differentiation to simultaneously identify nonlinear dynamics and extract noise probability distributions from data. *Machine Learning: Science and Technology*, **2022**, 3, 015031	5.1	1
175	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	3	0
174	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	2.4	2
173	Modern Koopman Theory for Dynamical Systems. *SIAM Review*, **2022**, 64, 229-340	7.4	7
172	Quantifying yeast colony morphologies with feature engineering from time-lapse photography.. *Scientific Data*, **2022**, 9, 216	8.2	
171	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,	3	3
170	DeepGreen: deep learning of Green S functions for nonlinear boundary value problems. *Scientific Reports*, **2021**, 11, 21614	4.9	4
169	Machine learning and feature engineering for predicting pulse presence during chest compressions. *Royal Society Open Science*, **2021**, 8, 210566	3.3	0
168	Structured time-delay models for dynamical systems with connections to Frenet-Serret frame.. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20210097	2.4	4
167	Sex-related differences in brain dynamism at rest as neural correlates of positive and negative valence system constructs. *Cognitive Neuroscience*, **2021**, 12, 131-154	1.7	0
166	Data-driven modeling of rotating detonation waves. *Physical Review Fluids*, **2021**, 6,	2.8	4

165	Data-driven discovery of Koopman eigenfunctions for control. *Machine Learning: Science and Technology*, **2021**, 2, 035023	5.1	15
164	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	4.1	0
163	SINDy-BVP: Sparse identification of nonlinear dynamics for boundary value problems. *Physical Review Research*, **2021**, 3,	3.9	4
162	Deep learning models for global coordinate transformations that linearise PDEs. *European Journal of Applied Mathematics*, **2021**, 32, 515-539	1	11
161	Nonlinear control of networked dynamical systems. *IEEE Transactions on Network Science and Engineering*, **2021**, 8, 174-189	4.9	8
160	Eckhaus Instability in Laser Cavities with Harmonically Swept Filters. *Journal of Lightwave Technology*, **2021**, 1-1	4	1
159	Extraction of Instantaneous Frequencies and Amplitudes in Nonstationary Time-Series Data. *IEEE Access*, **2021**, 9, 83453-83466	3.5	1
158	Optimal Sensor and Actuator Selection using Balanced Model Reduction. *IEEE Transactions on Automatic Control*, **2021**, 1-1	5.9	6
157	Learning dominant physical processes with data-driven balance models. *Nature Communications*, **2021**, 12, 1016	17.4	14
156	Multiscale physics of rotating detonation waves: Autosolitons and modulational instabilities. *Physical Review E*, **2021**, 104, 024210	2.4	1
155	Deep learning of conjugate mappings. *Physica D: Nonlinear Phenomena*, **2021**, 427, 133008	3.3	1
154	Data-Driven Stabilization of Periodic Orbits. *IEEE Access*, **2021**, 9, 43504-43521	3.5	2
153	Unsupervised learning of control signals and their encodings in whole-brain recordings. *Journal of the Royal Society Interface*, **2020**, 17, 20200459	4.1	6
152	Dimensionality reduction and reduced-order modeling for traveling wave physics. *Theoretical and Computational Fluid Dynamics*, **2020**, 34, 385-400	2.3	15
151	Time-Delay Observables for Koopman: Theory and Applications. *SIAM Journal on Applied Dynamical Systems*, **2020**, 19, 886-917	2.8	23
150	Sensor Selection With Cost Constraints for Dynamically Relevant Bases. *IEEE Sensors Journal*, **2020**, 20, 11674-11687	4	6
149	Shallow neural networks for fluid flow reconstruction with limited sensors. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200097	2.4	29
148	Discovery of Physics From Data: Universal Laws and Discrepancies. *Frontiers in Artificial Intelligence*, **2020**, 3, 25	3	15

147	Deep model predictive flow control with limited sensor data and online learning. *Theoretical and Computational Fluid Dynamics*, **2020**, 34, 577-591	2.3	15
146	Data-driven spatiotemporal modal decomposition for time frequency analysis. *Applied and Computational Harmonic Analysis*, **2020**, 49, 771-790	3.1	5
145	Mode-locked rotating detonation waves: Experiments and a model equation. *Physical Review E*, **2020**, 101, 013106	2.4	19
144	Frequency Comb Generation at 800 nm in Waveguide Array Quantum Well Diode Lasers. *IEEE Journal of Quantum Electronics*, **2020**, 56, 1-9	2	2
143	Poincaré maps for multiscale physics discovery and nonlinear Floquet theory. *Physica D: Nonlinear Phenomena*, **2020**, 408, 132479	3.3	9
142	Data-Driven Approximations of Dynamical Systems Operators for Control. *Lecture Notes in Control and Information Sciences*, **2020**, 197-234	0.5	7
141	Modeling thermodynamic trends of rotating detonation engines. *Physics of Fluids*, **2020**, 32, 126102	4.4	19
140	Deep reinforcement learning for optical systems: A case study of mode-locked lasers. *Machine Learning: Science and Technology*, **2020**, 1, 045013	5.1	5
139	Computer vision-based damage and stress state estimation for reinforced concrete and steel fiber-reinforced concrete panels. *Structural Health Monitoring*, **2020**, 19, 1645-1665	4.4	5
138	Toward Stable, General Machine-Learned Models of the Atmospheric Chemical System. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD032759	4.4	9
137	Multi-Fidelity Sensor Selection: Greedy Algorithms to Place Cheap and Expensive Sensors With Cost Constraints. *IEEE Sensors Journal*, **2020**, 1-1	4	9
136	Sparse identification of slow timescale dynamics. *Physical Review E*, **2020**, 102, 022204	2.4	4
135	Spatiotemporal mode locking in quadratic nonlinear media. *Physical Review E*, **2020**, 102, 022205	2.4	6
134	Inferring causal networks of dynamical systems through transient dynamics and perturbation. *Physical Review E*, **2020**, 102, 042309	2.4	5
133	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	2.4	22
132	A Unified Sparse Optimization Framework to Learn Parsimonious Physics-Informed Models From Data. *IEEE Access*, **2020**, 8, 169259-169271	3.5	18
131	Centering Data Improves the Dynamic Mode Decomposition. *SIAM Journal on Applied Dynamical Systems*, **2020**, 19, 1920-1955	2.8	4
130	Numerical differentiation of noisy data: A unifying multi-objective optimization framework. *IEEE Access*, **2020**, 8, 196865-196877	3.5	15

129	Dynamic Mode Decomposition for Compressive System Identification. *AIAA Journal*, **2020**, 58, 561-574	2.1	22
128	Nonlinear Control in the Nematode. *Frontiers in Computational Neuroscience*, **2020**, 14, 616639	3.5	4
127	Discovering time-varying aerodynamics of a prototype bridge by sparse identification of nonlinear dynamical systems. *Physical Review E*, **2019**, 100, 022220	2.4	15
126	Sex-related differences in intrinsic brain dynamism and their neurocognitive correlates. *NeuroImage* , **2019**, 202, 116116	7.9	18
125	Dynamic mode decomposition for multiscale nonlinear physics. *Physical Review E*, **2019**, 99, 063311	2.4	11
124	Slow-gamma frequencies are optimally guarded against effects of neurodegenerative diseases and traumatic brain injuries. *Journal of Computational Neuroscience*, **2019**, 47, 1-16	1.4	1
123	Putting a bug in ML: The moth olfactory network learns to read MNIST. *Neural Networks*, **2019**, 118, 54-64	9.1	8
122	Randomized model order reduction. *Advances in Computational Mathematics*, **2019**, 45, 1251-1271	1.6	11
121	Methods for data-driven multiscale model discovery for materials. *JPhys Materials*, **2019**, 2, 044002	4.2	17
120	Multilevel Mapping of Sexual Dimorphism in Intrinsic Functional Brain Networks. *Frontiers in Neuroscience*, **2019**, 13, 332	5.1	13
119	Data-Driven Identification of Parametric Partial Differential Equations. *SIAM Journal on Applied Dynamical Systems*, **2019**, 18, 643-660	2.8	73
118	Dual lineage tracing shows that glomerular parietal epithelial cells can transdifferentiate toward the ´adult podocyte fate. *Kidney International*, **2019**, 96, 597-611	9.9	27
117	Discovery of Nonlinear Multiscale Systems: Sampling Strategies and Embeddings. *SIAM Journal on Applied Dynamical Systems*, **2019**, 18, 312-333	2.8	54
116	Data-Driven Dynamical Systems **2019**, 229-275		1
115	Linear Control Theory **2019**, 276-320		1
114	Balanced Models for Control **2019**, 321-344		
113	Data-Driven Control **2019**, 345-372		0
112	Reduced Order Models (ROMs) **2019**, 375-402		0

111	Interpolation for Parametric ROMs **2019**, 403-435		
110	Optimized Sampling for Multiscale Dynamics. *Multiscale Modeling and Simulation*, **2019**, 17, 117-136	1.8	9
109	Forecasting dengue fever in Brazil: An assessment of climate conditions. *PLoS ONE*, **2019**, 14, e0220106	3.7	17
108	. *IEEE Access*, **2019**, 7, 1404-1423	3.5	42
107	Engineering structural robustness in power grid networks susceptible to community desynchronization. *Applied Network Science*, **2019**, 4,	2.9	2
106	Complex Algorithms for Data-Driven Model Learning in Science and Engineering. *Complexity*, **2019**, 2019, 1-3	1.6	2
105	Smoothing and parameter estimation by soft-adherence to governing equations. *Journal of Computational Physics*, **2019**, 398, 108860	4.1	3
104	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	11.5	135
103	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	1.7	3
102	Data-Driven Science and Engineering: Machine Learning, Dynamical Systems, and Control **2019**,		247
101	Singular Value Decomposition (SVD) **2019**, 3-46		2
100	Fourier and Wavelet Transforms **2019**, 47-83		0
99	Sparsity and Compressed Sensing **2019**, 84-114		1
98	Regression and Model Selection **2019**, 117-153		0
97	Clustering and Classification **2019**, 154-194		
96	Neural Networks and Deep Learning **2019**, 195-226		
95	Randomized Dynamic Mode Decomposition. *SIAM Journal on Applied Dynamical Systems*, **2019**, 18, 1867-1891	1.8	34
94	Neurosensory network functionality and data-driven control. *Current Opinion in Systems Biology*, **2019**, 13, 31-36	3.2	3

93	Greedy Sensor Placement With Cost Constraints. *IEEE Sensors Journal*, **2019**, 19, 2642-2656	4	22
92	Compressed dynamic mode decomposition for background modeling. *Journal of Real-Time Image Processing*, **2019**, 16, 1479-1492	1.9	49
91	Predicting shim gaps in aircraft assembly with machine learning and sparse sensing. *Journal of Manufacturing Systems*, **2018**, 48, 87-95	9.1	29
90	Variable Projection Methods for an Optimized Dynamic Mode Decomposition. *SIAM Journal on Applied Dynamical Systems*, **2018**, 17, 380-416	2.8	82
89	Impact of Spectral Filtering on Multipulsing Instability in Mode-Locked Fiber Lasers. *IEEE Journal of Selected Topics in Quantum Electronics*, **2018**, 24, 1-9	3.8	11
88	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, 04018024	5	22
87	Generalizing Koopman Theory to Allow for Inputs and Control. *SIAM Journal on Applied Dynamical Systems*, **2018**, 17, 909-930	2.8	64
86	Modeling cognitive deficits following neurodegenerative diseases and traumatic brain injuries with deep convolutional neural networks. *Brain and Cognition*, **2018**, 123, 154-164	2.7	4
85	Sparsity enabled cluster reduced-order models for control. *Journal of Computational Physics*, **2018**, 352, 388-409	4.1	16
84	Example-Based Super-Resolution Fluorescence Microscopy. *Scientific Reports*, **2018**, 8, 5700	4.9	1
83	Dynamic mode decomposition for plasma diagnostics and validation. *Review of Scientific Instruments*, **2018**, 89, 053501	1.7	12
82	Data-Driven Sparse Sensor Placement for Reconstruction: Demonstrating the Benefits of Exploiting Known Patterns. *IEEE Control Systems*, **2018**, 38, 63-86	2.9	123
81	Discovering Conservation Laws from Data for Control **2018**,		14
80	Deep learning for universal linear embeddings of nonlinear dynamics. *Nature Communications*, **2018**, 9, 4950	17.4	258
79	Applied Koopman Theory for Partial Differential Equations and Data-Driven Modeling of Spatio-Temporal Systems. *Complexity*, **2018**, 2018, 1-16	1.6	21
78	Biological Mechanisms for Learning: A Computational Model of Olfactory Learning in the Moth, With Applications to Neural Nets. *Frontiers in Computational Neuroscience*, **2018**, 12, 102	3.5	7
77	Feedback through graph motifs relates structure and function in complex networks. *Physical Review E*, **2018**, 98,	2.4	5
76	Selecting and Evaluating Representative Days for Generation Expansion Planning **2018**,		6

75	Sparse identification of nonlinear dynamics for rapid model recovery. *Chaos*, **2018**, 28, 063116	3.3	50
74	Deep learning in fluid dynamics. *Journal of Fluid Mechanics*, **2017**, 814, 1-4	3.7	294
73	Environment identification in flight using sparse approximation of wing strain. *Journal of Fluids and Structures*, **2017**, 70, 162-180	3.1	28
72	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	1.4	10
71	Data-driven discovery of partial differential equations. *Science Advances*, **2017**, 3, e1602614	14.3	439
70	Traveling Wave Model for Frequency Comb Generation in Single-Section Quantum Well Diode Lasers. *IEEE Journal of Quantum Electronics*, **2017**, 53, 1-11	2	16
69	Functionality and Robustness of Injured Connectomic Dynamics in C. elegans: Linking Behavioral Deficits to Neural Circuit Damage. *PLoS Computational Biology*, **2017**, 13, e1005261	5	5
68	Symmetries Constrain Dynamics in a Family of Balanced Neural Networks. *Journal of Mathematical Neuroscience*, **2017**, 7, 10	2.4	3
67	Nonlinear Model Order Reduction via Dynamic Mode Decomposition. *SIAM Journal of Scientific Computing*, **2017**, 39, B778-B796	2.6	37
66	Adaptive Dimensionality-Reduction for Time-Stepping in Differential and Partial Differential Equations. *Numerical Mathematics*, **2017**, 10, 872-894	1.5	2
65	Chaos as an intermittently forced linear system. *Nature Communications*, **2017**, 8, 19	17.4	170
64	Compressed Singular Value Decomposition for Image and Video Processing **2017**,		7
63	Data-Driven discovery of governing physical laws and their parametric dependencies in engineering, physics and biology **2017**,		3
62	Machine learning and air quality modeling **2017**,		4
61	Estimating Memory Deterioration Rates Following Neurodegeneration and Traumatic Brain Injuries in a Hopfield Network Model. *Frontiers in Neuroscience*, **2017**, 11, 623	5.1	1
60	Spatiotemporal Feedback and Network Structure Drive and Encode Caenorhabditis elegans Locomotion. *PLoS Computational Biology*, **2017**, 13, e1005303	5	20
59	Compound effects of aging and experimental FSGS on glomerular epithelial cells. *Aging*, **2017**, 9, 524-546	5.6	18
58	Semiconductor Diode Laser Mode-Locking by a Waveguide Array. *IEEE Journal of Selected Topics in Quantum Electronics*, **2016**, 22, 34-39	3.8	4

57	Classification of Spatiotemporal Data via Asynchronous Sparse Sampling: Application to Flow around a Cylinder. *Multiscale Modeling and Simulation*, **2016**, 14, 823-838	1.8	19
56	Extracting spatial-temporal coherent patterns in large-scale neural recordings using dynamic mode decomposition. *Journal of Neuroscience Methods*, **2016**, 258, 1-15	3	193
55	Dynamic Mode Decomposition **2016**,		342
54	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	2.9	3
53	Koopman Invariant Subspaces and Finite Linear Representations of Nonlinear Dynamical Systems for Control. *PLoS ONE*, **2016**, 11, e0150171	3.7	160
52	Including inputs and control within equation-free architectures for complex systems. *European Physical Journal: Special Topics*, **2016**, 225, 2413-2434	2.3	4
51	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	0.7	43
50	. *IEEE Transactions on Molecular, Biological, and Multi-Scale Communications*, **2016**, 2, 52-63	2.3	144
49	Dynamic Mode Decomposition with Control. *SIAM Journal on Applied Dynamical Systems*, **2016**, 15, 142-161	2.8	284
48	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, 3932-7	11.5	1026
47	Multiresolution Dynamic Mode Decomposition. *SIAM Journal on Applied Dynamical Systems*, **2016**, 15, 713-735	2.8	146
46	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	12.7	42
45	Dynamic mode decomposition for financial trading strategies. *Quantitative Finance*, **2016**, 16, 1643-1655	1.6	55
44	Inferring connectivity in networked dynamical systems: Challenges using Granger causality. *Physical Review E*, **2016**, 94, 032220	2.4	17
43	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, 233-43	3	13
42	Multi-resolution Dynamic Mode Decomposition for Foreground/Background Separation and Object Tracking **2015**,		13
41	Nonlinear model reduction for dynamical systems using sparse sensor locations from learned libraries. *Physical Review E*, **2015**, 92, 033304	2.4	39
40	Dynamics of a Low-Dimensional Model for Short Pulse Mode Locking. *Photonics*, **2015**, 2, 865-882	2.2	7

39	Sidelobe Canceling for Reconfigurable Holographic Metamaterial Antenna. *IEEE Transactions on Antennas and Propagation*, **2015**, 63, 1881-1886	4.9	81
38	Compressed sensing and dynamic mode decomposition. *Journal of Computational Dynamics*, **2015**, 2, 165-191	2.6	81
37	Sidelobe canceling on a reconfigurable holographic metamaterial antenna **2014**,		6
36	Self-Tuning Fiber Lasers. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 464-471	3.8	42
35	Spectral analysis of fluid flows using sub-Nyquist-rate PIV data. *Experiments in Fluids*, **2014**, 55, 1	2.5	68
34	Sensory biology. Flower discrimination by pollinators in a dynamic chemical environment. *Science*, **2014**, 344, 1515-8	33.3	129
33	Compromised axonal functionality after neurodegeneration, concussion and/or traumatic brain injury. *Journal of Computational Neuroscience*, **2014**, 37, 317-32	1.4	13
32	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	2.8	71
31	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	3.5	13
30	A reaction-diffusion model of cholinergic retinal waves. *PLoS Computational Biology*, **2014**, 10, e1003953	5	7
29	Herpes simplex virus-2 genital tract shedding is not predictable over months or years in infected persons. *PLoS Computational Biology*, **2014**, 10, e1003922	5	7
28	Low-dimensional functionality of complex network dynamics: neurosensory integration in the Caenorhabditis Elegans connectome. *Physical Review E*, **2014**, 89, 052805	2.4	31
27	Identifying critical regions for spike propagation in axon segments. *Journal of Computational Neuroscience*, **2014**, 36, 141-55	1.4	22
26	On dynamic mode decomposition: Theory and applications. *Journal of Computational Dynamics*, **2014**, 1, 391-421	2.6	587
25	Extremum-Seeking Control of a Mode-Locked Laser. *IEEE Journal of Quantum Electronics*, **2013**, 49, 852-861	3.6	41
24	High-energy mode-locked fiber lasers using multiple transmission filters and a genetic algorithm. *Optics Express*, **2013**, 21, 6526-37	3.3	23
23	Compressive sensing based machine learning strategy for characterizing the flow around a cylinder with limited pressure measurements. *Physics of Fluids*, **2013**, 25, 127102	4.4	92
22	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	3.8	2

#	Title	IF	Cites
21	Fixed-point attractor for chirp in nonlinear waveguide arrays. *Physical Review A*, **2012**, 85,	2.6	3
20	Neural Activity Measures and Their Dynamics. *SIAM Journal on Applied Mathematics*, **2012**, 72, 1260-1291	1.8	9
19	Waveguide Array Fiber Laser. *IEEE Photonics Journal*, **2012**, 4, 1438-1442	1.8	17
18	The Proper Orthogonal Decomposition for Dimensionality Reduction in Mode-Locked Lasers and Optical Systems. *International Journal of Optics*, **2012**, 2012, 1-18	0.9	23
17	Generating and routing light-bullets using slab waveguide arrays. *Optical and Quantum Electronics*, **2012**, 44, 247-253	2.4	2
16	Dual transmission filters for enhanced energy in mode-locked fiber lasers. *Optics Express*, **2011**, 19, 23408-19	3.3	15
15	Generalized Master Equation for High-Energy Passive Mode-Locking: The Sinusoidal GinzburgLandau Equation. *IEEE Journal of Quantum Electronics*, **2011**, 47, 705-714	2	28
14	Light-bullet routing and control with planar waveguide arrays. *Optics Express*, **2010**, 18, 11671-82	3.3	19
13	Intracavity dynamics in high-power mode-locked fiber lasers. *Physical Review A*, **2010**, 81,	2.6	25
12	Optimizing Waveguide Array Mode-Locking for High-Power Fiber Lasers. *IEEE Journal of Selected Topics in Quantum Electronics*, **2009**, 15, 220-231	3.8	8
11	Transition dynamics for multi-pulsing in mode-locked lasers. *Optics Express*, **2009**, 17, 23137-46	3.3	59
10	Theory of passive harmonic mode-locking using waveguide arrays. *Optics Express*, **2008**, 16, 636-50	3.3	60
9	Theory and Simulation of Passive Multifrequency Mode-Locking With Waveguide Arrays. *IEEE Journal of Quantum Electronics*, **2008**, 44, 976-983	2	10
8	Spectral filtering for ultra-fast mode-locking in the normal dispersive regime. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 2130005-2130006	0.2	
7	Multi-frequency mode-locked lasers. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 1130305-1130306	0.2	
6	Mode-Locked Soliton Lasers. *SIAM Review*, **2006**, 48, 629-678	7.4	135
5	Enhanced Supercontinuum Generation through Dispersion-Management. *Optics Express*, **2005**, 13, 3989-98	3.3	56
4	Passive mode-locking by use of waveguide arrays. *Optics Letters*, **2005**, 30, 2013-5	3	58

3	Bose-Einstein condensates in standing waves: the cubic nonlinear Schrödinger equation with a periodic potential. *Physical Review Letters*, **2001**, 86, 1402-5	7.4	255
2	Deeptime: a Python library for machine learning dynamical models from time series data. *Machine Learning: Science and Technology*,	5.1	3
1	Data-Driven Aerospace Engineering: Reframing the Industry with Machine Learning. *AIAA Journal*,1-26	2.1	6