Ioannis G Kevrekidis

List of Publications by Year
in descending order

196 papers	10,703 citations	50170 46 h-index	34900 98 g-index
199 all docs	199 docs citations	199 times ranked	5885 citing authors

#	Article	IF	Citations
1	Physics-informed machine learning. Nature Reviews Physics, 2021, 3, 422-440.	11.9	1,789
2	A Dataâ€“Driven Approximation of the Koopman Operator: Extending Dynamic Mode Decomposition. Journal of Nonlinear Science, 2015, 25, 1307-1346.	1.0	1,044
3	Equation-Free, Coarse-Grained Multiscale Computation: Enabling Mocroscopic Simulators to Perform System-Level Analysis. Communications in Mathematical Sciences, 2003, 1, 715-762.	0.5	570
4	Diffusion maps, spectral clustering and reaction coordinates of dynamical systems. Applied and Computational Harmonic Analysis, 2006, 21, 113-127.	1.1	440
5	Equation-free: The computer-aided analysis of complex multiscale systems. AICHE Journal, 2004, 50, 1346-1355.	1.8	305
6	Inherent noise can facilitate coherence in collective swarm motion. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5464-5469.	3.3	240
7	High-entropy nanoparticles: Synthesis-structure-property relationships and data-driven discovery. Science, 2022, 376, eabn3103.	6.0	239
8	Extended dynamic mode decomposition with dictionary learning: A data-driven adaptive spectral decomposition of the Koopman operator. Chaos, 2017, 27, 103111.	1.0	225
9	Equation-Free Multiscale Computation: Algorithms and Applications. Annual Review of Physical Chemistry, 2009, 60, 321-344.	4.8	214
10	Coarse molecular dynamics of a peptide fragment: Free energy, kinetics, and long-time dynamics computations. Journal of Chemical Physics, 2003, 118, 10762-10773.	1.2	212
11	Projective Methods for Stiff Differential Equations: Problems with Gaps in Their Eigenvalue Spectrum. SIAM Journal of Scientific Computing, 2003, 24, 1091-1106.	1.3	192
12	â€˜Coarseâ€™ integration/bifurcation analysis via microscopic simulators: micro-Galerkin methods. Computers and Chemical Engineering, 2002, 26, 941-963.	2.0	165
13	Nonlinear model reduction for control of distributed systems: A computer-assisted study. AICHE Journal, 1998, 44, 1579-1595.	1.8	155
14	Spatiotemporal Addressing of Surface Activity. Science, 2001, 294, 134-137.	6.0	147
15	Alternative approaches to the Karhunen-LoÃ¨ve decomposition for model reduction and data analysis. Computers and Chemical Engineering, 1996, 20, 495-506.	2.0	145
16	Systematic determination of order parameters for chain dynamics using diffusion maps. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13597-13602.	3.3	142
17	OPTICAL IMAGING AND CONTROL OF GENETICALLY DESIGNATED NEURONS IN FUNCTIONING CIRCUITS. Annual Review of Neuroscience, 2005, 28, 533-563.	5.0	132
18	Coarse Master Equation from Bayesian Analysis of Replica Molecular Dynamics Simulationsâ€. Journal of Physical Chemistry B, 2005, 109, 6479-6484.	1.2	119

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19	â€œCoarseâ€•stability and bifurcation analysis using stochastic simulators: Kinetic Monte Carlo examples. Journal of Chemical Physics, 2002, 116, 10083-10091.	1.2	113
20	Detecting intrinsic slow variables in stochastic dynamical systems by anisotropic diffusion maps. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16090-16095.	3.3	113
21	Intrinsic map dynamics exploration for uncharted effective free-energy landscapes. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5494-E5503.	3.3	99
22	The gap-tooth method in particle simulations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 316, 190-195.	0.9	94
23	Equation-free/Galerkin-free POD-assisted computation of incompressible flows. Journal of Computational Physics, 2005, 207, 568-587.	1.9	93
24	Coarse bifurcation analysis of kinetic Monte Carlo simulations: A lattice-gas model with lateral interactions. Journal of Chemical Physics, 2002, 117, 8229-8240.	1.2	92
25	Reduction and reconstruction for self-similar dynamical systems. Nonlinearity, 2003, 16, 1257-1275.	0.6	86
26	Coarse-grained kinetic computations for rare events: Application to micelle formation. Journal of Chemical Physics, 2005, 122, 044908.	1.2	84
27	From Discrete to Continuum Models of Three-Dimensional Deformations in Epithelial Sheets. Biophysical Journal, 2015, 109, 154-163.	0.2	84
28	Optimal sensor placement for state reconstruction of distributed process systems. AICHE Journal, 2004, 50, 1438-1452.	1.8	82
29	Coarse-grained analysis of stochasticity-induced switching between collective motion states. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5931-5935.	3.3	73
30	On learning Hamiltonian systems from data. Chaos, 2019, 29, 121107.	1.0	73
31	Ink-Jet Printing of Catalyst Patterns for Electroless Metal Deposition. Langmuir, 1999, 15, 1584-1587.	1.6	71
32	Gene regulatory networks: A coarse-grained, equation-free approach to multiscale computation. Journal of Chemical Physics, 2006, 124, 084106.	1.2	67
33	Effective bifurcation analysis: a time-stepper-based approach. Nonlinearity, 2002, 15, 491-511.	0.6	66
34	Coarse projective kMC integration: forward/reverse initial and boundary value problems. Journal of Computational Physics, 2004, 196, 474-489.	1.9	62
35	Dynamics of Inductive ERK Signaling in the Drosophila Embryo. Current Biology, 2015, 25, 1784-1790.	1.8	62
36	Programmable heating and quenching for efficient thermochemical synthesis. Nature, 2022, 605, 470-476.	13.7	61

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37	The Gap-Tooth Scheme for Homogenization Problems. Multiscale Modeling and Simulation, 2005, 4, 278-306.	0.6	59
38	Unsteady Two-Dimensional Flows in Complex Geometries: Comparative Bifurcation Studies with Global Eigenfunction Expansions. SIAM Journal of Scientific Computing, 1997, 18, 775-805.	1.3	58
39	Telescopic projective methods for parabolic differential equations. Journal of Computational Physics, 2003, 187, 95-109.	1.9	57
40	Time-steppers andâ€˜coarseâ€™ control of distributed microscopic processes. International Journal of Robust and Nonlinear Control, 2004, 14, 89-111.	2.1	57
41	Shape Transformations of Epithelial Shells. Biophysical Journal, 2016, 110, 1670-1678.	0.2	55
42	Constraint-Defined Manifolds: a Legacy Code Approach to Low-Dimensional Computation. Journal of Scientific Computing, 2005, 25, 17-28.	1.1	54
43	Systematic characterization of protein folding pathways using diffusion maps: Application to Trp-cage miniprotein. Journal of Chemical Physics, 2015, 142, 085101.	1.2	53
44	Variable-free exploration of stochastic models: A gene regulatory network example. Journal of Chemical Physics, 2007, 126, 155103.	1.2	50
45	Coarse Nonlinear Dynamics and Metastability of Filling-Emptying Transitions: Water in Carbon Nanotubes. Physical Review Letters, 2005, 95, 130603.	2.9	49
46	Title is missing!. Numerical Algorithms, 1997, 14, 125-140.	1.1	48
47	Patch dynamics with buffers for homogenization problems. Journal of Computational Physics, 2006, 213, 264-287.	1.9	47
48	Delaying transition in Taylorâ€“Couette flow with axial motion of the inner cylinder. Journal of Fluid Mechanics, 1997, 348, 141-151.	1.4	45
49	Parsimonious representation of nonlinear dynamical systems through manifold learning: A chemotaxis case study. Applied and Computational Harmonic Analysis, 2018, 44, 759-773.	1.1	45
50	Distributed nonlinear control of diffusionâ€“reaction processes. International Journal of Robust and Nonlinear Control, 2004, 14, 133-156.	2.1	44
51	RESONANCE PHENOMENA IN AN ADAPTIVELY-CONTROLLED SYSTEM. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1991, 01, 83-106.	0.7	42
52	Coarse-scale PDEs from fine-scale observations via machine learning. Chaos, 2020, 30, 013141.	1.0	42
53	Reconstruction of normal forms by learning informed observation geometries from data. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7865-E7874.	3.3	40
54	Deciding the Nature of the Coarse Equation through Microscopic Simulations: The Baby-Bathwater Scheme. SIAM Review, 2007, 49, 469-487.	4.2	39

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55	Analysis of a Stochastic Chemical System Close to a SNIPER Bifurcation of Its Mean-Field Model. SIAM Journal on Applied Mathematics, 2009, 70, 984-1016.	0.8	39
56	Kinetic Analysis of Nanostructures Formed by Enzyme-Instructed Intracellular Assemblies against Cancer Cells. ACS Nano, 2018, 12, 3804-3815.	7.3	38
57	The Impact of the Operation Mode on Pattern Formation in Electrode Reactions: From Potentiostatic to Galvanostatic Control. Journal of the Electrochemical Society, 1998, 145, 2404-2411.	1.3	37
58	Reduced Models in Chemical Kinetics via Nonlinear Data-Mining. Processes, 2014, 2, 112-140.	1.3	37
59	Data-Driven Reduction for a Class of Multiscale Fast-Slow Stochastic Dynamical Systems. SIAM Journal on Applied Dynamical Systems, 2016, 15, 1327-1351.	0.7	37
60	An equation-free computational approach for extracting population-level behavior from individual-based models of biological dispersal. Physica D: Nonlinear Phenomena, 2006, 215, 1-24.	1.3	35
61	Slow observables of singularly perturbed differential equations. Nonlinearity, 2007, 20, 2463-2481.	0.6	34
62	Design and Characterization of Rapid Optogenetic Circuits for Dynamic Control in Yeast Metabolic Engineering. ACS Synthetic Biology, 2020, 9, 3254-3266.	1.9	34
63	Dynamics on Microcomposite Catalytic Surfaces: The Effect of Active Boundaries. Physical Review Letters, 1999, 83, 2857-2860.	2.9	32
64	Computing in the past with forward integration. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 321, 335-343.	0.9	32
65	Equation-free modelling of evolving diseases: coarse-grained computations with individual-based models. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 2761-2779.	1.0	31
66	Coarse-graining the dynamics of a driven interface in the presence of mobile impurities: Effective description via diffusion maps. Physical Review E, 2009, 80, 031102.	0.8	31
67	Dynamic density functional theory of solid tumor growth: Preliminary models. AIP Advances, 2012, 2, 011210.	0.6	31
68	Mechanisms of wetting transitions on patterned surfaces: continuum and mesoscopic analysis. Soft Matter, 2012, 8, 7928.	1.2	30
69	Coarse-grained computations for a micellar system. Journal of Chemical Physics, 2005, 122, 044907.	1.2	29
70	Coarse analysis of collective motion with different communication mechanisms. Mathematical Biosciences, 2008, 214, 49-57.	0.9	29
71	CO oxidation on thin Pt crystals: Temperature slaving and the derivation of lumped models. Journal of Chemical Physics, 2003, 118, 3312-3328.	1.2	27
72	COARSE BIFURCATION DIAGRAMS VIA MICROSCOPIC SIMULATORS: A STATE-FEEDBACK CONTROL-BASED APPROACH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2004, 14, 207-220.	0.7	27

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73	Evidence for p55â€“p75 heterodimers in the absence of IL-2 from Scatchard plot analysis. International Immunology, 1992, 4, 23-32.	1.8	26
74	Deciding the Nature of the Coarse Equation through Microscopic Simulations: The Baby-Bathwater Scheme. Multiscale Modeling and Simulation, 2003, 1, 391-407.	0.6	26
75	Diffusion Maps - a Probabilistic Interpretation for Spectral Embedding and Clustering Algorithms. Lecture Notes in Computational Science and Engineering, 2008, , 238-260.	0.1	26
76	Coarse-Graining of Chain Models in Dissipative Particle Dynamics Simulations. Industrial & Engineering Chemistry Research, 2011, 50, 69-77.	1.8	26
77	A constrained approach to multiscale stochastic simulation of chemically reacting systems. Journal of Chemical Physics, 2011, 135, 094102.	1.2	26
78	Nonlinear intrinsic variables and state reconstruction in multiscale simulations. Journal of Chemical Physics, 2013, 139, 184109.	1.2	26
79	Manifold learning for parameter reduction. Journal of Computational Physics, 2019, 392, 419-431.	1.9	26
80	Apparent Hysteresis in a Driven System with Self-Organized Drag. Physical Review Letters, 2004, 92, 160603.	2.9	25
81	Designing networks with resiliency to edge failures using two-stage robust optimization. European Journal of Operational Research, 2019, 279, 704-720.	3.5	25
82	Equation-free gaptooth-based controller design for distributed complex/multiscale processes. Computers and Chemical Engineering, 2005, 29, 731-740.	2.0	24
83	Noninvertibility in neural networks. Computers and Chemical Engineering, 2000, 24, 2417-2433.	2.0	23
84	Diffusion maps, clustering and fuzzy Markov modeling in peptide folding transitions. Journal of Chemical Physics, 2014, 141, 114102.	1.2	23
85	Linking Gaussian process regression with data-driven manifold embeddings for nonlinear data fusion. Interface Focus, 2019, 9, 20180083.	1.5	23
86	Accelerating nonlinear model predictive control through machine learning. Journal of Process Control, 2020, 92, 261-270.	1.7	23
87	Water balance and multiplicity in a polymer electrolyte membrane fuel cell. AICHE Journal, 2004, 50, 2320-2324.	1.8	22
88	Reduced models for binocular rivalry. Journal of Computational Neuroscience, 2010, 28, 459-476.	0.6	22
89	Accelerating agent-based computation of complex urban systems. International Journal of Geographical Information Science, 2012, 26, 1917-1937.	2.2	21
90	Some twists and turns in the path of improving surface activity. Chemical Physics Letters, 2002, 358, 407-412.	1.2	20

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91	Equation-free, coarse-grained computational optimization using timesteppers. Chemical Engineering Science, 2006, 61, 779-793.	1.9	20
92	Linking Machine Learning with Multiscale Numerics: Data-Driven Discovery of Homogenized Equations. Jom, 2020, 72, 4444-4457.	0.9	20
93	Controlling Dispersive Chaos in Binary-Fluid Convection. Physical Review Letters, 1999, 83, 730-733.	2.9	18
94	An equation-free approach to analyzing heterogeneous cell population dynamics. Journal of Mathematical Biology, 2007, 55, 331-352.	0.8	18
95	Noisy dynamic simulations in the presence of symmetry: Data alignment and model reduction. Computers and Mathematics With Applications, 2013, 65, 1535-1557.	1.4	18
96	Experimental study of a Neimarkâ€“Sacker bifurcation in axially forced Taylorâ€“Couette flow. Journal of Fluid Mechanics, 2006, 558, 1.	1.4	17
97	Sticky Patches on Lipid Nanoparticles Enable the Selective Targeting and Killing of Untargetable Cancer Cells. Langmuir, 2016, 32, 8329-8338.	1.6	17
98	Quantifying deformation in gel swelling: Experiments and simulations. AICHE Journal, 2000, 46, 2128-2139.	1.8	16
99	Equation-free optimal switching policies for bistable reacting systems. International Journal of Robust and Nonlinear Control, 2005, 15, 713-726.	2.1	16
100	Emergent Spaces for Coupled Oscillators. Frontiers in Computational Neuroscience, 2020, 14, 36.	1.2	16
101	Core Collapse via Coarse Dynamic Renormalization. Physical Review Letters, 2005, 95, 081102.	2.9	15
102	STR-PEM fuel cell as a reactor building block. AICHE Journal, 2006, 52, 3902-3910.	1.8	15
103	Variance Reduction for the Equationâ€Free Simulation of Multiscale Stochastic Systems. Multiscale Modeling and Simulation, 2007, 6, 70-89.	0.6	15
104	Temporal ordering and registration of images in studies of developmental dynamics. Development (Cambridge), 2015, 142, 1717-24.	1.2	15
105	Partial Observations and Conservation Laws: Gray-Box Modeling in Biotechnology and Optogenetics. Industrial & Engineering Chemistry Research, 2020, 59, 2611-2620.	1.8	15
106	Removal of Alkanethiols from a Hydrocarbon Mixture by a Heterogeneous Reaction with Metal Oxides. Industrial & Engineering Chemistry Research, 2003, 42, 6919-6923.	1.8	14
107	Spatially distributed stochastic systems: Equation-free and equation-assisted preconditioned computations. Journal of Chemical Physics, 2006, 125, 204108.	1.2	14
108	An Emergent Space for Distributed Data With Hidden Internal Order Through Manifold Learning. IEEE Access, 2018, 6, 77402-77413.	2.6	14

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109	Equation-free multiscale computations for a lattice-gas model: coarse-grained bifurcation analysis of the NO+CO reaction on Pt(100). Chemical Engineering Science, 2004, 59, 1733-1743.	1.9	13
110	Periodically-forced finite networks of heterogeneous globally-coupled oscillators: A low-dimensional approach. Physica D: Nonlinear Phenomena, 2008, 237, 207-215.	1.3	13
111	A common approach to the computation of coarse-scale steady states and to consistent initialization on a slow manifold. Computers and Chemical Engineering, 2011, 35, 1949-1958.	2.0	13
112	Stability and stabilization of the constrained runs schemes for equation-free projection to a slow manifold. Discrete and Continuous Dynamical Systems, 2012, 32, 2759-2803.	0.5	13
113	Managing heterogeneity in the study of neural oscillator dynamics. Journal of Mathematical Neuroscience, 2012, 2, 5.	2.4	13
114	Model reduction for agent-based social simulation: Coarse-graining a civil violence model. Physical Review E, 2012, 85, 066106.	0.8	13
115	Cell Division Induces and Switches Coherent Angular Motion within Bounded Cellular Collectives. Biophysical Journal, 2017, 112, 2419-2427.	0.2	13
116	AN EQUATION-FREE APPROACH TO NONLINEAR CONTROL: COARSE FEEDBACK LINEARIZATION WITH POLE-PLACEMENT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 2029-2041.	0.7	12
117	Learning emergent partial differential equations in a learned emergent space. Nature Communications, 2022, 13, .	5.8	12
118	Exploration of effective potential landscapes using coarse reverse integration. Journal of Chemical Physics, 2009, 131, 134104.	1.2	11
119	Coarse graining the dynamics of heterogeneous oscillators in networks with spectral gaps. Physical Review E, 2011, 84, 036708.	0.8	11
120	State reduction in molecular simulations. Computers and Chemical Engineering, 2013, 51, 102-110.	2.0	11
121	Coarse-grained particle model for pedestrian flow using diffusion maps. Physical Review E, 2014, 89, 013304.	0.8	11
122	A COMPUTER-ASSISTED STUDY OF GLOBAL DYNAMIC TRANSITIONS FOR A NONINVERTIBLE SYSTEM. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 1305-1321.	0.7	10
123	Equation-free implementation of statistical moment closures. Physical Review E, 2008, 77, 026701.	0.8	10
124	Coarse-grained computation for particle coagulation and sintering processes by linking Quadrature Method of Moments with Monte-Carlo. Journal of Computational Physics, 2010, 229, 5299-5314.	1.9	10
125	Generation of networks with prescribed degree-dependent clustering. Optimization Letters, 2011, 5, 435-451.	0.9	10
126	Modeling epidemics on adaptively evolving networks: A data-mining perspective. Virulence, 2016, 7, 153-162.	1.8	10

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127	A Process for the Removal of Thiols from a Hydrocarbon Stream by a Heterogeneous Reaction with Lead Oxide. Energy & Fuels, 2004, 18, 721-726.	2.5	9
128	DYNAMICS OF POLYDISPERSE IRREVERSIBLE ADSORPTION: A PHARMACOLOGICAL EXAMPLE. Mathematical Models and Methods in Applied Sciences, 2007, 17, 759-781.	1.7	9
129	Newtonâ€“Krylov solvers for the equation-free computation of coarse traveling waves. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 3480-3491.	3.4	9
130	Simple Urban Simulation Atop Complicated Models: Multi-Scale Equation-Free Computing of Sprawl Using Geographic Automata. Entropy, 2013, 15, 2606-2634.	1.1	9
131	Coarse-grained variables for particle-based models: diffusion maps and animal swarming simulations. Computational Particle Mechanics, 2014, 1, 425-440.	1.5	9
132	Coarse-Grained Clustering Dynamics of Heterogeneously Coupled Neurons. Journal of Mathematical Neuroscience, 2015, 5, 2.	2.4	9
133	A general CFD framework for fault-resilient simulations based on multi-resolution information fusion. Journal of Computational Physics, 2017, 347, 290-304.	1.9	9
134	Data Mining for Parameters Affecting Polymorph Selection in Contorted Hexabenzocoronene Derivatives. Chemistry of Materials, 2018, 30, 3330-3337.	3.2	9
135	Dynamical Modeling of Optogenetic Circuits in Yeast for Metabolic Engineering Applications. ACS Synthetic Biology, 2021, 10, 219-227.	1.9	9
136	Numerical simulation of atomic layer deposition for thin deposit formation in a mesoporous substrate. AICHE Journal, 2021, 67, e17305.	1.8	9
137	Constraint-defined manifolds: A legacy code approach to low-dimensional computation. Journal of Scientific Computing, 2005, 25, 17-28.	1.1	8
138	Multiscale Integration Schemes for Jump-Diffusion Systems. Multiscale Modeling and Simulation, 2008, 7, 495-516.	0.6	8
139	Bifurcations of lurching waves in a thalamic neuronal network. Biological Cybernetics, 2010, 103, 447-462.	0.6	8
140	Efficient coarse simulation of a growing avascular tumor. Physical Review E, 2012, 85, 031912.	0.8	8
141	A resilient and efficient CFD framework: Statistical learning tools for multi-fidelity and heterogeneous information fusion. Journal of Computational Physics, 2017, 344, 516-533.	1.9	8
142	Synthesizing developmental trajectories. PLoS Computational Biology, 2017, 13, e1005742.	1.5	8
143	Some manifold learning considerations toward explicit model predictive control. AICHE Journal, 2020, 66, e16881.	1.8	8
144	Coarse Collective Dynamics of Animal Groups. Lecture Notes in Computational Science and Engineering, 2011, , 299-309.	0.1	8

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145	Coarse molecular-dynamics determination of the onset of structural transitions: Melting of crystalline solids. Physical Review B, 2006, 74, .	1.1	7
146	Computational coarse graining of a randomly forced one-dimensional Burgers equation. Physics of Fluids, 2008, 20, 035111.	1.6	7
147	Autonomous colloidal crystallization in a galvanic microreactor. Journal of Applied Physics, 2012, 112, .	1.1	7
148	Damping factors for the gap-tooth scheme. Lecture Notes in Computational Science and Engineering, 2004, , 93-102.	0.1	7
149	On the acceleration of spatially distributed agent-based computations: A patch dynamics scheme. Applied Numerical Mathematics, 2015, 92, 54-69.	1.2	6
150	On the sighting of unicorns: A variational approach to computing invariant sets in dynamical systems. Chaos, 2017, 27, 063102.	1.0	6
151	Nonlinear behavior and fluctuation-induced dynamics in the photosensitive Belousovâ€“Zhabotinsky reaction. Physical Chemistry Chemical Physics, 2017, 19, 22528-22537.	1.3	6
152	Coarse-Grained Descriptions of Dynamics for Networks with Both Intrinsic and Structural Heterogeneities. Frontiers in Computational Neuroscience, 2017, 11, 43.	1.2	6
153	Optimal deterministic algorithm generation. Journal of Global Optimization, 2018, 71, 891-913.	1.1	6
154	Local conformal autoencoder for standardized data coordinates. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30918-30927.	3.3	6
155	Equation-Free, Multiscale Computation for Unsteady Random Diffusion. Multiscale Modeling and Simulation, 2005, 4, 915-935.	0.6	5
156	Acceleration Methods for Coarse-Grained Numerical Solution of the Boltzmann Equation. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 908-912.	0.8	5
157	Reduced computations for nematic-liquid crystals: A timestepper approach for systems with continuous symmetries. Journal of Non-Newtonian Fluid Mechanics, 2007, 146, 51-58.	1.0	5
158	Coarse-graining the computations of surface reactions: Nonlinear dynamics from atomistic simulators. Surface Science, 2009, 603, 1696-1705.	0.8	5
159	Coarse-graining the dynamics of network evolution: the rise and fall of a networked society. New Journal of Physics, 2012, 14, 083037.	1.2	5
160	An equation-free approach to coarse-graining the dynamics of networks. Journal of Computational Dynamics, 2014, 1, 111-134.	0.4	5
161	Equation-free analysis of spike-timing-dependent plasticity. Biological Cybernetics, 2015, 109, 701-714.	0.6	5
162	A Geometric Approach to the Transport of Discontinuous Densities. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 1012-1035.	1.1	5

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163	Largeâ€scale simulation of shallow water waves via computation only on small staggered patches. International Journal for Numerical Methods in Fluids, 2021, 93, 953-977.	0.9	5
164	Data Mining When Each Data Point is a Network. Springer Proceedings in Mathematics and Statistics, 2017, , 289-317.	0.1	5
165	Learning the temporal evolution of multivariate densities via normalizing flows. Chaos, 2022, 32, 033121.	1.0	5
166	Equation-Free Particle-Based Computations:Â Coarse Projective Integration and Coarse Dynamic Renormalization in 2D. Industrial & Engineering Chemistry Research, 2006, 45, 7002-7014.	1.8	4
167	Equation-free dynamic renormalization of a Kardar-Parisi-Zhang-type equation. Physical Review E, 2006, 73, 036703.	0.8	4
168	AN EQUATION-FREE APPROACH TO COUPLED OSCILLATOR DYNAMICS: THE KURAMOTO MODEL EXAMPLE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 2043-2052.	0.7	4
169	Designing networks: A mixedâ€integer linear optimization approach. Networks, 2016, 68, 283-301.	1.6	4
170	Manifold learning for organizing unstructured sets of process observations. Chaos, 2020, 30, 043108.	1.0	4
171	Particles to partial differential equations parsimoniously. Chaos, 2021, 31, 033137.	1.0	4
172	Global and local reduced models for interacting, heterogeneous agents. Chaos, 2021, 31, 073139.	1.0	4
173	Uncertainty Quantification for Atomistic Reaction Models: An Equation-Free Stochastic Simulation Algorithm Example. Multiscale Modeling and Simulation, 2008, 6, 1217-1233.	0.6	3
174	Steady states for chemical process plants: A legacy code, timeâ€stepping approach. AICHE Journal, 2013, 59, 3308-3321.	1.8	3
175	A hybrid stochastic-deterministic algorithm for lattice-gas models of catalytic reactions and the computation of TPD spectra. Computers and Chemical Engineering, 2014, 60, 172-181.	2.0	3
176	Initializing LSTM internal states via manifold learning. Chaos, 2021, 31, 093111.	1.0	3
177	It doesnâ€™t always pay to be fit: success landscapes. Journal of Biological Physics, 2021, 47, 387-400.	0.7	3
178	Personalized Algorithm Generation: A Case Study in Learning ODE Integrators. SIAM Journal of Scientific Computing, 2022, 44, A1911-A1933.	1.3	3
179	Equationfree Modeling For Complex Systems. , 2005, , 1453-1475.		2
180	Patch dynamics: macroscopic simulation of multiscale systems. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1025803-1025804.	0.2	2

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181	External-field-enabled surface nanopattern engineering (a perspective on the article â€œCurrent-driven) Tj ETQq1 1 0.784314 rgBT /Ov	0.8	2
182	MODELING HETEROGENEITY IN NETWORKS USING POLYNOMIAL CHAOS. International Journal for Multiscale Computational Engineering, 2016, 14, 291-302.	0.8	2
183	Dataâ€driven Evolution Equation Reconstruction for Parameterâ€Dependent Nonlinear Dynamical Systems. Israel Journal of Chemistry, 2018, 58, 787-794.	1.0	2
184	Transport Map Accelerated Adaptive Importance Sampling, and Application to Inverse Problems Arising from Multiscale Stochastic Reaction Networks. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 1383-1413.	1.1	2
185	An Equation Free Algorithm Accurately Simulates Macroscale Shocks Arising From Heterogeneous Microscale Systems. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2021, 6, 8-15.	1.4	2
186	Global Stability Analysis of an Adaptively-Controlled Mixing Tank Experiment. , 1992, , .		2
187	Computational Aspects of Complex Dynamics. ACS Symposium Series, 1987, , 284-294.	0.5	1
188	Combining the Gap-Tooth Scheme with Projective Integration: Patch Dynamics. , 2005, , 225-239.		1
189	Periodicity Scoring of Time Series Encodes Dynamical Behavior of the Tumor Suppressor p53. IFAC-PapersOnLine, 2021, 54, 488-495.	0.5	1
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