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	Spectral Discovery of Jointly Smooth Features for Multimodal Data. SIAM Journal on Mathematics of Data Science, 2022, 4, 410-430.	1.0	1
2	Learning the temporal evolution of multivariate densities via normalizing flows. Chaos, 2022, 32, 033121.	1.0	5
3	High-entropy nanoparticles: Synthesis-structure-property relationships and data-driven discovery. Science, 2022, 376, eabn3103.	6.0	239
4	Programmable heating and quenching for efficient thermochemical synthesis. Nature, 2022, 605, 470-476.	13.7	61
5	Learning emergent partial differential equations in a learned emergent space. Nature Communications, 2022, 13, .	5.8	12
6	Personalized Algorithm Generation: A Case Study in Learning ODE Integrators. SIAM Journal of Scientific Computing, 2022, 44, A1911-A1933.	1.3	3
7	Large‐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
8	Periodicity Scoring of Time Series Encodes Dynamical Behavior of the Tumor Suppressor p53. IFAC-PapersOnLine, 2021, 54, 488-495.	0.5	1
9	Dynamical Modeling of Optogenetic Circuits in Yeast for Metabolic Engineering Applications. ACS Synthetic Biology, 2021, 10, 219-227.	1.9	9
10	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
11	Particles to partial differential equations parsimoniously. Chaos, 2021, 31, 033137.	1.0	4
12	Numerical simulation of atomic layer deposition for thin deposit formation in a mesoporous substrate. AICHE Journal, 2021, 67, e17305.	1.8	9
13	Physics-informed machine learning. Nature Reviews Physics, 2021, 3, 422-440.	11.9	1,789
14	Global and local reduced models for interacting, heterogeneous agents. Chaos, 2021, 31, 073139.	1.0	4
15	Initializing LSTM internal states via manifold learning. Chaos, 2021, 31, 093111.	1.0	3
16	It doesn't always pay to be fit: success landscapes. Journal of Biological Physics, 2021, 47, 387-400.	0.7	3
17	Some manifold learning considerations toward explicit model predictive control. AICHE Journal, 2020, 66, e16881.	1.8	8
18	A Geometric Approach to the Transport of Discontinuous Densities. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 1012-1035.	1.1	5

#	Article	IF	Citations
19	Accelerating nonlinear model predictive control through machine learning. Journal of Process Control, 2020, 92, 261-270.	1.7	23
20	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
21	Design and Characterization of Rapid Optogenetic Circuits for Dynamic Control in Yeast Metabolic Engineering. ACS Synthetic Biology, 2020, 9, 3254-3266.	1.9	34
22	Linking Machine Learning with Multiscale Numerics: Data-Driven Discovery of Homogenized Equations. Jom, 2020, 72, 4444-4457.	0.9	20
23	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
24	Emergent Spaces for Coupled Oscillators. Frontiers in Computational Neuroscience, 2020, 14, 36.	1.2	16
25	Partial Observations and Conservation Laws: Gray-Box Modeling in Biotechnology and Optogenetics. Industrial & Engineering Chemistry Research, 2020, 59, 2611-2620.	1.8	15
26	Coarse-scale PDEs from fine-scale observations via machine learning. Chaos, 2020, 30, 013141.	1.0	42
27	Manifold learning for organizing unstructured sets of process observations. Chaos, 2020, 30, 043108.	1.0	4
28	Exploring Koopman Operator Based Surrogate Models—Accelerating the Analysis of Critical Pedestrian Densities. Springer Proceedings in Physics, 2020, , 149-157.	0.1	0
29	Designing networks with resiliency to edge failures using two-stage robust optimization. European Journal of Operational Research, 2019, 279, 704-720.	3.5	25
30	Linking Gaussian process regression with data-driven manifold embeddings for nonlinear data fusion. Interface Focus, 2019, 9, 20180083.	1.5	23
31	Manifold learning for parameter reduction. Journal of Computational Physics, 2019, 392, 419-431.	1.9	26
32	On learning Hamiltonian systems from data. Chaos, 2019, 29, 121107.	1.0	73
33	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
34	Data Mining for Parameters Affecting Polymorph Selection in Contorted Hexabenzocoronene Derivatives. Chemistry of Materials, 2018, 30, 3330-3337.	3.2	9
35	Optimal deterministic algorithm generation. Journal of Global Optimization, 2018, 71, 891-913.	1.1	6
36	Kinetic Analysis of Nanostructures Formed by Enzyme-Instructed Intracellular Assemblies against Cancer Cells. ACS Nano, 2018, 12, 3804-3815.	7.3	38

#	Article	IF	Citations
37	An Emergent Space for Distributed Data With Hidden Internal Order Through Manifold Learning. IEEE Access, 2018, 6, 77402-77413.	2.6	14
38	Data‐driven Evolution Equation Reconstruction for Parameter‐Dependent Nonlinear Dynamical Systems. Israel Journal of Chemistry, 2018, 58, 787-794.	1.0	2
39	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
40	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
41	On the sighting of unicorns: A variational approach to computing invariant sets in dynamical systems. Chaos, 2017, 27, 063102.	1.0	6
42	Cell Division Induces and Switches Coherent Angular Motion within Bounded Cellular Collectives. Biophysical Journal, 2017, 112, 2419-2427.	0.2	13
43	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
44	Nonlinear behavior and fluctuation-induced dynamics in the photosensitive Belousov–Zhabotinsky reaction. Physical Chemistry Chemical Physics, 2017, 19, 22528-22537.	1.3	6
45	Extended dynamic mode decomposition with dictionary learning: A data-driven adaptive spectral decomposition of the Koopman operator. Chaos, 2017, 27, 103111.	1.0	225
46	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
47	Coarse-Grained Descriptions of Dynamics for Networks with Both Intrinsic and Structural Heterogeneities. Frontiers in Computational Neuroscience, 2017, 11, 43.	1.2	6
48	Synthesizing developmental trajectories. PLoS Computational Biology, 2017, 13, e1005742.	1.5	8
49	Data Mining When Each Data Point is a Network. Springer Proceedings in Mathematics and Statistics, 2017, , 289-317.	0.1	5
50	Reconstructing ERK Signaling in the Drosophila Embryo from Fixed Images. Methods in Molecular Biology, 2017, 1487, 337-351.	0.4	0
51	MODELING HETEROGENEITY IN NETWORKS USING POLYNOMIAL CHAOS. International Journal for Multiscale Computational Engineering, 2016, 14, 291-302.	0.8	2
52	Shape Transformations of Epithelial Shells. Biophysical Journal, 2016, 110, 1670-1678.	0.2	55
53	Sticky Patches on Lipid Nanoparticles Enable the Selective Targeting and Killing of Untargetable Cancer Cells. Langmuir, 2016, 32, 8329-8338.	1.6	17
54	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

#	Article	IF	Citations
55	Designing networks: A mixed–integer linear optimization approach. Networks, 2016, 68, 283-301.	1.6	4
56	Modeling epidemics on adaptively evolving networks: A data-mining perspective. Virulence, 2016, 7, 153-162.	1.8	10
57	A Data–Driven Approximation of the Koopman Operator: Extending Dynamic Mode Decomposition. Journal of Nonlinear Science, 2015, 25, 1307-1346.	1.0	1,044
58	Equation-free analysis of spike-timing-dependent plasticity. Biological Cybernetics, 2015, 109, 701-714.	0.6	5
59	On the acceleration of spatially distributed agent-based computations: A patch dynamics scheme. Applied Numerical Mathematics, 2015, 92, 54-69.	1.2	6
60	Coarse-Grained Clustering Dynamics of Heterogeneously Coupled Neurons. Journal of Mathematical Neuroscience, 2015, 5, 2.	2.4	9
61	From Discrete to Continuum Models of Three-Dimensional Deformations in Epithelial Sheets. Biophysical Journal, 2015, 109, 154-163.	0.2	84
62	Dynamics of Inductive ERK Signaling in the Drosophila Embryo. Current Biology, 2015, 25, 1784-1790.	1.8	62
63	Systematic characterization of protein folding pathways using diffusion maps: Application to Trp-cage miniprotein. Journal of Chemical Physics, 2015, 142, 085101.	1.2	53
64	Temporal ordering and registration of images in studies of developmental dynamics. Development (Cambridge), 2015, 142, 1717-24.	1.2	15
65	Reduced Models in Chemical Kinetics via Nonlinear Data-Mining. Processes, 2014, 2, 112-140.	1.3	37
66	Coarse-grained variables for particle-based models: diffusion maps and animal swarming simulations. Computational Particle Mechanics, 2014, 1, 425-440.	1.5	9
67	Diffusion maps, clustering and fuzzy Markov modeling in peptide folding transitions. Journal of Chemical Physics, 2014, 141, 114102.	1.2	23
68	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
69	An equation-free approach to coarse-graining the dynamics of networks. Journal of Computational Dynamics, 2014, 1, 111-134.	0.4	5
70	Coarse-grained particle model for pedestrian flow using diffusion maps. Physical Review E, 2014, 89, 013304.	0.8	11
71	Steady states for chemical process plants: A legacy code, time–stepping approach. AICHE Journal, 2013, 59, 3308-3321.	1.8	3
72	State reduction in molecular simulations. Computers and Chemical Engineering, 2013, 51, 102-110.	2.0	11

#	Article	IF	Citations
73	External-field-enabled surface nanopattern engineering (a perspective on the article â€œCurrent-driven) Tj ETQq1 1 0.784314 rgBT /O...	0.8	2
74	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
75	Simple Urban Simulation Atop Complicated Models: Multi-Scale Equation-Free Computing of Sprawl Using Geographic Automata. Entropy, 2013, 15, 2606-2634.	1.1	9
76	Nonlinear intrinsic variables and state reconstruction in multiscale simulations. Journal of Chemical Physics, 2013, 139, 184109.	1.2	26
77	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
78	Efficient coarse simulation of a growing avascular tumor. Physical Review E, 2012, 85, 031912.	0.8	8
79	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
80	Accelerating agent-based computation of complex urban systems. International Journal of Geographical Information Science, 2012, 26, 1917-1937.	2.2	21
81	Mechanisms of wetting transitions on patterned surfaces: continuum and mesoscopic analysis. Soft Matter, 2012, 8, 7928.	1.2	30
82	Autonomous colloidal crystallization in a galvanic microreactor. Journal of Applied Physics, 2012, 112, .	1.1	7
83	Managing heterogeneity in the study of neural oscillator dynamics. Journal of Mathematical Neuroscience, 2012, 2, 5.	2.4	13
84	Model reduction for agent-based social simulation: Coarse-graining a civil violence model. Physical Review E, 2012, 85, 066106.	0.8	13
85	Dynamic density functional theory of solid tumor growth: Preliminary models. AIP Advances, 2012, 2, 011210.	0.6	31
86	Coarse-Graining of Chain Models in Dissipative Particle Dynamics Simulations. Industrial & Engineering Chemistry Research, 2011, 50, 69-77.	1.8	26
87	Generation of networks with prescribed degree-dependent clustering. Optimization Letters, 2011, 5, 435-451.	0.9	10
88	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
89	Coarse graining the dynamics of heterogeneous oscillators in networks with spectral gaps. Physical Review E, 2011, 84, 036708.	0.8	11
90	A constrained approach to multiscale stochastic simulation of chemically reacting systems. Journal of Chemical Physics, 2011, 135, 094102.	1.2	26

#	Article	IF	Citations
91	Coarse Collective Dynamics of Animal Groups. Lecture Notes in Computational Science and Engineering, 2011, , 299-309.	0.1	8
92	Bifurcations of lurching waves in a thalamic neuronal network. Biological Cybernetics, 2010, 103, 447-462.	0.6	8
93	Reduced models for binocular rivalry. Journal of Computational Neuroscience, 2010, 28, 459-476.	0.6	22
94	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
95	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
96	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
97	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
98	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
99	Exploration of effective potential landscapes using coarse reverse integration. Journal of Chemical Physics, 2009, 131, 134104.	1.2	11
100	Coarse-graining the computations of surface reactions: Nonlinear dynamics from atomistic simulators. Surface Science, 2009, 603, 1696-1705.	0.8	5
101	Equation-Free Multiscale Computation: Algorithms and Applications. Annual Review of Physical Chemistry, 2009, 60, 321-344.	4.8	214
102	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
103	Periodically-forced finite networks of heterogeneous globally-coupled oscillators: A low-dimensional approach. Physica D: Nonlinear Phenomena, 2008, 237, 207-215.	1.3	13
104	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
105	Diffusion Maps - a Probabilistic Interpretation for Spectral Embedding and Clustering Algorithms. Lecture Notes in Computational Science and Engineering, 2008, , 238-260.	0.1	26
106	Coarse analysis of collective motion with different communication mechanisms. Mathematical Biosciences, 2008, 214, 49-57.	0.9	29
107	Multiscale Integration Schemes for Jump-Diffusion Systems. Multiscale Modeling and Simulation, 2008, 7, 495-516.	0.6	8
108	Uncertainty Quantification for Atomistic Reaction Models: An Equation-Free Stochastic Simulation Algorithm Example. Multiscale Modeling and Simulation, 2008, 6, 1217-1233.	0.6	3

#	Article	IF	Citations
109	Computational coarse graining of a randomly forced one-dimensional Burgers equation. Physics of Fluids, 2008, 20, 035111.	1.6	7
110	Equation-free implementation of statistical moment closures. Physical Review E, 2008, 77, 026701.	0.8	10
111	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
112	DYNAMICS OF POLYDISPERSE IRREVERSIBLE ADSORPTION: A PHARMACOLOGICAL EXAMPLE. Mathematical Models and Methods in Applied Sciences, 2007, 17, 759-781.	1.7	9
113	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
114	Variable-free exploration of stochastic models: A gene regulatory network example. Journal of Chemical Physics, 2007, 126, 155103.	1.2	50
115	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
116	Slow observables of singularly perturbed differential equations. Nonlinearity, 2007, 20, 2463-2481.	0.6	34
117	Variance Reduction for the Equation€Free Simulation of Multiscale Stochastic Systems. Multiscale Modeling and Simulation, 2007, 6, 70-89.	0.6	15
118	Deciding the Nature of the Coarse Equation through Microscopic Simulations: The Baby-Bathwater Scheme. SIAM Review, 2007, 49, 469-487.	4.2	39
119	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
120	Collective coordinates and the mechanism for conformational transitions of complex molecules. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1080503-1080504.	0.2	0
121	Patch dynamics: macroscopic simulation of multiscale systems. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1025803-1025804.	0.2	2
122	An equation-free approach to analyzing heterogeneous cell population dynamics. Journal of Mathematical Biology, 2007, 55, 331-352.	0.8	18
123	Experimental study of a Neimark€"Sacker bifurcation in axially forced Taylor€"Couette flow. Journal of Fluid Mechanics, 2006, 558, 1.	1.4	17
124	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
125	Equation-free, coarse-grained computational optimization using timesteppers. Chemical Engineering Science, 2006, 61, 779-793.	1.9	20
126	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

#	Article	IF	Citations
127	Patch dynamics with buffers for homogenization problems. Journal of Computational Physics, 2006, 213, 264-287.	1.9	47
128	Diffusion maps, spectral clustering and reaction coordinates of dynamical systems. Applied and Computational Harmonic Analysis, 2006, 21, 113-127.	1.1	440
129	STR-PEM fuel cell as a reactor building block. AICHE Journal, 2006, 52, 3902-3910.	1.8	15
130	Spatially distributed stochastic systems: Equation-free and equation-assisted preconditioned computations. Journal of Chemical Physics, 2006, 125, 204108.	1.2	14
131	Gene regulatory networks: A coarse-grained, equation-free approach to multiscale computation. Journal of Chemical Physics, 2006, 124, 084106.	1.2	67
132	Equation-free dynamic renormalization of a Kardar-Parisi-Zhang-type equation. Physical Review E, 2006, 73, 036703.	0.8	4
133	Coarse molecular-dynamics determination of the onset of structural transitions: Melting of crystalline solids. Physical Review B, 2006, 74, .	1.1	7
134	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
135	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
136	Combining the Gap-Tooth Scheme with Projective Integration: Patch Dynamics. , 2005, , 225-239.		1
137	Equation-free/Galerkin-free POD-assisted computation of incompressible flows. Journal of Computational Physics, 2005, 207, 568-587.	1.9	93
138	Equation-free gaptooth-based controller design for distributed complex/multiscale processes. Computers and Chemical Engineering, 2005, 29, 731-740.	2.0	24
139	Equationfree Modeling For Complex Systems. , 2005, , 1453-1475.		2
140	Constraint-defined manifolds: A legacy code approach to low-dimensional computation. Journal of Scientific Computing, 2005, 25, 17-28.	1.1	8
141	Constraint-Defined Manifolds: a Legacy Code Approach to Low-Dimensional Computation. Journal of Scientific Computing, 2005, 25, 17-28.	1.1	54
142	Equation-free optimal switching policies for bistable reacting systems. International Journal of Robust and Nonlinear Control, 2005, 15, 713-726.	2.1	16
143	Coarse-grained kinetic computations for rare events: Application to micelle formation. Journal of Chemical Physics, 2005, 122, 044908.	1.2	84
144	Core Collapse via Coarse Dynamic Renormalization. Physical Review Letters, 2005, 95, 081102.	2.9	15

#	Article	IF	Citations
145	Coarse Nonlinear Dynamics and Metastability of Filling-Emptying Transitions: Water in Carbon Nanotubes. Physical Review Letters, 2005, 95, 130603.	2.9	49
146	Equation-Free, Multiscale Computation for Unsteady Random Diffusion. Multiscale Modeling and Simulation, 2005, 4, 915-935.	0.6	5
147	The Gap-Tooth Scheme for Homogenization Problems. Multiscale Modeling and Simulation, 2005, 4, 278-306.	0.6	59
148	OPTICAL IMAGING AND CONTROL OF GENETICALLY DESIGNATED NEURONS IN FUNCTIONING CIRCUITS. Annual Review of Neuroscience, 2005, 28, 533-563.	5.0	132
149	Coarse-grained computations for a micellar system. Journal of Chemical Physics, 2005, 122, 044907.	1.2	29
150	Coarse Master Equation from Bayesian Analysis of Replica Molecular Dynamics Simulationsâ€. Journal of Physical Chemistry B, 2005, 109, 6479-6484.	1.2	119
151	Equationfree Modeling For Complex Systems. , 2005, , 1453-1475.		0
152	Apparent Hysteresis in a Driven System with Self-Organized Drag. Physical Review Letters, 2004, 92, 160603.	2.9	25
153	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
154	Coarse projective kMC integration: forward/reverse initial and boundary value problems. Journal of Computational Physics, 2004, 196, 474-489.	1.9	62
155	Time-steppers andâ€˜coarseâ€™ control of distributed microscopic processes. International Journal of Robust and Nonlinear Control, 2004, 14, 89-111.	2.1	57
156	Distributed nonlinear control of diffusionâ€"reaction processes. International Journal of Robust and Nonlinear Control, 2004, 14, 133-156.	2.1	44
157	Equation-free: The computer-aided analysis of complex multiscale systems. AICHE Journal, 2004, 50, 1346-1355.	1.8	305
158	Optimal sensor placement for state reconstruction of distributed process systems. AICHE Journal, 2004, 50, 1438-1452.	1.8	82
159	Water balance and multiplicity in a polymer electrolyte membrane fuel cell. AICHE Journal, 2004, 50, 2320-2324.	1.8	22
160	Computing in the past with forward integration. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 321, 335-343.	0.9	32
161	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
162	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

#	Article	IF	Citations
163	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
164	Damping factors for the gap-tooth scheme. Lecture Notes in Computational Science and Engineering, 2004, , 93-102.	0.1	7
165	Nonlinear Dynamics Analysis through Molecular Dynamics Simulations. Lecture Notes in Computational Science and Engineering, 2004, , 69-79.	0.1	0
166	Exploration of coarse free energy surfaces templated on continuum numerical methods. Lecture Notes in Computational Science and Engineering, 2004, , 81-91.	0.1	0
167	The gap-tooth method in particle simulations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 316, 190-195.	0.9	94
168	Telescopic projective methods for parabolic differential equations. Journal of Computational Physics, 2003, 187, 95-109.	1.9	57
169	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
170	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
171	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
172	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
173	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
174	Reduction and reconstruction for self-similar dynamical systems. Nonlinearity, 2003, 16, 1257-1275.	0.6	86
175	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
176	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
177	Effective bifurcation analysis: a time-stepper-based approach. Nonlinearity, 2002, 15, 491-511.	0.6	66
178	â€œCoarseâ€•stability and bifurcation analysis using stochastic simulators: Kinetic Monte Carlo examples. Journal of Chemical Physics, 2002, 116, 10083-10091.	1.2	113
179	â€˜Coarseâ€™ integration/bifurcation analysis via microscopic simulators: micro-Galerkin methods. Computers and Chemical Engineering, 2002, 26, 941-963.	2.0	165
180	Some twists and turns in the path of improving surface activity. Chemical Physics Letters, 2002, 358, 407-412.	1.2	20

#	Article	IF	Citations
181	Spatiotemporal Addressing of Surface Activity. Science, 2001, 294, 134-137.	6.0	147
182	Quantifying deformation in gel swelling: Experiments and simulations. AICHE Journal, 2000, 46, 2128-2139.	1.8	16
183	Noninvertibility in neural networks. Computers and Chemical Engineering, 2000, 24, 2417-2433.	2.0	23
184	Controlling Dispersive Chaos in Binary-Fluid Convection. Physical Review Letters, 1999, 83, 730-733.	2.9	18
185	Dynamics on Microcomposite Catalytic Surfaces: The Effect of Active Boundaries. Physical Review Letters, 1999, 83, 2857-2860.	2.9	32
186	Ink-Jet Printing of Catalyst Patterns for Electroless Metal Deposition. Langmuir, 1999, 15, 1584-1587.	1.6	71
187	Nonlinear model reduction for control of distributed systems: A computer-assisted study. AICHE Journal, 1998, 44, 1579-1595.	1.8	155
188	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
189	Delaying transition in Taylorâ€"Couette flow with axial motion of the inner cylinder. Journal of Fluid Mechanics, 1997, 348, 141-151.	1.4	45
190	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
191	Title is missing!. Numerical Algorithms, 1997, 14, 125-140.	1.1	48
192	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
193	Evidence for p55â€"p75 heterodimers in the absence of IL-2 from Scatchard plot analysis. International Immunology, 1992, 4, 23-32.	1.8	26
194	Global Stability Analysis of an Adaptively-Controlled Mixing Tank Experiment. , 1992, , .		2
195	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
196	Computational Aspects of Complex Dynamics. ACS Symposium Series, 1987, , 284-294.	0.5	1