Projecting to a Slow Manifold: Singularly Perturbed Sys

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Citation Report

#	Article	IF	CITATIONS
1	Coarse-grained numerical bifurcation analysis of lattice Boltzmann models. Physica D: Nonlinear Phenomena, 2005, 210, 58-76.	1.3	22
2	Working with multiscale asymptotics. Journal of Engineering Mathematics, 2005, 53, 301-336.	0.6	6
3	Equation-Free, Multiscale Computation for Unsteady Random Diffusion. Multiscale Modeling and Simulation, 2005, 4, 915-935.	0.6	5
4	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
5	An efficient iterative algorithm for the approximation of the fast and slow dynamics of stiff systems. Journal of Computational Physics, 2006, 214, 316-346.	1.9	59
6	The use of slow manifolds in reactive flows. Combustion and Flame, 2006, 147, 243-261.	2.8	47
7	Gene regulatory networks: A coarse-grained, equation-free approach to multiscale computation. Journal of Chemical Physics, 2006, 124, 084106.	1.2	67
8	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
9	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
10	Transport-chemistry coupling in the reduced description of reactive flows. Combustion Theory and Modelling, 2007, 11, 715-739.	1.0	25
11	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
12	Slow observables of singularly perturbed differential equations. Nonlinearity, 2007, 20, 2463-2481.	0.6	34
13	Accuracy of Hybrid Lattice Boltzmann/Finite Difference Schemes for Reaction-Diffusion Systems. Multiscale Modeling and Simulation, 2007, 6, 838-857.	0.6	42
14	Local diffusion models for stochastic reacting systems: estimation issues in equation-free numerics. Molecular Simulation, 2007, 33, 713-731.	0.9	2
15	Reduced Description of Complex Dynamics in Reactive Systems. Journal of Physical Chemistry A, 2007, 111, 8464-8474.	1.1	16
16	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
17	Stretching-based diagnostics and reduction of chemical kinetic models with diffusion. Journal of Computational Physics, 2007, 225, 1442-1471.	1.9	22
18	An equation-free approach to analyzing heterogeneous cell population dynamics. Journal of Mathematical Biology, 2007, 55, 331-352.	0.8	18

#	Article	IF	CITATIONS
19	Properties of the Michaelis–Menten mechanism in phase space. Journal of Mathematical Analysis and Applications, 2008, 339, 1044-1064.	0.5	13
20	Newton–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
21	Hybrid Simulations of Reaction-Diffusion Systems in Porous Media. SIAM Journal of Scientific Computing, 2008, 30, 2799-2816.	1.3	74
22	Mesoscale Analysis of the Equation-Free Constrained Runs Initialization Scheme. Multiscale Modeling and Simulation, 2008, 6, 1234-1255.	0.6	21
23	Using Equation-Free Macroscopic Analysis for Studying Self-Organising Emergent Solutions. , 2008, , .		3
24	Accuracy and Stability of the Coarse Time-Stepper for a Lattice Boltzmann Model. Journal of Algorithms and Computational Technology, 2008, 2, 249-274.	0.4	6
25	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
26	Efficient Implementation of Chemistry in Computational Combustion. Flow, Turbulence and Combustion, 2009, 82, 437-453.	1.4	35
27	An Efficient Newton-Krylov Implementation ofÂtheÂConstrained Runs Scheme for Initializing onÂaÂSlowÂManifold. Journal of Scientific Computing, 2009, 39, 167-188.	1.1	17
28	Simplified yet highly accurate enzyme kinetics for cases of low substrate concentrations. FEBS Journal, 2009, 276, 5491-5506.	2.2	23
29	Smooth initialization of lattice Boltzmann schemes. Computers and Mathematics With Applications, 2009, 58, 867-882.	1.4	6
30	Lifting in equation-free methods for molecular dynamics simulations of dense fluids. Discrete and Continuous Dynamical Systems - Series B, 2009, 11, 855-874.	0.5	9
31	Equation-Free Multiscale Computation: Algorithms and Applications. Annual Review of Physical Chemistry, 2009, 60, 321-344.	4.8	214
32	Analysis of the accuracy and convergence of equation-free projection to a slow manifold. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 757-784.	0.8	35
33	Tutorial on System Identification of Polynomial and of Rational Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 21-26.	0.4	1
34	Geometric singular perturbation theory in biological practice. Journal of Mathematical Biology, 2010, 60, 347-386.	0.8	175
35	Minimal curvature trajectories: Riemannian geometry concepts for slow manifold computation in chemical kinetics. Journal of Computational Physics, 2010, 229, 6512-6533.	1.9	22
36	Entropy-Related Extremum Principles for Model Reduction of Dissipative Dynamical Systems. Entropy, 2010, 12, 706-719.	1.1	22

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37	An Analysis of Equivalent Operator Preconditioning for Equation-Free Newton–Krylov Methods. SIAM Journal on Numerical Analysis, 2010, 48, 633-658.	1.1	3
38	Model Reduction for Combustion Chemistry. Fluid Mechanics and Its Applications, 2011, , 193-220.	0.1	53
39	A Variational Principle for Computing Slow Invariant Manifolds in Dissipative Dynamical Systems. SIAM Journal of Scientific Computing, 2011, 33, 703-720.	1.3	16
40	Scalable Bayesian Reduced-Order Models for Simulating High-Dimensional Multiscale Dynamical Systems. Multiscale Modeling and Simulation, 2011, 9, 449-485.	0.6	9
41	An analysis of noise propagation in the multiscale simulation of coarse Fokker-Planck equations. ESAIM: Mathematical Modelling and Numerical Analysis, 2011, 45, 541-561.	0.8	2
42	Dimension reduction method for ODE fluid models. Journal of Computational Physics, 2011, 230, 8554-8572.	1.9	11
43	Lifting in hybrid lattice Boltzmann and PDE models. Computing and Visualization in Science, 2011, 14, 67-78.	1.2	4
44	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
45	A computational approach for approximating center manifolds of black-box simulators. , 2012, , .		0
46	Towards an efficient multiscale modeling of low-dimensional reactive systems: Study of numerical closure procedures. Journal of Chemical Physics, 2012, 137, 204115.	1.2	0
47	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
48	A Multiscale Technique for Finding Slow Manifolds of Stiff Mechanical Systems. Multiscale Modeling and Simulation, 2012, 10, 1180-1203.	0.6	9
49	Systems analysis of hybrid, multi-scale complex flow simulations using Newton-GMRES. Rheologica Acta, 2012, 51, 849-866.	1.1	3
50	Numerical Extraction of a Macroscopic PDE and a Lifting Operator from a Lattice Boltzmann Model. Multiscale Modeling and Simulation, 2012, 10, 766-791.	0.6	3
51	Simulating Stochastic Inertial Manifolds by a Backward-Forward Approach. SIAM Journal on Applied Dynamical Systems, 2013, 12, 487-514.	0.7	11
52	Time-Scale Separation from Diffusion-Mapped Delay Coordinates. SIAM Journal on Applied Dynamical Systems, 2013, 12, 618-649.	0.7	67
53	Glycolysis in saccharomyces cerevisiae: Algorithmic exploration of robustness and origin of oscillations. Mathematical Biosciences, 2013, 243, 190-214.	0.9	29
54	Initialization of Lattice Boltzmann Models with the Help of the Numerical Chapman–Enskog Expansion. Procedia Computer Science, 2013, 18, 1036-1045.	1.2	27

#	Article	IF	CITATIONS
55	One-Dimensional Slow Invariant Manifolds for Fully Coupled Reaction and Micro-scale Diffusion. SIAM Journal on Applied Dynamical Systems, 2013, 12, 560-595.	0.7	11
56	A Micro-Macro Parareal Algorithm: Application to Singularly Perturbed Ordinary Differential Equations. SIAM Journal of Scientific Computing, 2013, 35, A1951-A1986.	1.3	33
57	Historical Developments in Singular Perturbations. , 2014, , .		19
58	Bifurcation analysis of a model for atherosclerotic plaque evolution. Physica D: Nonlinear Phenomena, 2014, 278-279, 31-43.	1.3	4
59	Implicit Methods for Equation-Free Analysis: Convergence Results and Analysis of Emergent Waves in Microscopic Traffic Models. SIAM Journal on Applied Dynamical Systems, 2014, 13, 1202-1238.	0.7	34
60	An Iterative Method for the Approximation of Fibers in Slow-Fast Systems. SIAM Journal on Applied Dynamical Systems, 2014, 13, 861-900.	0.7	7
61	Numerical simulation of turbulent combustion: Scientific challenges. Science China: Physics, Mechanics and Astronomy, 2014, 57, 1495-1503.	2.0	17
62	Computation of Saddle-Type Slow Manifolds Using Iterative Methods. SIAM Journal on Applied Dynamical Systems, 2015, 14, 1189-1227.	0.7	5
63	A Note on Implementations of the Boosting Algorithm and Heterogeneous Multiscale Methods. SIAM Journal on Numerical Analysis, 2015, 53, 2472-2487.	1.1	2
64	On coarse projective integration for atomic deposition in amorphous systems. Journal of Chemical Physics, 2015, 143, 134703.	1.2	1
65	Flow Structure Identification for Nonlinear Dynamical Systems via Finite-Time Lyapunov Analysis. Mathematical Modelling of Natural Phenomena, 2015, 10, 91-104.	0.9	0
66	On convergence of higher order schemes for the projective integration method for stiff ordinary differential equations. Journal of Computational and Applied Mathematics, 2015, 288, 44-69.	1.1	6
67	Constrained Runs Algorithm as a Lifting Operator for the One-Dimensional in Space Boltzmann Equation with BGK Collision Term. Multiscale Modeling and Simulation, 2016, 14, 1488-1512.	0.6	0
68	Exponential estimates of symplectic slow manifolds. Journal of Differential Equations, 2016, 261, 56-101.	1.1	13
69	Highly Reduced Species Mechanisms for isoâ€Cetane Using the Local Selfâ€Similarity Tabulation Method. International Journal of Chemical Kinetics, 2016, 48, 739-752.	1.0	8
70	Telescopic projective Adams multiscale modeling of electrochemical reactions in tubular solid oxide fuel cells. Computers and Chemical Engineering, 2016, 93, 331-342.	2.0	1
71	Asymptotic Analysis of a Target-Mediated Drug Disposition Model: Algorithmic and Traditional Approaches. Bulletin of Mathematical Biology, 2016, 78, 1121-1161.	0.9	14
72	Reduced-species mechanisms for the combustion of cyclohexane using the Local Self Similarity Tabulation method. , 2016, , .		0

#	Article	IF	CITATIONS
73	Characterizing two-timescale nonlinear dynamics using finite-time Lyapunov exponents and subspaces. Communications in Nonlinear Science and Numerical Simulation, 2016, 36, 148-174.	1.7	5
74	On unifying concepts for trajectory-based slow invariant attracting manifold computation in kinetic multiscale models. Mathematical and Computer Modelling of Dynamical Systems, 2016, 22, 87-112.	1.4	6
75	ATLAS: A Geometric Approach to Learning High-Dimensional Stochastic Systems Near Manifolds. Multiscale Modeling and Simulation, 2017, 15, 110-156.	0.6	11
76	A Low-Computational-Cost Strategy to Localize Points in the Slow Manifold Proximity for Isothermal Chemical Kinetics. International Journal of Chemical Kinetics, 2017, 49, 477-493.	1.0	5
77	Analysis of the approximate slow invariant manifold method for reactive flow equations. Journal of Mathematical Chemistry, 2017, 55, 1725-1754.	0.7	2
78	Coarse-Grained Descriptions of Dynamics for Networks with Both Intrinsic and Structural Heterogeneities. Frontiers in Computational Neuroscience, 2017, 11, 43.	1.2	6
79	Model reduction in chemical dynamics: slow invariant manifolds, singular perturbations, thermodynamic estimates, and analysis of reaction graph. Current Opinion in Chemical Engineering, 2018, 21, 48-59.	3.8	37
80	Towards Differential Geometric Characterization of Slow Invariant Manifolds in Extended Phase Space: Sectional Curvature and Flow Invariance. SIAM Journal on Applied Dynamical Systems, 2018, 17, 732-753.	0.7	3
81	Convergence of Equation-Free Methods in the Case of Finite Time Scale Separation with Application to Deterministic and Stochastic Systems. SIAM Journal on Applied Dynamical Systems, 2018, 17, 2574-2614.	0.7	7
82	Nonlinear Oscillations Induced by Follower Forces in Prestressed Clamped Rods Subjected to Drag. Journal of Computational and Nonlinear Dynamics, 2018, 13, .	0.7	16
83	Equilibrium free energies from non-equilibrium trajectories with relaxation fluctuation spectroscopy. Nature Physics, 2018, 14, 842-847.	6.5	13
84	Asymptotic error analysis of an IMEX Runge–Kutta method. Journal of Computational and Applied Mathematics, 2018, 343, 139-154.	1.1	0
85	Slow manifolds for dynamical systems with non-Gaussian stable Lévy noise. Analysis and Applications, 2019, 17, 477-511.	1.2	8
86	Interface learning in fluid dynamics: Statistical inference of closures within micro–macro-coupling models. Physics of Fluids, 2020, 32, 091704.	1.6	12
87	Perturbative-Iterative Computation of Inertial Manifolds of Systems of Delay-Differential Equations with Small Delays. Algorithms, 2020, 13, 209.	1.2	2
88	Adaptive stochastic continuation with a modified lifting procedure applied to complex systems. Physical Review E, 2020, 102, 032210.	0.8	3
89	Eight Perspectives on the Exponentially Ill-Conditioned Equation \$varepsilon y'' - x y' + y = 0\$. SIAM Review, 2020, 62, 439-462.	4.2	0
90	Guiding center dynamics as motion on a formal slow manifold in loop space. Journal of Mathematical Physics, 2020, 61, 012703.	0.5	8

#	Article	IF	CITATIONS
91	INVITED: Slow manifold reduction for plasma science. Communications in Nonlinear Science and Numerical Simulation, 2020, 89, 105289.	1.7	12
92	A toolbox of equation-free functions in Matlab/Octave for efficient system level simulation. Numerical Algorithms, 2021, 87, 1729-1748.	1.1	8
93	Multiple timescales and the parametrisation method in geometric singular perturbation theory. Nonlinearity, 2021, 34, 4163-4201.	0.6	3
94	Slow Invariant Manifolds of Slow–Fast Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2150112.	0.7	8
95	A numerical method for the approximation of stable and unstable manifolds of microscopic simulators. Numerical Algorithms, 2022, 89, 1335-1368.	1.1	3
96	Finite Difference Patch Dynamics for Advection Homogenization Problems. , 2006, , 225-246.		2
98	Basic Types of Coarse-Graining. , 2006, , 117-176.		9
99	Time-Scale Splitting-Based Mechanism Reduction. Green Energy and Technology, 2013, , 467-484.	0.4	18
100	A Multilevel Algorithm to Compute Steady States of Lattice Boltzmann Models. Lecture Notes in Computational Science and Engineering, 2011, , 151-167.	0.1	1
101	Equation-Free Computation: An Overview of Patch Dynamics. , 2009, , 216-246.		9
103	Elastohydrodynamical instabilities of active filaments, arrays, and carpets analyzed using slender-body theory. Physical Review Fluids, 2020, 5, .	1.0	8
104	Multiscale Modeling of Viscoelastic Plant Tissue. International Journal for Multiscale Computational Engineering, 2010, 8, 379-396.	0.8	9
105	Equation-free computation of coarse-grained center manifolds of microscopic simulators. Journal of Computational Dynamics, 2014, 1, 377-389.	0.4	2
106	On the computation of attractors for delay differential equations. Journal of Computational Dynamics, 2016, 3, 5-5.	0.4	5
107	The Role of Thermodynamics in Model Reduction When Using Invariant Grids. Communications in Computational Physics, 2010, 8, 701-734.	0.7	8
108	Slow Invariant Manifold of Laser with Feedback. Symmetry, 2021, 13, 1898.	1.1	2
110	The Method of Matched Asymptotic Expansions and Its Generalizations. , 2014, , 53-121.		0
111	Computing Manifolds. Applied Mathematical Sciences (Switzerland), 2015, , 327-357.	0.4	0

#	Article	IF	CITATIONS
114	Optimal vaccine roll-out strategies including social distancing for pandemics. IScience, 2022, 25, 104575.	1.9	5
115	Learning effective dynamics from data-driven stochastic systems. Chaos, 2023, 33, .	1.0	4