

Stephen Wiggins

List of Publications by Year in descending order

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227
papers

11,733
citations

38742

50
h-index

31849

101
g-index

238
all docs

238
docs citations

238
times ranked

4136
citing authors

#	ARTICLE	IF	CITATIONS
1	A bridge between invariant dynamical structures and uncertainty quantification. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022, 104, 106016.	3.3	6
2	Bifurcation study on a degenerate double van der Waals cirque potential energy surface using Lagrangian descriptors. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022, 105, 106089.	3.3	3
3	Predicting trajectory behaviour via machine-learned invariant manifolds. <i>Chemical Physics Letters</i> , 2022, 789, 139290.	2.6	2
4	Structured pathways in the turbulence organizing recent oil spill events in the Eastern Mediterranean. <i>Scientific Reports</i> , 2022, 12, 3662.	3.3	7
5	The Influence of a Parameter that Controls the Asymmetry of a Potential Energy Surface with an Entrance Channel and Two Potential Wells. <i>Regular and Chaotic Dynamics</i> , 2022, 27, 232-241.	0.8	0
6	Lagrangian descriptors and the action integral of classical mechanics. <i>Physica D: Nonlinear Phenomena</i> , 2022, 434, 133206.	2.8	5
7	The nature of reactive and non-reactive trajectories for a three dimensional Caldera potential energy surface. <i>Physica D: Nonlinear Phenomena</i> , 2022, 435, 133293.	2.8	11
8	Bifurcation of Dividing Surfaces Constructed from Period-Doubling Bifurcations of Periodic Orbits in a Caldera Potential Energy Surface. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2022, 32, .	1.7	6
9	From Poincaré Maps to Lagrangian Descriptors: The Case of the Valley Ridge Inflection Point Potential. <i>Regular and Chaotic Dynamics</i> , 2021, 26, 147-164.	0.8	6
10	The Role of Time-Dependent Phase Space Structures in Reaction Dynamics and the No-Recrossing Property of Dividing Surfaces. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2021, 31, 2150064.	1.7	1
11	The influence of a pitchfork bifurcation of the critical points of a symmetric caldera potential energy surface on dynamical matching. <i>Chemical Physics Letters</i> , 2021, 768, 138397.	2.6	11
12	The Generalization of the Periodic Orbit Dividing Surface in Hamiltonian Systems with Three or More Degrees of Freedom – I. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2021, 31, 2130028.	1.7	10
13	The Bifurcations of the Critical Points and the Role of Depth in a Symmetric Caldera Potential Energy Surface. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2021, 31, 2130034.	1.7	13
14	The Generalization of the Periodic Orbit Dividing Surface for Hamiltonian Systems with Three or More Degrees of Freedom – II. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2021, 31, 2150188.	1.7	1
15	LDDS: Python package for computing and visualizing Lagrangian Descriptors for Dynamical Systems. <i>Journal of Open Source Software</i> , 2021, 6, 3482.	4.6	3
16	The dynamical significance of valley-ridge inflection points. <i>Chemical Physics Letters</i> , 2021, 781, 138970.	2.6	1
17	Transport and roaming on the double van der Waals potential energy surface. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 102, 105917.	3.3	1
18	Reactive islands for three degrees-of-freedom Hamiltonian systems. <i>Physica D: Nonlinear Phenomena</i> , 2021, 425, 132976.	2.8	5

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19	Visualizing the phase space of the Helium van der Waals complex using Lagrangian descriptors. Communications in Nonlinear Science and Numerical Simulation, 2021, 103, 105993.	3.3	8
20	Hamiltonian pitchfork bifurcation in transition across index-1 saddles. Communications in Nonlinear Science and Numerical Simulation, 2021, 103, 105949.	3.3	3
21	Very High Resolution Tools for the Monitoring and Assessment of Environmental Hazards in Coastal Areas. Frontiers in Marine Science, 2021, 7, .	2.5	6
22	Support vector machines for learning reactive islands. Chaos, 2021, 31, 103101.	2.5	3
23	Bifurcation of Dividing Surfaces Constructed from a Pitchfork Bifurcation of Periodic Orbits in a Symmetric Potential Energy Surface with a Post-Transition-State Bifurcation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, .	1.7	4
24	The Time Evolution of the Trajectories After the Selectivity in a Symmetric Potential Energy Surface with a Post-transition-state Bifurcation. Regular and Chaotic Dynamics, 2021, 26, 763-774.	0.8	4
25	The Role of Depth and Flatness of a Potential Energy Surface in Chemical Reaction Dynamics. Regular and Chaotic Dynamics, 2020, 25, 453-475.	0.8	4
26	Phase space analysis of the dynamics on a potential energy surface with an entrance channel and two potential wells. Physical Review E, 2020, 102, 012215.	2.1	15
27	Tuning the branching ratio in a symmetric potential energy surface with a post-transition state bifurcation using external time dependence. Chemical Physics Letters, 2020, 754, 137714.	2.6	5
28	Detection of Dynamical Matching in a Caldera Hamiltonian System Using Lagrangian Descriptors. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030026.	1.7	22
29	Phase space structure and escape time dynamics in a Van der Waals model for exothermic reactions. Physical Review E, 2020, 102, 062203.	2.1	7
30	The dynamical matching mechanism in phase space for caldera-type potential energy surfaces. Chemical Physics Letters, 2020, 743, 137199.	2.6	22
31	Using Lagrangian Descriptors to Uncover Invariant Structures in Chesnavich's Isokinetic Model with Application to Roaming. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2050076.	1.7	5
32	Exploring isomerization dynamics on a potential energy surface with an index-2 saddle using lagrangian descriptors. Communications in Nonlinear Science and Numerical Simulation, 2020, 89, 105331.	3.3	15
33	The tipping times in an Arctic sea ice system under influence of extreme events. Chaos, 2020, 30, 063125.	2.5	20
34	The phase space mechanism for selectivity in a symmetric potential energy surface with a post-transition-state bifurcation. Chemical Physics Letters, 2020, 754, 137610.	2.6	12
35	Revealing roaming on the double Morse potential energy surface with Lagrangian descriptors. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 235702.	2.1	9
36	Tilting and Squeezing: Phase Space Geometry of Hamiltonian Saddle-Node Bifurcation and its Influence on Chemical Reaction Dynamics. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030008.	1.7	18

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37	Detecting reactive islands in a system-bath model of isomerization. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 17890-17912.	2.8	15
38	UIPOsHam: A Python package for computing unstable periodic orbits in two-degree-of-freedom Hamiltonian systems. <i>Journal of Open Source Software</i> , 2020, 5, 1684.	4.6	4
39	Lagrangian study of the final warming in the southern stratosphere during 2002: Part I. The vortex splitting at upper levels. <i>Climate Dynamics</i> , 2019, 53, 2779-2792.	3.8	12
40	Finding normally hyperbolic invariant manifolds in two and three degrees of freedom with HÄ©non-Heiles-type potential. <i>Physical Review E</i> , 2019, 100, 022204.	2.1	25
41	Lagrangian study of the final warming in the southern stratosphere during 2002: Part II. 3D structure. <i>Climate Dynamics</i> , 2019, 53, 1277-1286.	3.8	9
42	Finding NHIM: Identifying high dimensional phase space structures in reaction dynamics using Lagrangian descriptors. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2019, 79, 104907.	3.3	26
43	Dynamics of the Morse Oscillator: Analytical Expressions for Trajectories, Action-Angle Variables, and Chaotic Dynamics. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2019, 29, 1950157.	1.7	3
44	A Lie transform approach to the construction of Lyapunov functions in autonomous and non-autonomous systems. <i>Journal of Mathematical Physics</i> , 2019, 60, 082704.	1.1	2
45	The influence of the solventâ€™s mass on the location of the dividing surface for a model Hamiltonian. <i>Chemical Physics Letters: X</i> , 2019, 737, 100030.	2.1	6
46	Phase Space Analysis of the Nonexistence of Dynamical Matching in a Stretched Caldera Potential Energy Surface. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2019, 29, 1950057.	1.7	20
47	The Chesnavich Model for Ion-Molecule Reactions: A Rigid Body Coupled to a Particle. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2019, 29, 1950025.	1.7	3
48	Lagrangian transport across the upper Arctic waters in the Canada Basin. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2019, 145, 76-91.	2.7	6
49	Roaming at Constant Kinetic Energy: Chesnavichâ€™s Model and the Hamiltonian Isokinetic Thermostat. <i>Regular and Chaotic Dynamics</i> , 2019, 24, 615-627.	0.8	6
50	Dynamics on the Double Morse Potential: A Paradigm for Roaming Reactions with no Saddle Points. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 60-79.	0.8	8
51	Lagrangian coherent structure assisted path planning for transoceanic autonomous underwater vehicle missions. <i>Scientific Reports</i> , 2018, 8, 4575.	3.3	35
52	Empirical Classification of Trajectory Data: An Opportunity for the Use of Machine Learning in Molecular Dynamics. <i>Journal of Physical Chemistry B</i> , 2018, 122, 3230-3241.	2.6	16
53	Phase Space Structure and Transport in a Caldera Potential Energy Surface. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2018, 28, 1830042.	1.7	24
54	Detection of Phase Space Structures of the Cat Map with Lagrangian Descriptors. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 751-766.	0.8	12

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55	Preface: Current perspectives in modelling, monitoring, and predicting geophysical fluid dynamics. <i>Nonlinear Processes in Geophysics</i> , 2018, 25, 125-127.	1.3	0
56	Sampling Phase Space Dividing Surfaces Constructed from Normally Hyperbolic Invariant Manifolds (NHIMs). <i>Journal of Physical Chemistry A</i> , 2018, 122, 8354-8362.	2.5	26
57	The Application of Lagrangian Descriptors to 3D Vector Fields. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 551-568.	0.8	16
58	Influence of mass and potential energy surface geometry on roaming in Chesnavich's CH ₄ ⁺ model. <i>Journal of Chemical Physics</i> , 2018, 149, 094109.	3.0	6
59	Transient Invariant and Quasi-Invariant Structures in an Example of an Aperiodically Time Dependent Fluid Flow. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2018, 28, 1830015.	1.7	0
60	A Theoretical Framework for Lagrangian Descriptors. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2017, 27, 1730001.	1.7	69
61	Roaming: A Phase Space Perspective. <i>Annual Review of Physical Chemistry</i> , 2017, 68, 499-524.	10.8	48
62	Detection of Periodic Orbits in Hamiltonian Systems Using Lagrangian Descriptors. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2017, 27, 1750225.	1.7	24
63	A simple kinematic model for the Lagrangian description of relevant nonlinear processes in the stratospheric polar vortex. <i>Nonlinear Processes in Geophysics</i> , 2017, 24, 265-278.	1.3	5
64	Insights into the three-dimensional Lagrangian geometry of the Antarctic polar vortex. <i>Nonlinear Processes in Geophysics</i> , 2017, 24, 379-392.	1.3	20
65	Integrability and strong normal forms for non-autonomous systems in a neighbourhood of an equilibrium. <i>Journal of Mathematical Physics</i> , 2016, 57, 092703.	1.1	2
66	Lagrangian Descriptors for Stochastic Differential Equations: A Tool for Revealing the Phase Portrait of Stochastic Dynamical Systems. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2016, 26, 1630036.	1.7	21
67	The role of normally hyperbolic invariant manifolds (NHIMs) in the context of the phase space setting for chemical reaction dynamics. <i>Regular and Chaotic Dynamics</i> , 2016, 21, 621-638.	0.8	43
68	Phase space barriers and dividing surfaces in the absence of critical points of the potential energy: Application to roaming in ozone. <i>Journal of Chemical Physics</i> , 2016, 144, 054107.	3.0	22
69	Negligibility of small divisor effects in the normal form theory for nearly-integrable Hamiltonians with decaying non-autonomous perturbations. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2016, 125, 247-262.	1.4	6
70	A dynamical systems perspective for a real-time response to a marine oil spill. <i>Marine Pollution Bulletin</i> , 2016, 112, 201-210.	5.0	29
71	The Kolmogorov-Arnold-Moser (KAM) and Nekhoroshev Theorems with Arbitrary Time Dependence. , 2016, , 89-99.		0
72	Toward Understanding the Roaming Mechanism in H + MgH → Mg + HH Reaction. <i>Journal of Physical Chemistry A</i> , 2016, 120, 5145-5154.	2.5	24

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73	Normal forms \hat{A} la Moser for aperiodically time-dependent Hamiltonians in the vicinity of a hyperbolic equilibrium. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2016, 9, 1109-1118.	1.1	4
74	Lagrangian and Eulerian analysis of transport and mixing in the three dimensional, time dependent Hill's spherical vortex. <i>Physics of Fluids</i> , 2015, 27, 063603.	4.0	7
75	A dynamical systems approach to the surface search for debris associated with the disappearance of flight MH370. <i>Nonlinear Processes in Geophysics</i> , 2015, 22, 701-712.	1.3	26
76	Chaotic Dynamics in Nonautonomous Maps: Application to the Nonautonomous Hénon Map. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2015, 25, 1550172.	1.7	11
77	The Chaotic Saddle in the Lozi Map, Autonomous and Nonautonomous Versions. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2015, 25, 1550184.	1.7	15
78	A \hat{A} -lemma for normally hyperbolic invariant manifolds. <i>Regular and Chaotic Dynamics</i> , 2015, 20, 94-108.	0.8	5
79	The role of variability in transport for large-scale flow dynamics. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2015, 29, 459-481.	3.3	1
80	Reaction Path Bifurcation in an Electrocyclic Reaction: Ring-Opening of the Cyclopropyl Radical. <i>Journal of Physical Chemistry A</i> , 2015, 119, 6611-6630.	2.5	32
81	Preface to the special collection in honor of Gregory S. Ezra. <i>Theoretical Chemistry Accounts</i> , 2015, 134, 1.	1.4	0
82	Lagrangian descriptors for two dimensional, area preserving, autonomous and nonautonomous maps. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2015, 27, 40-51.	3.3	47
83	A Kolmogorov theorem for nearly integrable Poisson systems with asymptotically decaying time-dependent perturbation. <i>Regular and Chaotic Dynamics</i> , 2015, 20, 476-485.	0.8	6
84	Phase Space Structures Explain Hydrogen Atom Roaming in Formaldehyde Decomposition. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4123-4128.	4.6	32
85	Transport induced by mean-eddy interaction: I. Theory, and relation to Lagrangian lobe dynamics. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2015, 20, 516-535.	3.3	4
86	Transport induced by mean-eddy interaction: II. Analysis of transport processes. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2015, 20, 794-806.	3.3	3
87	Lagrangian descriptors and the assessment of the predictive capacity of oceanic data sets. <i>Nonlinear Processes in Geophysics</i> , 2014, 21, 677-689.	1.3	31
88	Persistence of Diophantine flows for quadratic nearly integrable Hamiltonians under slowly decaying aperiodic time dependence. <i>Regular and Chaotic Dynamics</i> , 2014, 19, 586-600.	0.8	9
89	Nonstatistical dynamics on the caldera. <i>Journal of Chemical Physics</i> , 2014, 141, 034111.	3.0	38
90	Roaming dynamics in ion-molecule reactions: Phase space reaction pathways and geometrical interpretation. <i>Journal of Chemical Physics</i> , 2014, 140, 134112.	3.0	35

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91	Roaming dynamics in ketene isomerization. <i>Theoretical Chemistry Accounts</i> , 2014, 133, 1.	1.4	20
92	Normal form and Nekhoroshev stability for nearly integrable hamiltonian systems with unconditionally slow aperiodic time dependence. <i>Regular and Chaotic Dynamics</i> , 2014, 19, 363-373.	0.8	7
93	Multiple transition states and roaming in ion-molecule reactions: A phase space perspective. <i>Chemical Physics Letters</i> , 2014, 592, 282-287.	2.6	42
94	Barriers to transport in aperiodically time-dependent two-dimensional velocity fields: Nekhoroshev's theorem and "Nearly Invariant" tori. <i>Nonlinear Processes in Geophysics</i> , 2014, 21, 165-185.	1.3	17
95	Lagrangian descriptors: A method for revealing phase space structures of general time dependent dynamical systems. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2013, 18, 3530-3557.	3.3	171
96	Bond breaking in a Morse chain under tension: Fragmentation patterns, higher index saddles, and bond healing. <i>Journal of Chemical Physics</i> , 2013, 138, 134118.	3.0	17
97	Nonstatistical dynamics on potentials exhibiting reaction path bifurcations and valley-ridge inflection points. <i>Journal of Chemical Physics</i> , 2013, 139, 154108.	3.0	48
98	BIFURCATIONS OF NORMALLY HYPERBOLIC INVARIANT MANIFOLDS IN ANALYTICALLY TRACTABLE MODELS AND CONSEQUENCES FOR REACTION DYNAMICS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2013, 23, 1330043.	1.7	17
99	Isomerization dynamics of a buckled nanobeam. <i>Physical Review E</i> , 2012, 86, 056218.	2.1	18
100	Eulerian indicators under continuously varying conditions. <i>Physics of Fluids</i> , 2012, 24, .	4.0	10
101	A Lagrangian description of transport associated with a front-eddy interaction: Application to data from the North-Western Mediterranean Sea. <i>Physica D: Nonlinear Phenomena</i> , 2011, 240, 282-304.	2.8	24
102	Index k saddles and dividing surfaces in phase space with applications to isomerization dynamics. <i>Journal of Chemical Physics</i> , 2011, 134, 244105.	3.0	38
103	Optimizing mixing in channel flows: kinematic aspects associated with secondary flows in the cross-section. <i>Microfluidics and Nanofluidics</i> , 2011, 10, 249-262.	2.2	8
104	Optimizing mixing in lid-driven flow designs through predictions from Eulerian indicators. <i>Physics of Fluids</i> , 2011, 23, 082005.	4.0	10
105	Coherent structures and chaotic advection in three dimensions. <i>Journal of Fluid Mechanics</i> , 2010, 654, 1-4.	3.4	27
106	Geometrical models of the phase space structures governing reaction dynamics. <i>Regular and Chaotic Dynamics</i> , 2010, 15, 1-39.	0.8	34
107	Periodic-orbit formula for quantum reactions through transition states. <i>Physical Review A</i> , 2010, 82, .	2.5	1
108	Finite-time Lagrangian transport analysis: stable and unstable manifolds of hyperbolic trajectories and finite-time Lyapunov exponents. <i>Nonlinear Processes in Geophysics</i> , 2010, 17, 1-36.	1.3	78

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109	Phase space structure and dynamics for the Hamiltonian isokinetic thermostat. Journal of Chemical Physics, 2010, 133, 014105.	3.0	9
110	A Periodic Orbit Formula for Quantum Reactions Through Transition States. , 2010, , .		0
111	The flux-flux correlation function for anharmonic barriers. Journal of Chemical Physics, 2010, 133, 244113.	3.0	5
112	Mixing by cutting and shuffling. Europhysics Letters, 2010, 91, 20003.	2.0	30
113	Quantum Theory of Reactive Scattering in Phase Space. Advances in Quantum Chemistry, 2010, , 269-332.	0.8	13
114	Bernoulli linked-twist maps in the plane. Dynamical Systems, 2010, 25, 483-499.	0.4	7
115	<i>Preface</i> "Nonlinear processes in oceanic and atmospheric flows". Nonlinear Processes in Geophysics, 2010, 17, 283-285.	1.3	0
116	Microcanonical rates, gap times, and phase space dividing surfaces. Journal of Chemical Physics, 2009, 130, 164118.	3.0	62
117	Phase-space geometry and reaction dynamics near index 2 saddles. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 205101.	2.1	36
118	A Quantum Version of Wigner's Transition State Theory. Few-Body Systems, 2009, 45, 203-206.	1.5	5
119	An adaptive method for computing invariant manifolds in non-autonomous, three-dimensional dynamical systems. Physica D: Nonlinear Phenomena, 2009, 238, 1625-1657.	2.8	39
120	The quantum normal form approach to reactive scattering: The cumulative reaction probability for collinear exchange reactions. Journal of Chemical Physics, 2009, 131, 144103.	3.0	8
121	Eulerian indicators for predicting and optimizing mixing quality. New Journal of Physics, 2009, 11, 075031.	2.9	20
122	Impenetrable barriers in phase space for deterministic thermostats. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 042001.	2.1	12
123	Wigner's dynamical transition state theory in phase space: classical and quantum. Nonlinearity, 2008, 21, R1-R118.	1.4	161
124	Lagrangian Transport through an Ocean Front in the Northwestern Mediterranean Sea. Journal of Physical Oceanography, 2008, 38, 1222-1237.	1.7	56
125	Linked twist map formalism in two and three dimensions applied to mixing in tumbled granular flows. Journal of Fluid Mechanics, 2008, 602, 129-174.	3.4	36
126	ENSO dynamics in current climate models: an investigation using nonlinear dimensionality reduction. Nonlinear Processes in Geophysics, 2008, 15, 339-363.	1.3	11

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127	DNA Microarrays: Design Principles for Maximizing Ergodic, Chaotic Mixing. <i>Small</i> , 2007, 3, 202-218.	10.0	30
128	Ergodicity, mixing and the Bernoulli property in a DNA hybridization microarray. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 1101303-1101304.	0.2	0
129	Stretching fields and lines in the transport dynamics of the Western Mediterranean. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 1101307-1101308.	0.2	0
130	Response to "Comment on "Identification of low order manifolds: Validating the algorithm of Maas and Pope"[<i>Chaos</i> 16, 048101 (2006)]. <i>Chaos</i> , 2006, 16, 048102.	2.5	0
131	A comparison of methods for interpolating chaotic flows from discrete velocity data. <i>Computers and Fluids</i> , 2006, 35, 416-428.	2.5	29
132	Lobe dynamics in a kinematic model of a meandering jet. I. Geometry and statistics of transport and lobe dynamics with accelerated convergence. <i>Physica D: Nonlinear Phenomena</i> , 2006, 223, 7-25.	2.8	13
133	A tutorial on dynamical systems concepts applied to Lagrangian transport in oceanic flows defined as finite time data sets: Theoretical and computational issues. <i>Physics Reports</i> , 2006, 437, 55-124.	25.6	111
134	Synoptic Lagrangian maps: Application to surface transport in Monterey Bay. <i>Journal of Marine Research</i> , 2006, 64, 221-247.	0.3	36
135	Efficient Computation of Transition State Resonances and Reaction Rates from a Quantum Normal Form. <i>Physical Review Letters</i> , 2006, 96, 218302.	7.8	31
136	A formula to compute the microcanonical volume of reactive initial conditions in transition state theory. <i>Journal of Physics A</i> , 2005, 38, L759-L768.	1.6	30
137	Escape from planetary neighbourhoods. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 361, 763-775.	4.4	37
138	Efficient Procedure to Compute the Microcanonical Volume of Initial Conditions that Lead to Escape Trajectories from a Multidimensional Potential Well. <i>Physical Review Letters</i> , 2005, 95, 084301.	7.8	45
139	THE DYNAMICAL SYSTEMS APPROACH TO LAGRANGIAN TRANSPORT IN OCEANIC FLOWS. <i>Annual Review of Fluid Mechanics</i> , 2005, 37, 295-328.	25.0	223
140	Computation of hyperbolic trajectories and their stable and unstable manifolds for oceanographic flows represented as data sets. <i>Nonlinear Processes in Geophysics</i> , 2004, 11, 17-33.	1.3	61
141	APPLIED PHYSICS: Designing Optimal Micromixers. <i>Science</i> , 2004, 305, 485-486.	12.6	116
142	Direct construction of a dividing surface of minimal flux for multi-degree-of-freedom systems that cannot be recrossed. <i>Journal of Physics A</i> , 2004, 37, L435-L445.	1.6	97
143	Phase space conduits for reaction in multidimensional systems: HCN isomerization in three dimensions. <i>Journal of Chemical Physics</i> , 2004, 121, 6207-6225.	3.0	106
144	Foundations of chaotic mixing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2004, 362, 937-970.	3.4	294

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145	A computational procedure to detect a new type of high-dimensional chaotic saddle and its application to the 3D Hill's problem. <i>Journal of Physics A</i> , 2004, 37, L257-L265.	1.6	50
146	Introduction: mixing in microfluidics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2004, 362, 923-935.	3.4	376
147	Time-frequency analysis of chaotic systems. <i>Physica D: Nonlinear Phenomena</i> , 2003, 181, 171-196.	2.8	129
148	Computation of stable and unstable manifolds of hyperbolic trajectories in two-dimensional, aperiodically time-dependent vector fields. <i>Physica D: Nonlinear Phenomena</i> , 2003, 182, 188-222.	2.8	82
149	Chaos-assisted capture of irregular moons. <i>Nature</i> , 2003, 423, 264-267.	27.8	88
150	Existence and Computation of Hyperbolic Trajectories of Aperiodically Time Dependent Vector Fields and Their Approximations. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2003, 13, 1449-1457.	1.7	35
151	The geometry of reaction dynamics. <i>Nonlinearity</i> , 2002, 15, 957-992.	1.4	241
152	Transport enhancement mechanisms in open cavities. <i>Journal of Fluid Mechanics</i> , 2002, 452, 199-229.	3.4	54
153	Distinguished hyperbolic trajectories in time-dependent fluid flows: analytical and computational approach for velocity fields defined as data sets. <i>Nonlinear Processes in Geophysics</i> , 2002, 9, 237-263.	1.3	104
154	Intergyre transport in a wind-driven, quasigeostrophic double gyre: An application of lobe dynamics. <i>Nonlinear Processes in Geophysics</i> , 2001, 8, 69-94.	1.3	42
155	On Roughness of Exponential Dichotomy. <i>Journal of Mathematical Analysis and Applications</i> , 2001, 262, 39-49.	1.0	30
156	TIME-FREQUENCY ANALYSIS OF CLASSICAL TRAJECTORIES OF POLYATOMIC MOLECULES. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2001, 11, 1359-1380.	1.7	114
157	Impenetrable Barriers in Phase-Space. <i>Physical Review Letters</i> , 2001, 86, 5478-5481.	7.8	184
158	Intergyre transport in a wind-driven, quasigeostrophic double gyre: An application of lobe dynamics. <i>Nonlinear Processes in Geophysics</i> , 2000, 7, 59-85.	1.3	50
159	Title is missing!. <i>Regular and Chaotic Dynamics</i> , 2000, 5, 227.	0.8	11
160	Residence-time distributions for chaotic flows in pipes. <i>Chaos</i> , 1999, 9, 173-182.	2.5	17
161	Chaos in the dynamics generated by sequences of maps, with applications to chaotic advection in flows with aperiodic time dependence. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1999, 50, 585.	1.4	37
162	Identification of low order manifolds: Validating the algorithm of Maas and Pope. <i>Chaos</i> , 1999, 9, 108-123.	2.5	48

#	ARTICLE	IF	CITATIONS
163	A method for visualization of invariant sets of dynamical systems based on the ergodic partition. Chaos, 1999, 9, 213-218.	2.5	116
164	Phase Space Geometry and Dynamics Associated with the 1:2:2 Resonance. , 1999, , 254-269.		1
165	Title is missing!. Regular and Chaotic Dynamics, 1999, 4, 39.	0.8	4
166	Geometric Structures, Lobe Dynamics, and Lagrangian Transport in Flows with Aperiodic Time-Dependence, with Applications to Rossby Wave Flow. Journal of Nonlinear Science, 1998, 8, 401-456.	2.1	106
167	Existence of exponentially small separatrix splittings and homoclinic connections between whiskered tori in weakly hyperbolic near-integrable Hamiltonian systems. Physica D: Nonlinear Phenomena, 1998, 114, 3-80.	2.8	25
168	Regular and chaotic particle motion near a helical vortex filament. Physica D: Nonlinear Phenomena, 1998, 111, 179-201.	2.8	16
169	Patchiness: A New Diagnostic for Lagrangian Trajectory Analysis in Time-Dependent Fluid Flows. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 1053-1093.	1.7	43
170	Diffusion of a passive scalar from a no-slip boundary into a two-dimensional chaotic advection field. Journal of Fluid Mechanics, 1998, 372, 119-163.	3.4	25
171	Mixing and chaotic fluid particle trajectories in the flow around two leap-frogging vortex rings. , 1998, , 482-487.		0
172	Lagrangian transport and chaos in the near wake of the flow around an obstacle: a numerical implementation of lobe dynamics. Nonlinear Processes in Geophysics, 1997, 4, 125-136.	1.3	28
173	KAM theory near multiplicity one resonant surfaces in perturbations of a-priori stable hamiltonian systems. Journal of Nonlinear Science, 1997, 7, 177-209.	2.1	19
174	Homoclinic orbits and chaos in discretized perturbed NLS systems: Part II. Symbolic dynamics. Journal of Nonlinear Science, 1997, 7, 315-370.	2.1	27
175	Homoclinic Orbits and Chaos in Discretized Perturbed NLS Systems: Part II. Symbolic Dynamics. Journal of Nonlinear Science, 1997, 7, 315-370.	2.1	5
176	Maximal Effective Diffusivity for Time-Periodic Incompressible Fluid Flows. SIAM Journal on Applied Mathematics, 1996, 56, 40-56.	1.8	22
177	Fluid Exchange across a Meandering Jet Quasiperiodic Variability. Journal of Physical Oceanography, 1996, 26, 1176-1188.	1.7	60
178	Geometry and chaos near resonant equilibria of 3-DOF Hamiltonian systems. Physica D: Nonlinear Phenomena, 1996, 90, 319-365.	2.8	60
179	Persistent homoclinic orbits for a perturbed nonlinear Schrödinger equation. Communications on Pure and Applied Mathematics, 1996, 49, 1175-1255.	3.1	88
180	Nonlinear stability of one-layer geostrophic fronts. Physica D: Nonlinear Phenomena, 1996, 98, 335-342.	2.8	0

#	ARTICLE	IF	CITATIONS
181	Homoclinic Orbits in a Four Dimensional Model of a Perturbed NLS Equation: A Geometric Singular Perturbation Study. <i>Dynamics Reported</i> , 1996, , 190-287.	0.6	13
182	N-pulse homoclinic orbits in perturbations of resonant hamiltonian systems. <i>Archive for Rational Mechanics and Analysis</i> , 1995, 130, 25-101.	2.4	91
183	Multi-pulse jumping orbits and homoclinic trees in a modal truncation of the damped-forced nonlinear Schrödinger equation. <i>Physica D: Nonlinear Phenomena</i> , 1995, 85, 311-347.	2.8	87
184	The dynamics of elliptically shaped regions of uniform vorticity in time-periodic, linear external velocity fields. <i>Fluid Dynamics Research</i> , 1995, 15, 205-235.	1.3	16
185	Nonergodicity, accelerator modes, and asymptotic quadratic-in-time diffusion in a class of volume-preserving maps. <i>Physical Review E</i> , 1995, 52, 3215-3217.	2.1	3
186	Fluid Particle Dynamics and Stokes Drift in Gravity and Capillary Waves Generated by the Faraday Instability. , 1995, , 141-160.		3
187	Fluid particle dynamics and stokes drift in gravity and capillary waves generated by the faraday instability. <i>Nonlinear Dynamics</i> , 1995, 8, 141-160.	5.2	6
188	On the dynamical origin of asymptotic t^2 dispersion of a nondiffusive tracer in incompressible laminar flows. <i>Physics of Fluids</i> , 1994, 6, 2227-2229.	4.0	22
189	On the integrability and perturbation of three-dimensional fluid flows with symmetry. <i>Journal of Nonlinear Science</i> , 1994, 4, 157-194.	2.1	129
190	Invariant manifold templates for chaotic advection. <i>Chaos, Solitons and Fractals</i> , 1994, 4, 749-868.	5.1	88
191	KAM tori are very sticky: rigorous lower bounds on the time to move away from an invariant Lagrangian torus with linear flow. <i>Physica D: Nonlinear Phenomena</i> , 1994, 71, 102-121.	2.8	64
192	Normally Hyperbolic Invariant Manifolds in Dynamical Systems. <i>Applied Mathematical Sciences (Switzerland)</i> , 1994, , .	0.8	298
193	Orbits homoclinic to resonances: The Hamiltonian case. <i>Physica D: Nonlinear Phenomena</i> , 1993, 66, 298-346.	2.8	95
194	On the existence of chaos in a class of two-degree-of-freedom, damped, strongly parametrically forced mechanical systems with broken $O(2)$ symmetry. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1993, 44, 201-248.	1.4	52
195	An analytical study of transport in Stokes flows exhibiting large-scale chaos in the eccentric journal bearing. <i>Journal of Fluid Mechanics</i> , 1993, 253, 211.	3.4	50
196	Statistical relaxation under nonturbulent chaotic flows: Non-Gaussian high-stretch tails of finite-time Lyapunov exponent distributions. <i>Physical Review Letters</i> , 1993, 70, 275-278.	7.8	36
197	Dynamics associated with a quasiperiodically forced Morse oscillator: Application to molecular dissociation. <i>Physical Review A</i> , 1992, 45, 4803-4827.	2.5	27
198	Orbits homoclinic to resonances, with an application to chaos in a model of the forced and damped sine-Gordon equation. <i>Physica D: Nonlinear Phenomena</i> , 1992, 57, 185-225.	2.8	199

#	ARTICLE	IF	CITATIONS
199	The Dynamics Associated with the Chaotic Tangles of Two Dimensional Quasiperiodic Vector Fields: Theory and Applications. The IMA Volumes in Mathematics and Its Applications, 1992, , 47-138.	0.5	7
200	Chaotic Transport in Dynamical Systems. Interdisciplinary Applied Mathematics, 1992, , .	0.3	326
201	Chaotic transport in the homoclinic and heteroclinic tangle regions of quasiperiodically forced two-dimensional dynamical systems. Nonlinearity, 1991, 4, 775-819.	1.4	66
202	On the dynamics of suspended microstructure in unsteady, spatially inhomogeneous, two-dimensional fluid flows. Journal of Fluid Mechanics Digital Archive, 1991, 228, 207.	0.6	14
203	A global study of enhanced stretching and diffusion in chaotic tangles. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1039-1050.	1.6	53
204	Strong flows of dilute suspensions of microstructure. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1438-1438.	1.6	1
205	Transport in two-dimensional maps: Concepts, examples, and a comparison of the theory of Rom-Kedar and Wiggins with the Markov model of MacKay, Meiss, Ott, and Percival. Physica D: Nonlinear Phenomena, 1991, 51, 248-266.	2.8	22
206	Transport of a passive tracer in time-dependent Rayleigh-Bénard convection. Physica D: Nonlinear Phenomena, 1991, 51, 472-481.	2.8	7
207	Lobe area in adiabatic Hamiltonian systems. Physica D: Nonlinear Phenomena, 1991, 51, 205-212.	2.8	27
208	A commentary ?on the periodic solutions of a forced second-order equation? by S. P. Hastings and J. B. McLeod. Journal of Nonlinear Science, 1991, 1, 247-253.	2.1	5
209	Chaotic advection in a Rayleigh-Bénard flow. Physical Review A, 1991, 43, 774-797.	2.5	98
210	Transport in two-dimensional maps. Archive for Rational Mechanics and Analysis, 1990, 109, 239-298.	2.4	183
211	On the geometry of transport in phase space I. Transport in k-degree-of-freedom Hamiltonian systems, 2â‰°k<âˆž. Physica D: Nonlinear Phenomena, 1990, 44, 471-501.	2.8	91
212	A simple dynamical system that mimics openâ€flow turbulence. Physics of Fluids A, Fluid Dynamics, 1990, 2, 1983-2001.	1.6	7
213	An analytical study of transport, mixing and chaos in an unsteady vortical flow. Journal of Fluid Mechanics, 1990, 214, 347.	3.4	432
214	Introduction to Applied Nonlinear Dynamical Systems and Chaos. Texts in Applied Mathematics, 1990, , .	0.4	1,715
215	The bifurcation to homoclinic tori in the quasiperiodically forced duffing oscillator. Physica D: Nonlinear Phenomena, 1989, 34, 169-182.	2.8	33
216	Stirred but not mixed. Nature, 1988, 333, 395-396.	27.8	18

#	ARTICLE	IF	CITATIONS
217	Chaotic dynamics of a whirling pendulum. <i>Physica D: Nonlinear Phenomena</i> , 1988, 31, 190-211.	2.8	25
218	Adiabatic chaos. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988, 128, 339-342.	2.1	13
219	On the Detection and Dynamical Consequences of Orbits Homoclinic to Hyperbolic Periodic Orbits and Normally Hyperbolic Invariant Tori in a Class of Ordinary Differential Equations. <i>SIAM Journal on Applied Mathematics</i> , 1988, 48, 262-285.	1.8	58
220	Global Bifurcations and Chaos. <i>Applied Mathematical Sciences (Switzerland)</i> , 1988, , .	0.8	823
221	Chaos and Three-Dimensional Horseshoes in Slowly Varying Oscillators. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1988, 55, 959-968.	2.2	45
222	Chaotic Motions of a Torsional Vibration Absorber. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1988, 55, 952-958.	2.2	32
223	Periodic Orbits in Slowly Varying Oscillators. <i>SIAM Journal on Mathematical Analysis</i> , 1987, 18, 592-611.	1.9	41
224	Homoclinic Orbits in Slowly Varying Oscillators. <i>SIAM Journal on Mathematical Analysis</i> , 1987, 18, 612-629.	1.9	66
225	Chaos in the quasiperiodically forced duffing oscillator. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 124, 138-142.	2.1	86
226	Fluid mixing and dynamical systems. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 1987, 2, 179-190.	0.4	11
227	Slowly varying oscillators. , 1985, , .		2