

# Darryl D Holm

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/652128/publications.pdf>

Version: 2024-02-01

251  
papers

13,554  
citations

44066

48  
h-index

24254

110  
g-index

254  
all docs

254  
docs citations

254  
times ranked

3237  
citing authors

#	ARTICLE	IF	CITATIONS
1	An integrable shallow water equation with peaked solitons. <i>Physical Review Letters</i> , 1993, 71, 1661-1664.	7.8	2,793
2	Nonlinear stability of fluid and plasma equilibria. <i>Physics Reports</i> , 1985, 123, 1-116.	25.6	753
3	A New Integrable Shallow Water Equation. <i>Advances in Applied Mechanics</i> , 1994, , 1-33.	2.3	720
4	The Euler-Poincaré Equations and Semidirect Products with Applications to Continuum Theories. <i>Advances in Mathematics</i> , 1998, 137, 1-81.	1.1	711
5	The Navier-Stokes-alpha model of fluid turbulence. <i>Physica D: Nonlinear Phenomena</i> , 2001, 152-153, 505-519.	2.8	311
6	An Integrable Shallow Water Equation with Linear and Nonlinear Dispersion. <i>Physical Review Letters</i> , 2001, 87, 194501.	7.8	294
7	Title is missing!. <i>Journal of Dynamics and Differential Equations</i> , 2002, 14, 1-35.	1.9	293
8	Camassa-Holm Equations as a Closure Model for Turbulent Channel and Pipe Flow. <i>Physical Review Letters</i> , 1998, 81, 5338-5341.	7.8	272
9	Camassa-Holm, Korteweg-de Vries-5 and other asymptotically equivalent equations for shallow water waves. <i>Fluid Dynamics Research</i> , 2003, 33, 73-95.	1.3	241
10	Euler-Poincaré Models of Ideal Fluids with Nonlinear Dispersion. <i>Physical Review Letters</i> , 1998, 80, 4173-4176.	7.8	240
11	Wave Structure and Nonlinear Balances in a Family of Evolutionary PDEs. <i>SIAM Journal on Applied Dynamical Systems</i> , 2003, 2, 323-380.	1.6	223
12	On a Leray model of turbulence. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2005, 461, 629-649.	2.1	215
13	Low-dimensional behaviour in the complex Ginzburg-Landau equation. <i>Nonlinearity</i> , 1988, 1, 279-309.	1.4	200
14	The geometry of peaked solitons and billiard solutions of a class of integrable PDE's. <i>Letters in Mathematical Physics</i> , 1994, 32, 137-151.	1.1	184
15	On asymptotically equivalent shallow water wave equations. <i>Physica D: Nonlinear Phenomena</i> , 2004, 190, 1-14.	2.8	182
16	Regularization modeling for large-eddy simulation. <i>Physics of Fluids</i> , 2003, 15, L13-L16.	4.0	161
17	Variational principles for stochastic fluid dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015, 471, 20140963.	2.1	155
18	Direct numerical simulations of the Navier-Stokes alpha model. <i>Physica D: Nonlinear Phenomena</i> , 1999, 133, 66-83.	2.8	150

#	ARTICLE	IF	CITATIONS
19	Richardson Number Criterion for the Nonlinear Stability of Three-Dimensional Stratified Flow. <i>Physical Review Letters</i> , 1984, 52, 2352-2355.	7.8	146
20	Nonlinear balance and exchange of stability in dynamics of solitons, peakons, ramps/cliffs and leftons in a 1+1 nonlinear evolutionary PDE. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 308, 437-444.	2.1	141
21	Poisson brackets and clebsch representations for magnetohydrodynamics, multifluid plasmas, and elasticity. <i>Physica D: Nonlinear Phenomena</i> , 1983, 6, 347-363.	2.8	132
22	Fluctuation effects on 3D Lagrangian mean and Eulerian mean fluid motion. <i>Physica D: Nonlinear Phenomena</i> , 1999, 133, 215-269.	2.8	119
23	Singular solutions of a modified two-component Camassa-Holm equation. <i>Physical Review E</i> , 2009, 79, 016601.	2.1	113
24	Intermittency in the Joint Cascade of Energy and Helicity. <i>Physical Review Letters</i> , 2003, 90, 214503.	7.8	91
25	Hamiltonian chaos in nonlinear optical polarization dynamics. <i>Physics Reports</i> , 1990, 187, 281-367.	25.6	89
26	Traveling Wave Solutions for a Class of One-Dimensional Nonlinear Shallow Water Wave Models. <i>Journal of Dynamics and Differential Equations</i> , 2004, 16, 167-178.	1.9	87
27	The Complex Geometry of Weak Piecewise Smooth Solutions of Integrable Nonlinear PDE's of Shallow Water and Dym Type. <i>Communications in Mathematical Physics</i> , 2001, 221, 197-227.	2.2	81
28	Simultaneous Multi-scale Registration Using Large Deformation Diffeomorphic Metric Mapping. <i>IEEE Transactions on Medical Imaging</i> , 2011, 30, 1746-1759.	8.9	75
29	Solution Properties of a 3D Stochastic Euler Fluid Equation. <i>Journal of Nonlinear Science</i> , 2019, 29, 813-870.	2.1	74
30	Resonant interactions in rotating homogeneous three-dimensional turbulence. <i>Journal of Fluid Mechanics</i> , 2005, 542, 139.	3.4	71
31	Quaternions and particle dynamics in the Euler fluid equations. <i>Nonlinearity</i> , 2006, 19, 1969-1983.	1.4	71
32	Numerically Modeling Stochastic Lie Transport in Fluid Dynamics. <i>Multiscale Modeling and Simulation</i> , 2019, 17, 192-232.	1.6	65
33	Modeling Mesoscale Turbulence in the Barotropic Double-Gyre Circulation. <i>Journal of Physical Oceanography</i> , 2003, 33, 2355-2365.	1.7	64
34	The ideal Craik-Leibovich equations. <i>Physica D: Nonlinear Phenomena</i> , 1996, 98, 415-441.	2.8	63
35	The Maxwell-Vlasov equations in Euler-Poincaré form. <i>Journal of Mathematical Physics</i> , 1998, 39, 3138-3157.	1.1	62
36	Stepwise Precession of the Resonant Swinging Spring. <i>SIAM Journal on Applied Dynamical Systems</i> , 2002, 1, 44-64.	1.6	62

#	ARTICLE	IF	CITATIONS
37	Soliton dynamics in computational anatomy. <i>NeuroImage</i> , 2004, 23, S170-S178.	4.2	61
38	Formation of clumps and patches in self-aggregation of finite-size particles. <i>Physica D: Nonlinear Phenomena</i> , 2006, 220, 183-196.	2.8	61
39	Long-time effects of bottom topography in shallow water. <i>Physica D: Nonlinear Phenomena</i> , 1996, 98, 258-286.	2.8	60
40	Averaged Lagrangians and the mean effects of fluctuations in ideal fluid dynamics. <i>Physica D: Nonlinear Phenomena</i> , 2002, 170, 253-286.	2.8	56
41	Aggregation of Finite-Size Particles with Variable Mobility. <i>Physical Review Letters</i> , 2005, 95, 226106.	7.8	56
42	Nonlinear stability conditions and a priori estimates for barotropic hydrodynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1983, 98, 15-21.	2.1	54
43	Lagrangian averages, averaged Lagrangians, and the mean effects of fluctuations in fluid dynamics. <i>Chaos</i> , 2002, 12, 518-530.	2.5	53
44	The Euler-Poincaré theory of metamorphosis. <i>Quarterly of Applied Mathematics</i> , 2009, 67, 661-685.	0.7	53
45	Leray and LANS- $\epsilon$ modelling of turbulent mixing. <i>Journal of Turbulence</i> , 2006, 7, N10.	1.4	52
46	Quantum computer on a class of one-dimensional Ising systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 193, 444-450.	2.1	51
47	Complexified dynamical systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, F793-F804.	2.1	51
48	Complex trajectories of a simple pendulum. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, F81-F89.	2.1	48
49	The Momentum Map Representation of Images. <i>Journal of Nonlinear Science</i> , 2011, 21, 115-150.	2.1	48
50	Poisson structures of superfluids. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1982, 91, 425-430.	2.1	47
51	Symmetry Reduced Dynamics of Charged Molecular Strands. <i>Archive for Rational Mechanics and Analysis</i> , 2010, 197, 811-902.	2.4	47
52	Multiple lie-poisson structures, reductions, and geometric phases for the Maxwell-Bloch travelling wave equations. <i>Journal of Nonlinear Science</i> , 1992, 2, 241-262.	2.1	46
53	A Class of Equations with Peakon and Pulson Solutions (with an Appendix by Harry Braden and John) <i>Tj ETQq1 1 0.784314 rgBT /Over</i>	1.3	46
54	One-dimensional closure models for three-dimensional incompressible viscoelastic free jets: von Kármán flow geometry and elliptical cross-section. <i>Journal of Fluid Mechanics</i> , 1988, 196, 241-262.	3.4	45

#	ARTICLE	IF	CITATIONS
55	Multi-component generalizations of the CH equation: geometrical aspects, peakons and numerical examples. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 492001.	2.1	45
56	Invariant Higher-Order Variational Problems. <i>Communications in Mathematical Physics</i> , 2012, 309, 413-458.	2.2	44
57	Oscillation center theory and ponderomotive stabilization of low-frequency plasma modes. <i>Physics of Fluids</i> , 1986, 29, 1908.	1.4	43
58	Momentum maps and measure-valued solutions (peakons, filaments, and sheets) for the EPDiff equation. , 2005, , 203-235.		43
59	Stochastic partial differential fluid equations as a diffusive limit of deterministic Lagrangian multi-time dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170388.	2.1	43
60	Geometric Mechanics. , 2008, , .		43
61	Self-consistent Hamiltonian dynamics of wave mean-flow interaction for a rotating stratified incompressible fluid. <i>Physica D: Nonlinear Phenomena</i> , 1996, 98, 343-378.	2.8	42
62	Geometric Mechanics. , 2011, , .		42
63	Canonical maps between poisson brackets in eulerian and Lagrangian descriptions of continuum mechanics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1983, 98, 389-395.	2.1	41
64	Hall magnetohydrodynamics: Conservation laws and Lyapunov stability. <i>Physics of Fluids</i> , 1987, 30, 1310.	1.4	39
65	Zero-helicity Lagrangian kinematics of three-dimensional advection. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 1033-1038.	1.6	38
66	On billiard solutions of nonlinear PDEs. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 264, 171-178.	2.1	38
67	Nonlinear stability analysis of inviscid flows in three dimensions: Incompressible fluids and barotropic fluids. <i>Physics of Fluids</i> , 1987, 30, 3369.	1.4	37
68	Exact Lyapunov Dimension of the Universal Attractor for the Complex Ginzburg-Landau Equation. <i>Physical Review Letters</i> , 1987, 59, 2911-2914.	7.8	36
69	Noncanonical Hamiltonian formulation of ideal magnetohydrodynamics. <i>Physica D: Nonlinear Phenomena</i> , 1983, 7, 330-333.	2.8	35
70	Long-time shallow-water equations with a varying bottom. <i>Journal of Fluid Mechanics</i> , 1997, 349, 173-189.	3.4	35
71	The Hamiltonian structure of classical chromohydrodynamics. <i>Physica D: Nonlinear Phenomena</i> , 1983, 6, 179-194.	2.8	34
72	Hamiltonian formulation of the baroclinic quasigeostrophic fluid equations. <i>Physics of Fluids</i> , 1986, 29, 7.	1.4	34

#	ARTICLE	IF	CITATIONS
73	Extended-geostrophic Hamiltonian models for rotating shallow water motion. <i>Physica D: Nonlinear Phenomena</i> , 1996, 98, 229-248.	2.8	34
74	Integrable vs. nonintegrable geodesic soliton behavior. <i>Physica D: Nonlinear Phenomena</i> , 2001, 150, 237-263.	2.8	34
75	Transient Vortex Events in the Initial Value Problem for Turbulence. <i>Physical Review Letters</i> , 2002, 88, 244501.	7.8	33
76	Implementation of the LANS- $\beta$ turbulence model in a primitive equation ocean model. <i>Journal of Computational Physics</i> , 2008, 227, 5691-5716.	3.8	33
77	Gauge-invariant poisson brackets for chromohydrodynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1982, 90, 281-283.	2.1	32
78	Euler-alpha and vortex blob regularization of vortex filament and vortex sheet motion. <i>Journal of Fluid Mechanics</i> , 2006, 555, 149.	3.4	32
79	Hamiltonian formalism for general-relativistic adiabatic fluids. <i>Physica D: Nonlinear Phenomena</i> , 1985, 17, 1-36.	2.8	31
80	Geometric Mechanics. , 2011, , .		31
81	Hamiltonian balance equations. <i>Physica D: Nonlinear Phenomena</i> , 1996, 98, 379-414.	2.8	30
82	The analogy between spin glasses and Yang-Mills fluids. <i>Journal of Mathematical Physics</i> , 1988, 29, 21-30.	1.1	28
83	Three regularization models of the Navier-Stokes equations. <i>Physics of Fluids</i> , 2008, 20, .	4.0	28
84	Stochastic Geometric Models with Non-stationary Spatial Correlations in Lagrangian Fluid Flows. <i>Journal of Nonlinear Science</i> , 2018, 28, 873-904.	2.1	28
85	Stochastic discrete Hamiltonian variational integrators. <i>BIT Numerical Mathematics</i> , 2018, 58, 1009-1048.	2.0	28
86	Relativistic fluid dynamics as a Hamiltonian system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1984, 101, 23-26.	2.1	27
87	Hamilton's principle for quasigeostrophic motion. <i>Physics of Fluids</i> , 1998, 10, 800-806.	4.0	27
88	Higher order Lagrange-Poincaré and Hamilton-Poincaré reductions. <i>Bulletin of the Brazilian Mathematical Society</i> , 2011, 42, 579-606.	0.8	27
89	Invariant Higher-Order Variational Problems II. <i>Journal of Nonlinear Science</i> , 2012, 22, 553-597.	2.1	27
90	Noise and Dissipation on Coadjoint Orbits. <i>Journal of Nonlinear Science</i> , 2018, 28, 91-145.	2.1	27

#	ARTICLE	IF	CITATIONS
91	The Lie-transformed Vlasov action principle: Relativistically covariant wave propagation and self-consistent ponderomotive effects. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1984, 105, 277-279.	2.1	25
92	Hamiltonian dynamics of a charged fluid, including electro- and magnetohydrodynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1986, 114, 137-141.	2.1	25
93	Lagrange-Poincaré field equations. <i>Journal of Geometry and Physics</i> , 2011, 61, 2120-2146.	1.4	25
94	Dispersive barotropic equations for stratified mesoscale ocean dynamics. <i>Physica D: Nonlinear Phenomena</i> , 1992, 60, 1-15.	2.8	24
95	Highly turbulent solutions of the Lagrangian-averaged Navier-Stokes $\pm$ model and their large-eddy-simulation potential. <i>Physical Review F</i> , 2007, 76, 056310.	2.1	24
96	Vlasov moments, integrable systems and singular solutions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 1024-1033.	2.1	24
97	<i>Geometric Mechanics</i> , 2008, , .		24
98	Lyapunov stability analysis of magnetohydrodynamic plasma equilibria with axisymmetric toroidal flow. <i>Physics of Fluids</i> , 1988, 31, 1930.	1.4	23
99	Elliptical vortices and integrable Hamiltonian dynamics of the rotating shallow-water equations. <i>Journal of Fluid Mechanics</i> , 1991, 227, 393-406.	3.4	23
100	<i>Euler-Poincaré Dynamics of Perfect Complex Fluids</i> , 2002, , 169-180.		23
101	Continuous and Discrete Clebsch Variational Principles. <i>Foundations of Computational Mathematics</i> , 2009, 9, 221-242.	2.5	23
102	Variational principles for stochastic soliton dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150827.	2.1	23
103	Wave breaking for the Stochastic Camassa-Holm equation. <i>Physica D: Nonlinear Phenomena</i> , 2018, 376-377, 138-143.	2.8	23
104	Hamiltonian techniques for relativistic fluid dynamics and stability theory. <i>Lecture Notes in Mathematics</i> , 1989, , 65-151.	0.2	22
105	Euler-Poincaré formulation of hybrid plasma models. <i>Communications in Mathematical Sciences</i> , 2012, 10, 191-222.	1.0	22
106	Poisson structures of superconductors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1983, 93, 177-181.	2.1	21
107	Superfluid plasmas: Multivelocity nonlinear hydrodynamics of superfluid solutions with charged condensates coupled electromagnetically. <i>Physical Review A</i> , 1987, 36, 3947-3956.	2.5	21
108	Hamiltonian structure for two-dimensional hydrodynamics with nonlinear dispersion. <i>Physics of Fluids</i> , 1988, 31, 2371.	1.4	21

#	ARTICLE	IF	CITATIONS
109	Integrable and chaotic polarization dynamics in nonlinear optical beams. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 137, 355-364.	2.1	21
110	Homoclinic chaos in a laser-matter system. Physica D: Nonlinear Phenomena, 1992, 56, 270-300.	2.8	21
111	Geodesic flows on semidirect-product Lie groups: geometry of singular measure-valued solutions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 457-476.	2.1	21
112	Smooth and peaked solitons of the CH equation. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 434003.	2.1	21
113	The Rotor and the Pendulum. , 1991, , 189-203.		21
114	Crossover-Time in Quantum Boson and Spin Systems. Lecture Notes in Physics Monographs, 1994, , .	0.5	21
115	Lyapunov stability of relativistic fluids and plasmas. Physics of Fluids, 1986, 29, 49.	1.4	20
116	Chaotic laser-matter interaction. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 154, 346-352.	2.1	20
117	Lagrangian particle paths and ortho-normal quaternion frames. Nonlinearity, 2007, 20, 1745-1759.	1.4	20
118	Selective decay by Casimir dissipation in inviscid fluids. Nonlinearity, 2013, 26, 495-524.	1.4	20
119	Circulation and Energy Theorem Preserving Stochastic Fluids. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2020, 150, 2776-2814.	1.2	20
120	Simultaneous Fine and Coarse Diffeomorphic Registration: Application to Atrophy Measurement in Alzheimer's Disease. Lecture Notes in Computer Science, 2010, 13, 610-617.	1.3	20
121	A Particle Filter for Stochastic Advection by Lie Transport: A Case Study for the Damped and Forced Incompressible Two-Dimensional Euler Equation. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 1446-1492.	2.0	20
122	Commutator errors in large-eddy simulation. Journal of Physics A, 2006, 39, 2213-2229.	1.6	19
123	Geometry of Vlasov kinetic moments: A bosonic Fock space for the symmetric Schouten bracket. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 4184-4196.	2.1	19
124	Alpha-modeling Strategy for LES of Turbulent Mixing. , 2002, , 237-278.		19
125	The LANS- $\hat{\pm}$ and Leray turbulence parameterizations in primitive equation ocean modeling. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344009.	2.1	18
126	Hamiltonian theory of relativistic magnetohydrodynamics with anisotropic pressure. Physics of Fluids, 1986, 29, 3889.	1.4	17



#	ARTICLE	IF	CITATIONS
127	Variational principles for Lagrangian-averaged fluid dynamics. <i>Journal of Physics A</i> , 2002, 35, 679-688.	1.6	17
128	Körner's Howarth theorem for the Lagrangian-averaged Navier-Stokes-alpha model of turbulence. <i>Journal of Fluid Mechanics</i> , 2002, 467, 205-214.	3.4	17
129	The dynamics of the gradient of potential vorticity. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 172001.	2.1	17
130	Expansion of a cold ion cloud. <i>Applied Physics Letters</i> , 1981, 38, 519-521.	3.3	16
131	Yang-Mills magnetohydrodynamics: Nonrelativistic theory. <i>Physical Review D</i> , 1984, 30, 2557-2560.	4.7	16
132	Length-scale estimates for the LANS- $\alpha$ equations in terms of the Reynolds number. <i>Physica D: Nonlinear Phenomena</i> , 2006, 220, 69-78.	2.8	16
133	Geometry of Nonadiabatic Quantum Hydrodynamics. <i>Acta Applicandae Mathematicae</i> , 2019, 162, 63-103.	1.0	16
134	Variational principles for spin systems and the Kirchhoff rod. <i>Journal of Geometric Mechanics</i> , 2009, 1, 417-444.	0.8	16
135	Low-noise picosecond soliton transmission by use of concatenated nonlinear amplifying loop mirrors. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1997, 14, 1850.	2.1	15
136	Baroclinic Instabilities of the Two-Layer Quasigeostrophic Alpha Model. <i>Journal of Physical Oceanography</i> , 2005, 35, 1287-1296.	1.7	15
137	Momentum Maps and Stochastic Clebsch Action Principles. <i>Communications in Mathematical Physics</i> , 2018, 357, 873-912.	2.2	15
138	Lyapunov stability of ideal stratified fluid equilibria in hydrostatic balance. <i>Nonlinearity</i> , 1989, 2, 23-35.	1.4	14
139	Secondary Instabilities of Flows with Elliptic Streamlines. <i>Physical Review Letters</i> , 1997, 78, 1900-1903.	7.8	14
140	A Geometric Framework for Stochastic Shape Analysis. <i>Foundations of Computational Mathematics</i> , 2019, 19, 653-701.	2.5	14
141	Implications of Kunita's Itô-Wentzell Formula for k-Forms in Stochastic Fluid Dynamics. <i>Journal of Nonlinear Science</i> , 2020, 30, 1421-1454.	2.1	14
142	Relativistic chromohydrodynamics and Yang-Mills Vlasov plasma. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1984, 105, 225-228.	2.1	13
143	Lie-Poisson description of Hamiltonian ray optics. <i>Physica D: Nonlinear Phenomena</i> , 1991, 51, 189-199.	2.8	13
144	Geometry of Image Registration: The Diffeomorphism Group and Momentum Maps. <i>Fields Institute Communications</i> , 2015, , 19-56.	1.3	13

#	ARTICLE	IF	CITATIONS
145	Modelling the Climate and Weather of a 2D Lagrangian-Averaged Euler-Boussinesq Equation with Transport Noise. <i>Journal of Statistical Physics</i> , 2020, 179, 1267-1303.	1.2	13
146	Stochastic mesoscale circulation dynamics in the thermal ocean. <i>Physics of Fluids</i> , 2021, 33, .	4.0	13
147	Lagrangian Averaged Stochastic Advection by Lie Transport for Fluids. <i>Journal of Statistical Physics</i> , 2020, 179, 1304-1342.	1.2	13
148	Multipressure regularization for multiphase flow. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1984, 106, 165-168.	2.1	12
149	Hamiltonian differencing of fluid dynamics. <i>Advances in Applied Mathematics</i> , 1985, 6, 52-84.	0.7	12
150	Hamiltonian dynamics and stability analysis of neutral electromagnetic fluids with induction. <i>Physica D: Nonlinear Phenomena</i> , 1987, 25, 261-287.	2.8	12
151	Nonlocal orientation-dependent dynamics of charged strands and ribbons. <i>Comptes Rendus Mathematique</i> , 2009, 347, 1093-1098.	0.3	12
152	Multiscale turbulence models based on convected fluid microstructure. <i>Journal of Mathematical Physics</i> , 2012, 53, .	1.1	12
153	G-Strands. <i>Journal of Nonlinear Science</i> , 2012, 22, 517-551.	2.1	12
154	A multipressure regularization for multiphase flow. <i>International Journal of Multiphase Flow</i> , 1986, 12, 681-697.	3.4	11
155	Horseshoe chaos in a periodically perturbed polarized optical beam. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1989, 138, 29-36.	2.1	11
156	Boundary Effects on Exact Solutions of the Lagrangian-Averaged Navier-Stokes Equations. <i>Journal of Statistical Physics</i> , 2003, 113, 841-854.	1.2	11
157	Mean Effects of Turbulence on Elliptic Instability in Fluids. <i>Physical Review Letters</i> , 2003, 90, 124501.	7.8	11
158	Geometric gradient-flow dynamics with singular solutions. <i>Physica D: Nonlinear Phenomena</i> , 2008, 237, 2952-2965.	2.8	11
159	Waltzing peakons and compacton pairs in a cross-coupled Camassa-Holm equation. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 265205.	2.1	11
160	The Effect of Subfilter-Scale Physics on Regularization Models. <i>Journal of Scientific Computing</i> , 2011, 49, 21-34.	2.3	11
161	On Noether's Theorem for the Euler-Poincaré Equation on the Diffeomorphism Group with Advected Quantities. <i>Foundations of Computational Mathematics</i> , 2013, 13, 457-477.	2.5	11
162	A geometric theory of selective decay with applications in MHD. <i>Nonlinearity</i> , 2014, 27, 1747-1777.	1.4	11

#	ARTICLE	IF	CITATIONS
163	Variational formulations of sound-proof models. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1966-1973.	2.7	11
164	Stochastic effects of waves on currents in the ocean mixed layer. Journal of Mathematical Physics, 2021, 62, .	1.1	11
165	Converging finite-strength shocks. Physica D: Nonlinear Phenomena, 1981, 2, 194-202.	2.8	10
166	Ponderomotive hamiltonian and Lyapunov stability for magnetically confined plasma in the presence of rf field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 106, 29-33.	2.1	10
167	A tri-Hamiltonian formulation of the self-induced transparency equations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 160, 143-148.	2.1	10
168	Homoclinic chaos for ray optics in a fiber. Physica D: Nonlinear Phenomena, 1991, 51, 177-188.	2.8	10
169	Nonlinear resonance and dynamical chaos in a diatomic molecule driven by a resonant ir field. Physical Review A, 1995, 52, 3074-3081.	2.5	10
170	Formation and evolution of singularities in anisotropic geometric continua. Physica D: Nonlinear Phenomena, 2007, 235, 33-47.	2.8	10
171	Inexact trajectory planning and inverse problems in the Hamilton-Pontryagin framework. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130249.	2.1	10
172	Stochastic Closures for Wave-Current Interaction Dynamics. Journal of Nonlinear Science, 2019, 29, 2987-3031.	2.1	10
173	Stochastic Wave-Current Interaction in Thermal Shallow Water Dynamics. Journal of Nonlinear Science, 2021, 31, 1.	2.1	10
174	Stochastic Variational Formulations of Fluid Wave-Current Interaction. Journal of Nonlinear Science, 2021, 31, 4.	2.1	10
175	Lagrangian analysis of alignment dynamics for isentropic compressible magnetohydrodynamics. New Journal of Physics, 2007, 9, 292-292.	2.9	9
176	A Euler-Poincaré framework for the multilayer Green-Naghdi equations. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344018.	2.1	9
177	Exact geometric theory of dendronized polymer dynamics. Advances in Applied Mathematics, 2012, 48, 535-574.	0.7	9
178	A Stochastic Large Deformation Model for Computational Anatomy. Lecture Notes in Computer Science, 2017, , 571-582.	1.3	9
179	Geometric dynamics of optimization. Communications in Mathematical Sciences, 2013, 11, 163-231.	1.0	9
180	Recovery of solitons with nonlinear amplifying loop mirrors. Optics Letters, 1995, 20, 2490.	3.3	8

#	ARTICLE	IF	CITATIONS
181	Geometric dissipation in kinetic equations. <i>Comptes Rendus Mathematique</i> , 2007, 345, 297-302.	0.3	8
182	Variational principles for fluid dynamics on rough paths. <i>Advances in Mathematics</i> , 2022, 404, 108409.	1.1	8
183	Magnetic tornadoes: Three-dimensional affine motions in ideal magnetohydrodynamics. <i>Physica D: Nonlinear Phenomena</i> , 1983, 8, 170-182.	2.8	7
184	Gyroscopic analog for collective motion of a stratified fluid. <i>Journal of Mathematical Analysis and Applications</i> , 1986, 117, 57-80.	1.0	7
185	Introduction to HVBK Dynamics. , 2001, , 114-130.		7
186	Craik's Criminale solutions and elliptic instability in nonlinear-reactive closure models for turbulence. <i>Physics of Fluids</i> , 2004, 16, 853-866.	4.0	7
187	Quantum Splines. <i>Physical Review Letters</i> , 2012, 109, 100501.	7.8	7
188	New variational and multisymplectic formulations of the Euler-Poincaré equation on the Virasoro-Bott group using the inverse map. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20180052.	2.1	7
189	Stochastic Parametrization of the Richardson Triple. <i>Journal of Nonlinear Science</i> , 2019, 29, 89-113.	2.1	7
190	Dual pairs in resonances. <i>Journal of Geometric Mechanics</i> , 2012, 4, 297-311.	0.8	7
191	Quantum chaos of atoms in a resonator driven by an external resonant field. <i>Physical Review A</i> , 1994, 49, 4943-4956.	2.5	6
192	Hamiltonian statistical mechanics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 502002.	2.1	6
193	Lyapunov Exponents of Two Stochastic Lorenz 63 Systems. <i>Journal of Statistical Physics</i> , 2020, 179, 1343-1365.	1.2	6
194	The bohmion method in nonadiabatic quantum hydrodynamics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 495201.	2.1	6
195	Finite dimensionality in the laser equations in the good cavity limit. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988, 129, 310-316.	2.1	5
196	Rotating concentric circular peakons. <i>Nonlinearity</i> , 2004, 17, 2163-2186.	1.4	5
197	The stochastic energy-Casimir method. <i>Comptes Rendus - Mecanique</i> , 2018, 346, 279-290.	2.1	5
198	Un-reduction. <i>Journal of Geometric Mechanics</i> , 2011, 3, 363-387.	0.8	5

#	ARTICLE	IF	CITATIONS
199	Hydrodynamics and electrohydrodynamics of adiabatic multiphase fluids and plasmas. <i>International Journal of Multiphase Flow</i> , 1986, 12, 667-680.	3.4	4
200	Hamiltonian formulation of ferromagnetic hydrodynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988, 129, 93-100.	2.1	4
201	Near-integrability and chaos in a resonant-cavity laser model. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 200, 299-307.	2.1	4
202	Rasetti's Regge Dirac bracket formulation of Lagrangian fluid dynamics of vortex filaments. <i>Mathematics and Computers in Simulation</i> , 2003, 62, 53-63.	4.4	4
203	Kinetic models of oriented self-assembly. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 344010.	2.1	4
204	Emergent singular solutions of nonlocal density-magnetization equations in one dimension. <i>Physical Review E</i> , 2008, 77, 036211.	2.1	4
205	Euler's fluid equations: Optimal control vs optimization. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 4354-4359.	2.1	4
206	Matrix G-strands. <i>Nonlinearity</i> , 2014, 27, 1445-1469.	1.4	4
207	A jetlet hierarchy for ideal fluid dynamics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 352001.	2.1	4
208	$G$ -Strands on symmetric spaces. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20160795.	2.1	4
209	Multipole Vortex Blobs (MVB): Symplectic Geometry and Dynamics. <i>Journal of Nonlinear Science</i> , 2017, 27, 973-1006.	2.1	4
210	Perspectives on the formation of peakons in the stochastic Camassa-Holm equation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, .	2.1	4
211	Hamiltonian structure for Alfvén wave turbulence equations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1985, 108, 445-447.	2.1	3
212	Dynamical chaos in $SU(2)$ - $U(1)$ theory. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 194, 251-264.	2.1	3
213	On Kelvin Waves in Balance Models. <i>Journal of Physical Oceanography</i> , 1997, 27, 2060-2063.	1.7	3
214	Homoclinic orbits and chaos in a second-harmonic generating optical cavity. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 233, 203-208.	2.1	3
215	Quasiconservation laws for compressible three-dimensional Navier-Stokes flow. <i>Physical Review E</i> , 2012, 86, 047301.	2.1	3
216	Weak Dual Pairs and Jetlet Methods for Ideal Incompressible Fluid Models in $2n$ Dimensions. <i>Journal of Nonlinear Science</i> , 2016, 26, 1723-1765.	2.1	3

#	ARTICLE	IF	CITATIONS
217	Noise and Dissipation in Rigid Body Motion. Springer Proceedings in Mathematics and Statistics, 2017, , 1-12.	0.2	3
218	String Methods for Stochastic Image and Shape Matching. Journal of Mathematical Imaging and Vision, 2018, 60, 953-967.	1.3	3
219	Wave-current interaction on a free surface. Studies in Applied Mathematics, 2021, 147, 1277-1338.	2.4	3
220	Predicting uncertainty in geometric fluid mechanics. Discrete and Continuous Dynamical Systems - Series S, 2020, 13, 1229-1242.	1.1	3
221	Hamiltonian structure and Lyapunov stability of a hyperbolic system of two-phase flow equations including surface tension. Physics of Fluids, 1986, 29, 986.	1.4	2
222	Chaotic dynamics due to competition among degenerate modes in a ring-cavity laser. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 161, 499-505.	2.1	2
223	Violation of the semi-classical approximation and quantum chaos in a paramagnetic spin system. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 181, 296-307.	2.1	2
224	Crossover behavior in quantum nonlinear resonance in a hydrogen atom. Physica D: Nonlinear Phenomena, 1995, 83, 55-58.	2.8	2
225	Homoclinic orbits in the Maxwell-Bloch equations with a probe. Physical Review E, 1996, 54, 243-256.	2.1	2
226	Multi-frequency Craik-Criminale solutions of the Navier-Stokes equations. Journal of Fluid Mechanics, 2004, 506, 207-215.	3.4	2
227	Random Hamiltonian in thermal equilibrium. Journal of Physics: Conference Series, 2009, 174, 012041.	0.4	2
228	The gradient of potential vorticity, quaternions and an orthonormal frame for fluid particles. Geophysical and Astrophysical Fluid Dynamics, 2011, 105, 329-339.	1.2	2
229	Stochastic modelling in fluid dynamics: Itô versus Stratonovich. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190812.	2.1	2
230	Variational Principles, Geometry and Topology of Lagrangian-Averaged Fluid Dynamics. , 2001, , 271-291.		2
231	Stochastic Metamorphosis with Template Uncertainties. Lecture Notes Series, Institute for Mathematical Sciences, 2019, , 75-96.	0.2	2
232	Collisionless kinetic theory of rolling molecules. Kinetic and Related Models, 2013, 6, 429-458.	0.9	2
233	Gyroscopic analog for magnetohydrodynamics. , 1982, , .		1
234	Euler-Poincaré formulation and elliptic instability for thin-gradient fluids. Journal of Physics A, 2004, 37, 7609-7623.	1.6	1

#	ARTICLE	IF	CITATIONS
235	Integrable G-strands on semisimple Lie groups. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 075201.	2.1	1
236	Un-reduction in field theory. Letters in Mathematical Physics, 2018, 108, 225-247.	1.1	1
237	A geometric diffuse-interface method for droplet spreading. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190222.	2.1	1
238	Coriolis induced compressibility effects in rotating shear layers. , 2007, , 383-385.		1
239	Nonlinear dispersion in wave-current interactions. Journal of Geometric Mechanics, 2022, 14, 597-633.	0.8	1
240	Lyapunov stability conditions for relativistic multifluid plasma. Physica D: Nonlinear Phenomena, 1986, 18, 405-409.	2.8	0
241	Variational methods and nonlinear quasigeostrophic waves. Physics of Fluids, 1999, 11, 875-879.	4.0	0
242	Elliptic instability in the Lagrangian-averaged Euler-Boussinesq equations. Physics of Fluids, 2005, 17, 054113.	4.0	0
243	The LANS-alpha turbulence model in primitive-equation ocean modeling. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1100903-1100904.	0.2	0
244	Momentum Maps for Lattice EPDiff. Handbook of Numerical Analysis, 2009, 14, 247-278.	1.8	0
245	Stretching and Folding Processes in the 3D Euler and Navier-Stokes Equations. Procedia IUTAM, 2013, 9, 25-31.	1.2	0
246	Euler-Poincaré equations for G-Strands. Journal of Physics: Conference Series, 2014, 482, 012018.	0.4	0
247	Bounds on solutions of the rotating, stratified, incompressible, non-hydrostatic, three-dimensional Boussinesq equations. Nonlinearity, 2017, 30, R1-R24.	1.4	0
248	Dynamics of non-holonomic systems with stochastic transport. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170479.	2.1	0
249	Stochastic Evolution of Augmented Born-Infeld Equations. Journal of Nonlinear Science, 2019, 29, 115-138.	2.1	0
250	G-Strands and Peakon Collisions on Diff(R). Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2013, , .	0.5	0
251	Stochastic metamorphosis in imaging science. Annals of Mathematical Sciences and Applications, 2018, 3, 309-335.	0.4	0