

Stefan G Llewellyn Smith

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

2,341
citations

218592

26
h-index

223716

46
g-index

103
all docs

103
docs citations

103
times ranked

1874
citing authors

#	ARTICLE	IF	CITATIONS
1	Equations of motion for weakly compressible point vortices. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022, 380, 20210052.	1.6	2
2	Long-wavelength equations of motion for thin double vorticity layers. <i>Journal of Fluid Mechanics</i> , 2022, 942, .	1.4	0
3	Hollow vortex in a corner. <i>Journal of Fluid Mechanics</i> , 2021, 908, .	1.4	3
4	Density and surface tension effects on vortex stability. Part 1. Curvature instability. <i>Journal of Fluid Mechanics</i> , 2021, 913, .	1.4	1
5	Density and surface tension effects on vortex stability. Part 2. Mooreâ€™Saffmanâ€™Tsaiâ€™Widnall instability. <i>Journal of Fluid Mechanics</i> , 2021, 913, .	1.4	3
6	Bounding temperature dissipation in time-modulated Rayleigh-BÃ©nard convection. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	1
7	Finite rotating and translating vortex sheets. <i>Journal of Fluid Mechanics</i> , 2021, 923, .	1.4	1
8	Instability of Lenticular Vortices: Results from Laboratory Experiments, Linear Stability Analysis and Numerical Simulations. <i>Fluids</i> , 2021, 6, 380.	0.8	0
9	Helical Contour Dynamics. <i>Regular and Chaotic Dynamics</i> , 2021, 26, 600-617.	0.3	0
10	Modal Analysis of Internal Wave Propagation and Scattering over Large-Amplitude Topography. <i>Journal of Physical Oceanography</i> , 2020, 50, 305-321.	0.7	10
11	Improved bounds on horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	1.4	7
12	The Nusselt numbers of horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020, 894, .	1.4	5
13	Axisymmetric contour dynamics for buoyant vortex rings. <i>Journal of Fluid Mechanics</i> , 2020, 887, .	1.4	1
14	Stability Analysis of a Bulkâ€™Surface Reaction Model for Membrane Protein Clustering. <i>Bulletin of Mathematical Biology</i> , 2020, 82, 30.	0.9	8
15	Resonance of a flexible plate immersed in a von KÃ©rmÃ©n vortex street. <i>Journal of Mechanical Science and Technology</i> , 2020, 34, 1459-1465.	0.7	4
16	Time-Dependent Propagation of Tsunami-Generated Acousticâ€™Gravity Waves in the Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 2020, 77, 1233-1244.	0.6	3
17	Numerical solution of scattering problems using a Riemannâ€™Hilbert formulation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019, 475, 20190105.	1.0	2
18	A Lagrangian approach for computational acoustics with particle-based method. <i>Engineering Analysis With Boundary Elements</i> , 2019, 108, 459-471.	2.0	2

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19	Generation of bulk vorticity and current density in current-vortex sheet models. High Energy Density Physics, 2019, 33, 100712.	0.4	1
20	The response of surface buoyancy flux-driven convection to localized mechanical forcing. Experiments in Fluids, 2019, 60, 1.	1.1	1
21	Current/Voltage Characteristics of the Short-Channel Double-Gate Transistor. Part I. SIAM Journal on Applied Mathematics, 2018, 78, 877-896.	0.8	0
22	A note on "Quasi-analytical solution of two-dimensional Helmholtz equation". Applied Mathematical Modelling, 2018, 54, 281-283.	2.2	0
23	Generalized Contour Dynamics: A Review. Regular and Chaotic Dynamics, 2018, 23, 507-518.	0.3	4
24	Stokes flow through a two-dimensional channel with a linear expansion. Quarterly Journal of Mechanics and Applied Mathematics, 2018, , .	0.5	0
25	The motion of a buoyant vortex filament. Journal of Fluid Mechanics, 2018, 857, .	1.4	7
26	Connection between encounter volume and diffusivity in geophysical flows. Nonlinear Processes in Geophysics, 2018, 25, 267-278.	0.6	10
27	Excess pore water pressure due to ground surface erosion. Applied Mathematical Modelling, 2018, 61, 72-82.	2.2	1
28	Characteristics of colliding sea breeze gravity current fronts: a laboratory study. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1434-1441.	1.0	16
29	The Sadovskii vortex in strain. Journal of Fluid Mechanics, 2017, 825, 479-501.	1.4	3
30	The Propagation of Tsunami-Generated Acoustic "Gravity Waves in the Atmosphere. Journals of the Atmospheric Sciences, 2016, 73, 3025-3036.	0.6	7
31	Dynamics and transport properties of three surface quasigeostrophic point vortices. Chaos, 2016, 26, 113117.	1.0	13
32	On the slow motion of a spheroid in a rotating stratified fluid. Journal of Fluid Mechanics, 2016, 808, .	1.4	0
33	Hollow vortices in shear. Journal of Fluid Mechanics, 2016, 809, 705-715.	1.4	6
34	Modelling gravity currents without an energy closure. Journal of Fluid Mechanics, 2016, 789, 806-829.	1.4	13
35	Instability of a vortex sheet leaving a right-angled wedge. Journal of Fluid Mechanics, 2016, 803, 1-17.	1.4	11
36	Energy Cascades and Loss of Balance in a Reentrant Channel Forced by Wind Stress and Buoyancy Fluxes. Journal of Physical Oceanography, 2015, 45, 272-293.	0.7	38

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37	Desingularized propagating vortex equilibria. <i>Fluid Dynamics Research</i> , 2014, 46, 061419.	0.6	1
38	Three-dimensional corner eddies in Stokes flow. <i>Fluid Dynamics Research</i> , 2014, 46, 015509.	0.6	2
39	When land breezes collide: Converging diurnal winds over small bodies of water. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 2573-2581.	1.0	10
40	Vortex pairs and dipoles. <i>Regular and Chaotic Dynamics</i> , 2013, 18, 194-201.	0.3	11
41	Motion of Axisymmetric Magnetic Eddies with Swirl. <i>Procedia IUTAM</i> , 2013, 7, 243-250.	1.2	2
42	Rotating horizontal convection. <i>Journal of Fluid Mechanics</i> , 2013, 723, 556-586.	1.4	29
43	Translating hollow vortex pairs. <i>European Journal of Mechanics, B/Fluids</i> , 2013, 37, 180-186.	1.2	16
44	An Arabidopsis rhomboid protease has roles in the chloroplast and in flower development. <i>Journal of Experimental Botany</i> , 2012, 63, 3559-3570.	2.4	37
45	Structure and stability of hollow vortex equilibria. <i>Journal of Fluid Mechanics</i> , 2012, 691, 178-200.	1.4	16
46	Generation of Internal Gravity Waves by an Oscillating Horizontal Elliptical Plate. <i>SIAM Journal on Applied Mathematics</i> , 2012, 72, 725-739.	0.8	2
47	Axisymmetric magnetic vortices with swirl. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012, 17, 2101-2107.	1.7	5
48	Internal gravity waves, boundary integral equations and radiation conditions. <i>Wave Motion</i> , 2012, 49, 427-444.	1.0	4
49	How do singularities move in potential flow?. <i>Physica D: Nonlinear Phenomena</i> , 2011, 240, 1644-1651.	1.3	38
50	A conundrum in conversion. <i>Journal of Fluid Mechanics</i> , 2011, 684, 1-4.	1.4	2
51	Generation of internal gravity waves by an oscillating horizontal disc. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011, 467, 3406-3423.	1.0	13
52	Tangential oscillations of a circular disk in a viscous stratified fluid. <i>Journal of Fluid Mechanics</i> , 2010, 656, 342-359.	1.4	11
53	Falling cards and flapping flags: understanding fluid-solids interactions using an unsteady point vortex model. <i>Theoretical and Computational Fluid Dynamics</i> , 2010, 24, 195-200.	0.9	26
54	Estimation of Biomass Heat Storage Using Thermal Infrared Imagery: Application to a Walnut Orchard. <i>Boundary-Layer Meteorology</i> , 2010, 137, 333-342.	1.2	16

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55	The split ring resonator. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 3117-3134.	1.0	11
56	Examining the large-time wellbore flux of constant head test. Water Resources Research, 2010, 46, .	1.7	1
57	Time dependence of groundwater pumping from a well near a river. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 175-192.	1.0	1
58	Wind gusts and plant aeroelasticity effects on the aerodynamics of pollen shedding: A hypothetical turbulence-initiated wind-pollination mechanism. Journal of Theoretical Biology, 2009, 259, 785-792.	0.8	24
59	An unsteady point vortex method for coupled fluid–solid problems. Theoretical and Computational Fluid Dynamics, 2009, 23, 127-153.	0.9	105
60	Linear stability analysis of coupled parallel flexible plates in an axial flow. Journal of Fluids and Structures, 2009, 25, 1136-1157.	1.5	45
61	Resonance and propulsion performance of a heaving flexible wing. Physics of Fluids, 2009, 21, .	1.6	191
62	Falling cards and flapping flags: understanding fluid–solid interactions using an unsteady point vortex model. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 211-216.	0.1	2
63	Asymmetric Channel Divider in Stokes Flow. SIAM Journal on Applied Mathematics, 2008, 68, 1439-1463.	0.8	5
64	Matrix Wiener-Hopf approximation for a partially clamped plate. Quarterly Journal of Mechanics and Applied Mathematics, 2008, 61, 241-265.	0.5	14
65	Endothermic and exothermic chemically reacting plumes. Journal of Fluid Mechanics, 2008, 612, 291-310.	1.4	13
66	The dipolar field of rotating bodies in two dimensions. Journal of Fluid Mechanics, 2008, 607, 109-118.	1.4	3
67	Vortex shedding model of a flapping flag. Journal of Fluid Mechanics, 2008, 617, 1-10.	1.4	139
68	The elastohydrodynamic force on a sphere near a soft wall. Physics of Fluids, 2007, 19, .	1.6	37
69	Trapped edge waves in stratified rotating fluids: numerical and asymptotic results. Journal of Fluid Mechanics, 2007, 592, 195-220.	1.4	5
70	Perturbation of eigenvalues due to gaps in two-dimensional boundaries. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 759-786.	1.0	10
71	Supersonic and subsonic stages of dynamic contact between bodies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 2781-2795.	1.0	4
72	Tidal Conversion at a Submarine Ridge. Journal of Physical Oceanography, 2006, 36, 1053-1071.	0.7	94

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73	Numerical and Analytical Estimates of M2 Tidal Conversion at Steep Oceanic Ridges. <i>Journal of Physical Oceanography</i> , 2006, 36, 1072-1084.	0.7	56
74	Evolution of a chemically reacting plume in a ventilated room. <i>Journal of Fluid Mechanics</i> , 2005, 537, 221.	1.4	9
75	Global observations of the land breeze. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	87
76	The Role of Small-Scale Topography in Turbulent Mixing of the Global Ocean. <i>Oceanography</i> , 2004, 17, 55-64.	0.5	81
77	Organization of near-inertial energy by an eddy field. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2004, 130, 1153-1166.	1.0	41
78	Vortex dynamos. <i>Journal of Fluid Mechanics</i> , 2004, 498, 1-21.	1.4	16
79	Stratified rotating edge waves. <i>Journal of Fluid Mechanics</i> , 2004, 498, 161-170.	1.4	12
80	Tidal conversion at a very steep ridge. <i>Journal of Fluid Mechanics</i> , 2003, 495, 175-191.	1.4	103
81	Measuring the sea breeze from QuikSCAT Scatterometry. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	64
82	Scattering of acoustic waves by a superfluid vortex. <i>Journal of Physics A</i> , 2002, 35, 3597-3607.	1.6	6
83	Conversion of the Barotropic Tide. <i>Journal of Physical Oceanography</i> , 2002, 32, 1554-1566.	0.7	185
84	Axisymmetric acoustic scattering by vortices. <i>Journal of Fluid Mechanics</i> , 2002, 473, 275-294.	1.4	11
85	Horizontal dispersion of near-inertial oscillations in a turbulent mesoscale eddy field. <i>Journal of Marine Research</i> , 2001, 59, 697-723.	0.3	28
86	Three-dimensional acoustic scattering by vortical flows. II. Axisymmetric scattering by Hill's spherical vortex. <i>Physics of Fluids</i> , 2001, 13, 2890-2900.	1.6	10
87	Disturbing vortices. <i>Journal of Fluid Mechanics</i> , 2001, 426, 95-133.	1.4	64
88	Radiation of Mixed Layer Near-Inertial Oscillations into the Ocean Interior. <i>Journal of Physical Oceanography</i> , 2001, 31, 1550-1560.	0.7	28
89	Three-dimensional acoustic scattering by vortical flows. I. General theory. <i>Physics of Fluids</i> , 2001, 13, 2876-2889.	1.6	17
90	The asymptotic behaviour of Ramanujan's integral and its application to two-dimensional diffusion-like equations. <i>European Journal of Applied Mathematics</i> , 2000, 11, 13-28.	1.4	7

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91	Energy and pseudomomentum of propagating disturbances on the beta-plane. <i>Dynamics of Atmospheres and Oceans</i> , 2000, 32, 135-151.	0.7	3
92	Velocity Probability Density Functions from Altimetry. <i>Journal of Physical Oceanography</i> , 2000, 30, 125-136.	0.7	26
93	Bifurcation of a Coastal Current at an Escarpment. <i>Journal of Physical Oceanography</i> , 1999, 29, 969-985.	0.7	25
94	Numerical and asymptotic approaches to scattering problems involving finite elastic plates in structural acoustics. <i>Wave Motion</i> , 1999, 30, 17-41.	1.0	9
95	A class of expansion functions for finite elastic plates in structural acoustics. <i>Journal of the Acoustical Society of America</i> , 1999, 106, 3128-3134.	0.5	3
96	Near-Inertial Oscillations of a Barotropic Vortex: Trapped Modes and Time Evolution. <i>Journal of Physical Oceanography</i> , 1999, 29, 747-761.	0.7	18
97	Scattering of acoustic waves by a vortex. <i>Journal of Fluid Mechanics</i> , 1999, 386, 305-328.	1.4	56
98	Probability Density Functions of Large-Scale Turbulence in the Ocean. <i>Physical Review Letters</i> , 1998, 81, 5249-5252.	2.9	18
99	Dynamics of interfaces and layers in a stratified turbulent fluid. <i>Journal of Fluid Mechanics</i> , 1998, 355, 329-358.	1.4	116
100	Enhanced dispersion of near-inertial waves in an idealized geostrophic flow. <i>Journal of Marine Research</i> , 1998, 56, 1-40.	0.3	51
101	The motion of a non-isolated vortex on the beta-plane. <i>Journal of Fluid Mechanics</i> , 1997, 346, 149-179.	1.4	35
102	Hydraulically Drained Flows in Rotating Basins. Part I: Method*. <i>Journal of Physical Oceanography</i> , 1997, 27, 2509-2521.	0.7	15
103	The influence of circulation on the stability of vortices to mode-one disturbances. <i>Proceedings of the Royal Society A</i> , 1995, 451, 747-755.	1.0	12