

Stefan G Llewellyn Smith

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98
papers

1,907
citations

24
h-index

41
g-index

103
ext. papers

2,128
ext. citations

3
avg, IF

5.1
L-index

#	Paper	IF	Citations
98	Equations of motion for weakly compressible point vortices.. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20210052	3	1
97	Helical Contour Dynamics. <i>Regular and Chaotic Dynamics</i> , 2021 , 26, 600-617	1.6	
96	Instability of Lenticular Vortices: Results from Laboratory Experiments, Linear Stability Analysis and Numerical Simulations. <i>Fluids</i> , 2021 , 6, 380	1.6	
95	Bounding temperature dissipation in time-modulated Rayleigh-Bénard convection. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	1
94	Hollow vortex in a corner. <i>Journal of Fluid Mechanics</i> , 2021 , 908,	3.7	1
93	Density and surface tension effects on vortex stability. Part 1. Curvature instability. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	1
92	Density and surface tension effects on vortex stability. Part 2. Moore-Buffman-Sai-Widnall instability. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	1
91	The Nusselt numbers of horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020 , 894,	3.7	1
90	Stability Analysis of a Bulk-Surface Reaction Model for Membrane Protein Clustering. <i>Bulletin of Mathematical Biology</i> , 2020 , 82, 30	2.1	4
89	Resonance of a flexible plate immersed in a von Kármán vortex street. <i>Journal of Mechanical Science and Technology</i> , 2020 , 34, 1459-1465	1.6	2
88	Time-Dependent Propagation of Tsunami-Generated Acoustic-Gravity Waves in the Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 2020 , 77, 1233-1244	2.1	1
87	Modal Analysis of Internal Wave Propagation and Scattering over Large-Amplitude Topography. <i>Journal of Physical Oceanography</i> , 2020 , 50, 305-321	2.4	4
86	Improved bounds on horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020 , 883,	3.7	3
85	A Lagrangian approach for computational acoustics with particle-based method. <i>Engineering Analysis With Boundary Elements</i> , 2019 , 108, 459-471	2.6	1
84	Generation of bulk vorticity and current density in current-vortex sheet models. <i>High Energy Density Physics</i> , 2019 , 33, 100712	1.2	
83	The response of surface buoyancy flux-driven convection to localized mechanical forcing. <i>Experiments in Fluids</i> , 2019 , 60, 1	2.5	0
82	Numerical solution of scattering problems using a Riemann-Hilbert formulation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019 , 475, 20190105	2.4	2

81	Current/Voltage Characteristics of the Short-Channel Double-Gate Transistor. Part I. <i>SIAM Journal on Applied Mathematics</i> , 2018 , 78, 877-896	1.8	
80	A note on Quasi-analytical solution of two-dimensional Helmholtz equation \square <i>Applied Mathematical Modelling</i> , 2018 , 54, 281-283	4.5	
79	Connection between encounter volume and diffusivity in geophysical flows. <i>Nonlinear Processes in Geophysics</i> , 2018 , 25, 267-278	2.9	7
78	Excess pore water pressure due to ground surface erosion. <i>Applied Mathematical Modelling</i> , 2018 , 61, 72-82	4.5	1
77	Generalized Contour Dynamics: A Review. <i>Regular and Chaotic Dynamics</i> , 2018 , 23, 507-518	1.6	3
76	The motion of a buoyant vortex filament. <i>Journal of Fluid Mechanics</i> , 2018 , 857,	3.7	3
75	Characteristics of colliding sea breeze gravity current fronts: a laboratory study. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2017 , 143, 1434-1441	6.4	10
74	The Sadovskii vortex in strain. <i>Journal of Fluid Mechanics</i> , 2017 , 825, 479-501	3.7	3
73	Instability of a vortex sheet leaving a right-angled wedge. <i>Journal of Fluid Mechanics</i> , 2016 , 803, 1-17	3.7	6
72	The Propagation of Tsunami-Generated Acoustic Gravity Waves in the Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 2016 , 73, 3025-3036	2.1	6
71	Dynamics and transport properties of three surface quasigeostrophic point vortices. <i>Chaos</i> , 2016 , 26, 113117	3.3	10
70	Hollow vortices in shear. <i>Journal of Fluid Mechanics</i> , 2016 , 809, 705-715	3.7	5
69	Modelling gravity currents without an energy closure. <i>Journal of Fluid Mechanics</i> , 2016 , 789, 806-829	3.7	9
68	Energy Cascades and Loss of Balance in a Reentrant Channel Forced by Wind Stress and Buoyancy Fluxes. <i>Journal of Physical Oceanography</i> , 2015 , 45, 272-293	2.4	24
67	Three-dimensional corner eddies in Stokes flow. <i>Fluid Dynamics Research</i> , 2014 , 46, 015509	1.2	2
66	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	6.4	9
65	Desingularized propagating vortex equilibria. <i>Fluid Dynamics Research</i> , 2014 , 46, 061419	1.2	1
64	Vortex pairs and dipoles. <i>Regular and Chaotic Dynamics</i> , 2013 , 18, 194-201	1.6	10

63	Motion of Axisymmetric Magnetic Eddies with Swirl. <i>Procedia IUTAM</i> , 2013 , 7, 243-250		2
62	Rotating horizontal convection. <i>Journal of Fluid Mechanics</i> , 2013 , 723, 556-586	3.7	21
61	Translating hollow vortex pairs. <i>European Journal of Mechanics, B/Fluids</i> , 2013 , 37, 180-186	2.4	12
60	Internal gravity waves, boundary integral equations and radiation conditions. <i>Wave Motion</i> , 2012 , 49, 427-444	1.8	3
59	Structure and stability of hollow vortex equilibria. <i>Journal of Fluid Mechanics</i> , 2012 , 691, 178-200	3.7	15
58	Generation of Internal Gravity Waves by an Oscillating Horizontal Elliptical Plate. <i>SIAM Journal on Applied Mathematics</i> , 2012 , 72, 725-739	1.8	2
57	Axisymmetric magnetic vortices with swirl. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012 , 17, 2101-2107	3.7	4
56	An Arabidopsis rhomboid protease has roles in the chloroplast and in flower development. <i>Journal of Experimental Botany</i> , 2012 , 63, 3559-70	7	32
55	How do singularities move in potential flow?. <i>Physica D: Nonlinear Phenomena</i> , 2011 , 240, 1644-1651	3.3	32
54	A conundrum in conversion. <i>Journal of Fluid Mechanics</i> , 2011 , 684, 1-4	3.7	1
53	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	2.4	8
52	The split ring resonator. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010 , 466, 3117-3134	2.4	7
51	Examining the large-time wellbore flux of constant head test. <i>Water Resources Research</i> , 2010 , 46,	5.4	1
50	Tangential oscillations of a circular disk in a viscous stratified fluid. <i>Journal of Fluid Mechanics</i> , 2010 , 656, 342-359	3.7	9
49	Falling cards and flapping flags: understanding fluid-solid interactions using an unsteady point vortex model. <i>Theoretical and Computational Fluid Dynamics</i> , 2010 , 24, 195-200	2.3	24
48	Estimation of Biomass Heat Storage Using Thermal Infrared Imagery: Application to a Walnut Orchard. <i>Boundary-Layer Meteorology</i> , 2010 , 137, 333-342	3.4	12
47	Time dependence of groundwater pumping from a well near a river. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2009 , 465, 175-192	2.4	1
46	Wind gusts and plant aeroelasticity effects on the aerodynamics of pollen shedding: a hypothetical turbulence-initiated wind-pollination mechanism. <i>Journal of Theoretical Biology</i> , 2009 , 259, 785-92	2.3	21

45	An unsteady point vortex method for coupled fluid-solid problems. <i>Theoretical and Computational Fluid Dynamics</i> , 2009 , 23, 127-153	2.3	90
44	Linear stability analysis of coupled parallel flexible plates in an axial flow. <i>Journal of Fluids and Structures</i> , 2009 , 25, 1136-1157	3.1	39
43	Resonance and propulsion performance of a heaving flexible wing. <i>Physics of Fluids</i> , 2009 , 21, 071902	4.4	145
42	Falling cards and flapping flags: understanding fluid-solid interactions using an unsteady point vortex model. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2009 , 211-216	0.3	2
41	Asymmetric Channel Divider in Stokes Flow. <i>SIAM Journal on Applied Mathematics</i> , 2008 , 68, 1439-1463	1.8	3
40	Matrix Wiener-Elopf approximation for a partially clamped plate. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2008 , 61, 241-265	1	12
39	Endothermic and exothermic chemically reacting plumes. <i>Journal of Fluid Mechanics</i> , 2008 , 612, 291-310	3.7	12
38	The dipolar field of rotating bodies in two dimensions. <i>Journal of Fluid Mechanics</i> , 2008 , 607, 109-118	3.7	2
37	Vortex shedding model of a flapping flag. <i>Journal of Fluid Mechanics</i> , 2008 , 617, 1-10	3.7	113
36	Trapped edge waves in stratified rotating fluids: numerical and asymptotic results. <i>Journal of Fluid Mechanics</i> , 2007 , 592, 195-220	3.7	5
35	Perturbation of eigenvalues due to gaps in two-dimensional boundaries. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2007 , 463, 759-786	2.4	8
34	The elastohydrodynamic force on a sphere near a soft wall. <i>Physics of Fluids</i> , 2007 , 19, 103106	4.4	26
33	Supersonic and subsonic stages of dynamic contact between bodies. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2006 , 462, 2781-2795	2.4	4
32	Tidal Conversion at a Submarine Ridge. <i>Journal of Physical Oceanography</i> , 2006 , 36, 1053-1071	2.4	80
31	Numerical and Analytical Estimates of M2 Tidal Conversion at Steep Oceanic Ridges. <i>Journal of Physical Oceanography</i> , 2006 , 36, 1072-1084	2.4	48
30	Evolution of a chemically reacting plume in a ventilated room. <i>Journal of Fluid Mechanics</i> , 2005 , 537, 221	3.7	8
29	Global observations of the land breeze. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	69
28	The Role of Small-Scale Topography in Turbulent Mixing of the Global Ocean. <i>Oceanography</i> , 2004 , 17, 55-64	2.3	67

27	Organization of near-inertial energy by an eddy field. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2004 , 130, 1153-1166	6.4	34
26	Vortex dynamos. <i>Journal of Fluid Mechanics</i> , 2004 , 498, 1-21	3.7	14
25	Stratified rotating edge waves. <i>Journal of Fluid Mechanics</i> , 2004 , 498, 161-170	3.7	11
24	Tidal conversion at a very steep ridge. <i>Journal of Fluid Mechanics</i> , 2003 , 495, 175-191	3.7	90
23	Measuring the sea breeze from QuikSCAT Scatterometry. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	59
22	Scattering of acoustic waves by a superfluid vortex. <i>Journal of Physics A</i> , 2002 , 35, 3597-3607		5
21	Conversion of the Barotropic Tide. <i>Journal of Physical Oceanography</i> , 2002 , 32, 1554-1566	2.4	163
20	Axisymmetric acoustic scattering by vortices. <i>Journal of Fluid Mechanics</i> , 2002 , 473, 275-294	3.7	7
19	Radiation of Mixed Layer Near-Inertial Oscillations into the Ocean Interior. <i>Journal of Physical Oceanography</i> , 2001 , 31, 1550-1560	2.4	24
18	Three-dimensional acoustic scattering by vortical flows. I. General theory. <i>Physics of Fluids</i> , 2001 , 13, 2876-2889	4.4	14
17	Horizontal dispersion of near-inertial oscillations in a turbulent mesoscale eddy field. <i>Journal of Marine Research</i> , 2001 , 59, 697-723	1.5	24
16	Three-dimensional acoustic scattering by vortical flows. II. Axisymmetric scattering by Hill's spherical vortex. <i>Physics of Fluids</i> , 2001 , 13, 2890-2900	4.4	9
15	Disturbing vortices. <i>Journal of Fluid Mechanics</i> , 2001 , 426, 95-133	3.7	60
14	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
13	Energy and pseudomomentum of propagating disturbances on the beta-plane. <i>Dynamics of Atmospheres and Oceans</i> , 2000 , 32, 135-151	1.9	3
12	Velocity Probability Density Functions from Altimetry. <i>Journal of Physical Oceanography</i> , 2000 , 30, 125-136		23
11	Bifurcation of a Coastal Current at an Escarpment. <i>Journal of Physical Oceanography</i> , 1999 , 29, 969-985	2.4	24
10	Numerical and asymptotic approaches to scattering problems involving finite elastic plates in structural acoustics. <i>Wave Motion</i> , 1999 , 30, 17-41	1.8	9

9	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	2.2	3
8	Near-Inertial Oscillations of a Barotropic Vortex: Trapped Modes and Time Evolution. <i>Journal of Physical Oceanography</i> , 1999 , 29, 747-761	2.4	14
7	Scattering of acoustic waves by a vortex. <i>Journal of Fluid Mechanics</i> , 1999 , 386, 305-328	3.7	42
6	Probability Density Functions of Large-Scale Turbulence in the Ocean. <i>Physical Review Letters</i> , 1998 , 81, 5249-5252	7.4	17
5	Dynamics of interfaces and layers in a stratified turbulent fluid. <i>Journal of Fluid Mechanics</i> , 1998 , 355, 329-358	3.7	93
4	Enhanced dispersion of near-inertial waves in an idealized geostrophic flow. <i>Journal of Marine Research</i> , 1998 , 56, 1-40	1.5	43
3	The motion of a non-isolated vortex on the beta-plane. <i>Journal of Fluid Mechanics</i> , 1997 , 346, 149-179	3.7	28
2	Hydraulically Drained Flows in Rotating Basins. Part I: Method*. <i>Journal of Physical Oceanography</i> , 1997 , 27, 2509-2521	2.4	12
1	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		6