

# Stefan G Llewellyn Smith

## List of Publications by Year in descending order

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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	Resonance and propulsion performance of a heaving flexible wing. <i>Physics of Fluids</i> , 2009, 21, .	1.6	191
2	Conversion of the Barotropic Tide. <i>Journal of Physical Oceanography</i> , 2002, 32, 1554-1566.	0.7	185
3	Vortex shedding model of a flapping flag. <i>Journal of Fluid Mechanics</i> , 2008, 617, 1-10.	1.4	139
4	Dynamics of interfaces and layers in a stratified turbulent fluid. <i>Journal of Fluid Mechanics</i> , 1998, 355, 329-358.	1.4	116
5	An unsteady point vortex method for coupled fluid–solid problems. <i>Theoretical and Computational Fluid Dynamics</i> , 2009, 23, 127-153.	0.9	105
6	Tidal conversion at a very steep ridge. <i>Journal of Fluid Mechanics</i> , 2003, 495, 175-191.	1.4	103
7	Tidal Conversion at a Submarine Ridge. <i>Journal of Physical Oceanography</i> , 2006, 36, 1053-1071.	0.7	94
8	Global observations of the land breeze. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	87
9	The Role of Small-Scale Topography in Turbulent Mixing of the Global Ocean. <i>Oceanography</i> , 2004, 17, 55-64.	0.5	81
10	Disturbing vortices. <i>Journal of Fluid Mechanics</i> , 2001, 426, 95-133.	1.4	64
11	Measuring the sea breeze from QuikSCAT Scatterometry. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	64
12	Scattering of acoustic waves by a vortex. <i>Journal of Fluid Mechanics</i> , 1999, 386, 305-328.	1.4	56
13	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
14	Enhanced dispersion of near-inertial waves in an idealized geostrophic flow. <i>Journal of Marine Research</i> , 1998, 56, 1-40.	0.3	51
15	Linear stability analysis of coupled parallel flexible plates in an axial flow. <i>Journal of Fluids and Structures</i> , 2009, 25, 1136-1157.	1.5	45
16	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
17	How do singularities move in potential flow?. <i>Physica D: Nonlinear Phenomena</i> , 2011, 240, 1644-1651.	1.3	38
18	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.	0.7	38

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19	The elasto-hydrodynamic force on a sphere near a soft wall. <i>Physics of Fluids</i> , 2007, 19, .	1.6	37
20	An <i>Arabidopsis</i> rhomboid protease has roles in the chloroplast and in flower development. <i>Journal of Experimental Botany</i> , 2012, 63, 3559-3570.	2.4	37
21	The motion of a non-isolated vortex on the beta-plane. <i>Journal of Fluid Mechanics</i> , 1997, 346, 149-179.	1.4	35
22	Rotating horizontal convection. <i>Journal of Fluid Mechanics</i> , 2013, 723, 556-586.	1.4	29
23	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
24	Radiation of Mixed Layer Near-Inertial Oscillations into the Ocean Interior. <i>Journal of Physical Oceanography</i> , 2001, 31, 1550-1560.	0.7	28
25	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
26	Velocity Probability Density Functions from Altimetry. <i>Journal of Physical Oceanography</i> , 2000, 30, 125-136.	0.7	26
27	Bifurcation of a Coastal Current at an Escarpment. <i>Journal of Physical Oceanography</i> , 1999, 29, 969-985.	0.7	25
28	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, 785-792.	0.8	24
29	Probability Density Functions of Large-Scale Turbulence in the Ocean. <i>Physical Review Letters</i> , 1998, 81, 5249-5252.	2.9	18
30	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
31	Three-dimensional acoustic scattering by vortical flows. I. General theory. <i>Physics of Fluids</i> , 2001, 13, 2876-2889.	1.6	17
32	Vortex dynamos. <i>Journal of Fluid Mechanics</i> , 2004, 498, 1-21.	1.4	16
33	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
34	Structure and stability of hollow vortex equilibria. <i>Journal of Fluid Mechanics</i> , 2012, 691, 178-200.	1.4	16
35	Translating hollow vortex pairs. <i>European Journal of Mechanics, B/Fluids</i> , 2013, 37, 180-186.	1.2	16
36	Characteristics of colliding sea breeze gravity current fronts: a laboratory study. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2017, 143, 1434-1441.	1.0	16

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37	Hydraulically Drained Flows in Rotating Basins. Part I: Method*. Journal of Physical Oceanography, 1997, 27, 2509-2521.	0.7	15
38	Matrix Wiener-Hopf approximation for a partially clamped plate. Quarterly Journal of Mechanics and Applied Mathematics, 2008, 61, 241-265.	0.5	14
39	Endothermic and exothermic chemically reacting plumes. Journal of Fluid Mechanics, 2008, 612, 291-310.	1.4	13
40	Generation of internal gravity waves by an oscillating horizontal disc. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 3406-3423.	1.0	13
41	Dynamics and transport properties of three surface quasigeostrophic point vortices. Chaos, 2016, 26, 113117.	1.0	13
42	Modelling gravity currents without an energy closure. Journal of Fluid Mechanics, 2016, 789, 806-829.	1.4	13
43	The influence of circulation on the stability of vortices to mode-one disturbances. Proceedings of the Royal Society A, 1995, 451, 747-755.	1.0	12
44	Stratified rotating edge waves. Journal of Fluid Mechanics, 2004, 498, 161-170.	1.4	12
45	Axisymmetric acoustic scattering by vortices. Journal of Fluid Mechanics, 2002, 473, 275-294.	1.4	11
46	Tangential oscillations of a circular disk in a viscous stratified fluid. Journal of Fluid Mechanics, 2010, 656, 342-359.	1.4	11
47	The split ring resonator. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 3117-3134.	1.0	11
48	Vortex pairs and dipoles. Regular and Chaotic Dynamics, 2013, 18, 194-201.	0.3	11
49	Instability of a vortex sheet leaving a right-angled wedge. Journal of Fluid Mechanics, 2016, 803, 1-17.	1.4	11
50	Three-dimensional acoustic scattering by vortical flows. II. Axisymmetric scattering by Hill's spherical vortex. Physics of Fluids, 2001, 13, 2890-2900.	1.6	10
51	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
52	When land breezes collide: Converging diurnal winds over small bodies of water. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 2573-2581.	1.0	10
53	Connection between encounter volume and diffusivity in geophysical flows. Nonlinear Processes in Geophysics, 2018, 25, 267-278.	0.6	10
54	Modal Analysis of Internal Wave Propagation and Scattering over Large-Amplitude Topography. Journal of Physical Oceanography, 2020, 50, 305-321.	0.7	10

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55	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
56	Evolution of a chemically reacting plume in a ventilated room. <i>Journal of Fluid Mechanics</i> , 2005, 537, 221.	1.4	9
57	Stability Analysis of a Bulk-Surface Reaction Model for Membrane Protein Clustering. <i>Bulletin of Mathematical Biology</i> , 2020, 82, 30.	0.9	8
58	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
59	The Propagation of Tsunami-Generated Acoustic-Gravity Waves in the Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 2016, 73, 3025-3036.	0.6	7
60	The motion of a buoyant vortex filament. <i>Journal of Fluid Mechanics</i> , 2018, 857, .	1.4	7
61	Improved bounds on horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	1.4	7
62	Scattering of acoustic waves by a superfluid vortex. <i>Journal of Physics A</i> , 2002, 35, 3597-3607.	1.6	6
63	Hollow vortices in shear. <i>Journal of Fluid Mechanics</i> , 2016, 809, 705-715.	1.4	6
64	Trapped edge waves in stratified rotating fluids: numerical and asymptotic results. <i>Journal of Fluid Mechanics</i> , 2007, 592, 195-220.	1.4	5
65	Asymmetric Channel Divider in Stokes Flow. <i>SIAM Journal on Applied Mathematics</i> , 2008, 68, 1439-1463.	0.8	5
66	Axisymmetric magnetic vortices with swirl. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012, 17, 2101-2107.	1.7	5
67	The Nusselt numbers of horizontal convection. <i>Journal of Fluid Mechanics</i> , 2020, 894, .	1.4	5
68	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.	1.0	4
69	Internal gravity waves, boundary integral equations and radiation conditions. <i>Wave Motion</i> , 2012, 49, 427-444.	1.0	4
70	Generalized Contour Dynamics: A Review. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 507-518.	0.3	4
71	Resonance of a flexible plate immersed in a von Kármán vortex street. <i>Journal of Mechanical Science and Technology</i> , 2020, 34, 1459-1465.	0.7	4
72	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

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73	Energy and pseudomomentum of propagating disturbances on the beta-plane. <i>Dynamics of Atmospheres and Oceans</i> , 2000, 32, 135-151.	0.7	3
74	The dipolar field of rotating bodies in two dimensions. <i>Journal of Fluid Mechanics</i> , 2008, 607, 109-118.	1.4	3
75	The Sadvovskii vortex in strain. <i>Journal of Fluid Mechanics</i> , 2017, 825, 479-501.	1.4	3
76	Hollow vortex in a corner. <i>Journal of Fluid Mechanics</i> , 2021, 908, .	1.4	3
77	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
78	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
79	A conundrum in conversion. <i>Journal of Fluid Mechanics</i> , 2011, 684, 1-4.	1.4	2
80	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
81	Motion of Axisymmetric Magnetic Eddies with Swirl. <i>Procedia IUTAM</i> , 2013, 7, 243-250.	1.2	2
82	Three-dimensional corner eddies in Stokes flow. <i>Fluid Dynamics Research</i> , 2014, 46, 015509.	0.6	2
83	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
84	A Lagrangian approach for computational acoustics with particle-based method. <i>Engineering Analysis With Boundary Elements</i> , 2019, 108, 459-471.	2.0	2
85	Falling cards and flapping flags: understanding fluidâ€™solid interactions using an unsteady point vortex model. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2009, , 211-216.	0.1	2
86	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
87	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.	1.0	1
88	Examining the largeâ€™time wellbore flux of constant head test. <i>Water Resources Research</i> , 2010, 46, .	1.7	1
89	Desingularized propagating vortex equilibria. <i>Fluid Dynamics Research</i> , 2014, 46, 061419.	0.6	1
90	Excess pore water pressure due to ground surface erosion. <i>Applied Mathematical Modelling</i> , 2018, 61, 72-82.	2.2	1

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91	Generation of bulk vorticity and current density in current-vortex sheet models. High Energy Density Physics, 2019, 33, 100712.	0.4	1
92	The response of surface buoyancy flux-driven convection to localized mechanical forcing. Experiments in Fluids, 2019, 60, 1.	1.1	1
93	Axisymmetric contour dynamics for buoyant vortex rings. Journal of Fluid Mechanics, 2020, 887, .	1.4	1
94	Density and surface tension effects on vortex stability. Part 1. Curvature instability. Journal of Fluid Mechanics, 2021, 913, .	1.4	1
95	Bounding temperature dissipation in time-modulated Rayleigh-Bénard convection. Physical Review Fluids, 2021, 6, .	1.0	1
96	Finite rotating and translating vortex sheets. Journal of Fluid Mechanics, 2021, 923, .	1.4	1
97	On the slow motion of a spheroid in a rotating stratified fluid. Journal of Fluid Mechanics, 2016, 808, .	1.4	0
98	Current/Voltage Characteristics of the Short-Channel Double-Gate Transistor. Part I. SIAM Journal on Applied Mathematics, 2018, 78, 877-896.	0.8	0
99	A note on "Quasi-analytical solution of two-dimensional Helmholtz equation". Applied Mathematical Modelling, 2018, 54, 281-283.	2.2	0
100	Stokes flow through a two-dimensional channel with a linear expansion. Quarterly Journal of Mechanics and Applied Mathematics, 2018, , .	0.5	0
101	Instability of Lenticular Vortices: Results from Laboratory Experiments, Linear Stability Analysis and Numerical Simulations. Fluids, 2021, 6, 380.	0.8	0
102	Helical Contour Dynamics. Regular and Chaotic Dynamics, 2021, 26, 600-617.	0.3	0
103	Long-wavelength equations of motion for thin double vorticity layers. Journal of Fluid Mechanics, 2022, 942, .	1.4	0