

Charles H K Williamson

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64
papers

9,748
citations

38
h-index

68
g-index

68
ext. papers

11,139
ext. citations

4.1
avg, IF

6.6
L-index

#	Paper	IF	Citations
64	VORTEX-INDUCED VIBRATIONS. <i>Annual Review of Fluid Mechanics</i> , 2004 , 36, 413-455	2.2	1423
63	Oblique and parallel modes of vortex shedding in the wake of a circular cylinder at low Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 1989 , 206, 579-627	3.7	757
62	MOTIONS, FORCES AND MODE TRANSITIONS IN VORTEX-INDUCED VIBRATIONS AT LOW MASS-DAMPING. <i>Journal of Fluids and Structures</i> , 1999 , 13, 813-851	3.1	687
61	Modes of vortex formation and frequency response of a freely vibrating cylinder. <i>Journal of Fluid Mechanics</i> , 2000 , 420, 85-130	3.7	575
60	Three-dimensional wake transition. <i>Journal of Fluid Mechanics</i> , 1996 , 328, 345-407	3.7	453
59	The effect of two degrees of freedom on vortex-induced vibration at low mass and damping. <i>Journal of Fluid Mechanics</i> , 2004 , 509, 23-62	3.7	434
58	A brief review of recent results in vortex-induced vibrations. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2008 , 96, 713-735	3.7	394
57	DYNAMICS OF A HYDROELASTIC CYLINDER WITH VERY LOW MASS AND DAMPING. <i>Journal of Fluids and Structures</i> , 1996 , 10, 455-472	3.1	381
56	The existence of two stages in the transition to three-dimensionality of a cylinder wake. <i>Physics of Fluids</i> , 1988 , 31, 3165		357
55	Evolution of a single wake behind a pair of bluff bodies. <i>Journal of Fluid Mechanics</i> , 1985 , 159, 1	3.7	324
54	Defining a universal and continuous Strouhal-Reynolds number relationship for the laminar vortex shedding of a circular cylinder. <i>Physics of Fluids</i> , 1988 , 31, 2742		293
53	The instability of the shear layer separating from a bluff body. <i>Journal of Fluid Mechanics</i> , 1997 , 333, 375-402	3.7	290
52	The natural and forced formation of spot-like vortex dislocations in the transition of a wake. <i>Journal of Fluid Mechanics</i> , 1992 , 243, 393	3.7	280
51	FLUID FORCES AND DYNAMICS OF A HYDROELASTIC STRUCTURE WITH VERY LOW MASS AND DAMPING. <i>Journal of Fluids and Structures</i> , 1997 , 11, 973-982	3.1	258
50	Cooperative elliptic instability of a vortex pair. <i>Journal of Fluid Mechanics</i> , 1998 , 360, 85-119	3.7	245
49	Sinusoidal flow relative to circular cylinders. <i>Journal of Fluid Mechanics</i> , 1985 , 155, 141	3.7	210
48	Defining the modified Griffin plot in vortex-induced vibration: revealing the effect of Reynolds number using controlled damping. <i>Journal of Fluid Mechanics</i> , 2006 , 561, 147	3.7	189

47	The physical mechanism for vortex merging. <i>Journal of Fluid Mechanics</i> , 2003 , 475, 41-77	3.7	162
46	A SERIES IN $1/Re$ TO REPRESENT THE STROUHAL-REYNOLDS NUMBER RELATIONSHIP OF THE CYLINDER WAKE. <i>Journal of Fluids and Structures</i> , 1998 , 12, 1073-1085	3.1	156
45	Vortex-induced vibration of a cylinder with two degrees of freedom. <i>Journal of Fluids and Structures</i> , 2003 , 17, 1035-1042	3.1	140
44	Prediction of vortex-induced vibration response by employing controlled motion. <i>Journal of Fluid Mechanics</i> , 2009 , 634, 5	3.7	130
43	Dynamics and Instabilities of Vortex Pairs. <i>Annual Review of Fluid Mechanics</i> , 2016 , 48, 507-541	22	129
42	THE PHYSICAL MECHANISM OF TRANSITION IN BLUFF BODY WAKES. <i>Journal of Fluids and Structures</i> , 2001 , 15, 607-616	3.1	110
41	The effect of Reynolds number on the dynamics and wakes of freely rising and falling spheres. <i>Journal of Fluid Mechanics</i> , 2010 , 651, 251-294	3.7	109
40	Vortex-induced vibrations of a sphere. <i>Journal of Fluid Mechanics</i> , 2005 , 531, 11-47	3.7	97
39	A COMPLEMENTARY NUMERICAL AND PHYSICAL INVESTIGATION OF VORTEX-INDUCED VIBRATION. <i>Journal of Fluids and Structures</i> , 2001 , 15, 481-488	3.1	94
38	Three-dimensional effects in turbulent bluff-body wakes. <i>Journal of Fluid Mechanics</i> , 1997 , 343, 235-265	3.7	77
37	Direct measurement of thrust and efficiency of an airfoil undergoing pure pitching. <i>Journal of Fluid Mechanics</i> , 2015 , 765, 524-543	3.7	72
36	The effect of end conditions on the vortex-induced vibration of cylinders. <i>Journal of Fluids and Structures</i> , 2008 , 24, 1227-1239	3.1	65
35	VORTEX-INDUCED VIBRATION OF A FLEXIBLE CANTILEVER. <i>Journal of Fluids and Structures</i> , 2001 , 15, 651-658	3.1	61
34	DYNAMICS AND FORCING OF A TETHERED SPHERE IN A FLUID FLOW. <i>Journal of Fluids and Structures</i> , 1997 , 11, 293-305	3.1	60
33	Vortex-induced vibrations of a pivoted cylinder. <i>Journal of Fluid Mechanics</i> , 2005 , 522, 215-252	3.7	59
32	Fluid forcing, wake modes, and transitions for a cylinder undergoing controlled oscillations. <i>Journal of Fluids and Structures</i> , 2009 , 25, 697-712	3.1	56
31	A new mechanism for oblique wave resonance in the natural far wake. <i>Journal of Fluid Mechanics</i> , 1993 , 256, 269-313	3.7	50
30	MULTIPLE MODES OF VORTEX-INDUCED VIBRATION OF A SPHERE. <i>Journal of Fluids and Structures</i> , 2001 , 15, 555-563	3.1	42

29	MEAN AND FLUCTUATING VELOCITY FIELDS IN THE WAKE OF A FREELY-VIBRATING CYLINDER. <i>Journal of Fluids and Structures</i> , 2001 , 15, 489-501	3.1	40
28	Three-dimensional vortex dynamics in bluff body wakes. <i>Experimental Thermal and Fluid Science</i> , 1996 , 12, 150-168	3	39
27	The instability of the separated shear layer from a bluff body. <i>Physics of Fluids</i> , 1996 , 8, 1347-1349	4.4	38
26	Experiments on long-wavelength instability and reconnection of a vortex pair. <i>Physics of Fluids</i> , 2011 , 23, 024101	4.4	33
25	Developing a cyber-physical fluid dynamics facility for fluid-structure interaction studies. <i>Journal of Fluids and Structures</i> , 2011 , 27, 748-757	3.1	32
24	A new family of uniform vortices related to vortex configurations before merging. <i>Journal of Fluid Mechanics</i> , 2003 , 493, 219-229	3.7	31
23	An efficient and general numerical method to compute steady uniform vortices. <i>Journal of Computational Physics</i> , 2011 , 230, 6495-6511	4.1	28
22	Stability of elliptical vortices from imperfect velocity-impulse diagrams. <i>Theoretical and Computational Fluid Dynamics</i> , 2010 , 24, 181-188	2.3	25
21	Employing controlled vibrations to predict fluid forces on a cylinder undergoing vortex-induced vibration. <i>Journal of Fluids and Structures</i> , 2006 , 22, 877-884	3.1	25
20	Instability of secondary vortices generated by a vortex pair in ground effect. <i>Journal of Fluid Mechanics</i> , 2012 , 700, 148-186	3.7	23
19	Acoustic forcing of oblique wave resonance in the far wake. <i>Journal of Fluid Mechanics</i> , 1993 , 256, 315-341	3.7	21
18	Vortex-induced vibration of a rising and falling cylinder. <i>Journal of Fluid Mechanics</i> , 2010 , 662, 352-383	3.7	20
17	Dynamics of a rising and falling cylinder. <i>Journal of Fluids and Structures</i> , 2006 , 22, 837-843	3.1	20
16	In-line response of a cylinder in oscillatory flow. <i>Applied Ocean Research</i> , 1985 , 7, 97-106	3.4	19
15	Determining the stability of steady two-dimensional flows through imperfect velocity-impulse diagrams. <i>Journal of Fluid Mechanics</i> , 2012 , 706, 323-350	3.7	16
14	A mathematical model of 2P and 2C vortex wakes. <i>Journal of Fluids and Structures</i> , 2011 , 27, 774-783	3.1	14
13	Wave interactions in the far wake of a body. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993 , 5, 1854-1856		14
12	Stability of conservative flows and new steady-fluid solutions from bifurcation diagrams exploiting a variational argument. <i>Physical Review Letters</i> , 2010 , 104, 044504	7.4	13

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| 11 | Steady, unsteady and transient vortex-induced vibration predicted using controlled motion data. <i>Journal of Fluid Mechanics</i> , 2010 , 649, 429-451 | 3-7 | 13 |
| 10 | Current blockage experiments: force time histories on obstacle arrays in combined steady and oscillatory motion. <i>Journal of Fluid Mechanics</i> , 2014 , 739, 143-178 | 3-7 | 12 |
| 9 | Structure and stability of the finite-area von Kármán street. <i>Physics of Fluids</i> , 2012 , 24, 066602 | 4-4 | 11 |
| 8 | Cell Formation in Cylinder Wakes at Low Reynolds Numbers. <i>Physical Review Letters</i> , 1997 , 78, 1259-1262 | 7-4 | 9 |
| 7 | Fluid forces on a small cylinder in the presence of a large cylinder in relative oscillatory flow. <i>Applied Ocean Research</i> , 1985 , 7, 124-127 | 3-4 | 9 |
| 6 | Resonant instability in two-dimensional vortex arrays. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 1164-1185 | 2-4 | 8 |
| 5 | Influence of a wall on the three-dimensional dynamics of a vortex pair. <i>Journal of Fluid Mechanics</i> , 2017 , 817, 339-373 | 3-7 | 6 |
| 4 | Double laminar and turbulent meteor trails observed in space and simulated in the laboratory. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 3622-3625 | 2-6 | 3 |
| 3 | Turbulent structures in the trailing vortex wake of a delta wing. <i>Experimental Thermal and Fluid Science</i> , 1997 , 14, 2-8 | 3 | 3 |
| 2 | Aerodynamics 2007 , 1043-1155 | | 2 |
| 1 | Computing Steady Vortex Flows of Prescribed Topology. <i>Procedia IUTAM</i> , 2013 , 7, 67-76 | | |