

# Timothy Pedley

## List of Publications by Citations

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64  
papers

4,075  
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34  
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63  
g-index

66  
ext. papers

4,518  
ext. citations

5  
avg, IF

5.63  
L-index

#	Paper	IF	Citations
64	Hydrodynamic Phenomena in Suspensions of Swimming Microorganisms. <i>Annual Review of Fluid Mechanics</i> , <b>1992</b> , 24, 313-358	22	573
63	Hydrodynamic interaction of two swimming model micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 568, 119	3.7	319
62	The growth of bioconvection patterns in a uniform suspension of gyrotactic micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>1988</b> , 195, 223-37	3.7	235
61	A new continuum model for suspensions of gyrotactic micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>1990</b> , 212, 155-82	3.7	180
60	Bioconvection. <i>Fluid Dynamics Research</i> , <b>2005</b> , 37, 1-20	1.2	178
59	Coherent structures in monolayers of swimming particles. <i>Physical Review Letters</i> , <b>2008</b> , 100, 088103	7.4	153
58	A separated-flow model for collapsible-tube oscillations. <i>Journal of Fluid Mechanics</i> , <b>1985</b> , 157, 375-404	3.7	146
57	Growth of bioconvection patterns in a suspension of gyrotactic micro-organisms in a layer of finite depth. <i>Journal of Fluid Mechanics</i> , <b>1989</b> , 208, 509-543	3.7	124
56	Diffusion of swimming model micro-organisms in a semi-dilute suspension. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 588, 437-462	3.7	112
55	A numerical simulation of unsteady flow in a two-dimensional collapsible channel. <i>Journal of Fluid Mechanics</i> , <b>1996</b> , 314, 191-225	3.7	112
54	Modelling Flow and Oscillations in Collapsible Tubes. <i>Theoretical and Computational Fluid Dynamics</i> , <b>1998</b> , 10, 277-294	2.3	109
53	Bioconvection in suspensions of oxytactic bacteria: linear theory. <i>Journal of Fluid Mechanics</i> , <b>1996</b> , 324, 223-259	3.7	109
52	The rheology of a semi-dilute suspension of swimming model micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 588, 399-435	3.7	107
51	Development of coherent structures in concentrated suspensions of swimming model micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 615, 401-431	3.7	101
50	Flow along a channel with a time-dependent indentation in one wall: the generation of vorticity waves. <i>Journal of Fluid Mechanics</i> , <b>1985</b> , 160, 337-367	3.7	96
49	The effects of wall inertia on flow in a two-dimensional collapsible channel. <i>Journal of Fluid Mechanics</i> , <b>1998</b> , 363, 253-280	3.7	72
48	Flow in a channel with a moving indentation. <i>Journal of Fluid Mechanics</i> , <b>1988</b> , 190, 87-112	3.7	67

47	Average nutrient uptake by a self-propelled unsteady squirmer. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 539, 93	3.7	65
46	Squirmers with swirl: a model for swimming. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 798, 165-186	3.7	63
45	Large-amplitude undulatory fish swimming: fluid mechanics coupled to internal mechanics. <i>Journal of Experimental Biology</i> , <b>1999</b> , 202, 3431-3438	3	61
44	Numerical solutions for unsteady gravity-driven flows in collapsible tubes: evolution and roll-wave instability of a steady state. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 396, 223-256	3.7	59
43	Instability of uniform micro-organism suspensions revisited. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 647, 335-359	3.7	57
42	Falling plumes in bacterial bioconvection. <i>Journal of Fluid Mechanics</i> , <b>2001</b> , 445, 121-149	3.7	57
41	Multiple solutions and flow limitation in collapsible channel flows. <i>Journal of Fluid Mechanics</i> , <b>2000</b> , 420, 301-324	3.7	53
40	The existence of steady flow in a collapsed tube. <i>Journal of Fluid Mechanics</i> , <b>1989</b> , 206, 339-374	3.7	51
39	Spherical squirmers: models for swimming micro-organisms. <i>IMA Journal of Applied Mathematics</i> , <b>2016</b> , 81, 488-521	1	49
38	Bacterial bioconvection: weakly nonlinear theory for pattern selection. <i>Journal of Fluid Mechanics</i> , <b>1998</b> , 370, 249-270	3.7	48
37	The effect of secondary motion on axial transport in oscillatory tube flow. <i>Journal of Fluid Mechanics</i> , <b>1988</b> , 193, 347	3.7	48
36	Viscous flow in collapsible tubes of slowly varying elliptical cross-section. <i>Journal of Fluid Mechanics</i> , <b>1977</b> , 81, 273-294	3.7	42
35	Analytical approximations for the orientation distribution of small dipolar particles in steady shear flows. <i>Journal of Mathematical Biology</i> , <b>1998</b> , 36, 269-298	2	41
34	Large-amplitude undulatory fish swimming: fluid mechanics coupled to internal mechanics. <i>Journal of Experimental Biology</i> , <b>1999</b> , 202, 3431-8	3	40
33	Viscous boundary layers in reversing flow. <i>Journal of Fluid Mechanics</i> , <b>1976</b> , 74, 59-79	3.7	36
32	The cascade structure of linear instability in collapsible channel flows. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 600, 45-76	3.7	34
31	Oscillatory flow in a tube of time-dependent curvature. Part 1. Perturbation to flow in a stationary curved tube. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 383, 327-352	3.7	32
30	Heat transfer from a hot film in reversing shear flow. <i>Journal of Fluid Mechanics</i> , <b>1976</b> , 78, 513-534	3.7	32

29	Flow in a tube with non-uniform, time-dependent curvature: governing equations and simple examples. <i>Journal of Fluid Mechanics</i> , <b>1996</b> , 323, 237-265	3.7	27
28	Bioconvection under uniform shear: linear stability analysis. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 738, 522-562	3.7	26
27	Stability of downflowing gyrotactic microorganism suspensions in a two-dimensional vertical channel. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 749, 750-777	3.7	26
26	The interaction between stirring and osmosis. Part 1. <i>Journal of Fluid Mechanics</i> , <b>1980</b> , 101, 843-861	3.7	26
25	Fluid flow along a channel with an asymmetric oscillating constriction. <i>Nature</i> , <b>1983</b> , 305, 692-695	50.4	23
24	A thermal boundary layer in a reversing flow. <i>Journal of Fluid Mechanics</i> , <b>1975</b> , 67, 209-225	3.7	21
23	Steady and unsteady separation in an approximately two-dimensional indented channel. <i>Journal of Fluid Mechanics</i> , <b>1983</b> , 130, 315	3.7	20
22	Distribution of gyrotactic micro-organisms in complex three-dimensional flows. Part 1. Horizontal shear flow past a vertical circular cylinder. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 852, 358-397	3.7	19
21	Viscous and inviscid flows in a channel with a moving indentation. <i>Journal of Fluid Mechanics</i> , <b>1989</b> , 209, 543-566	3.7	18
20	Collective Behaviour of Swimming Micro-organisms. <i>Experimental Mechanics</i> , <b>2010</b> , 50, 1293-1301	2.6	17
19	Three-dimensional steady streaming in a uniform tube with an oscillating elliptical cross-section. <i>Journal of Fluid Mechanics</i> , <b>1987</b> , 178, 325-343	3.7	14
18	Osmosis in small pores: a molecular dynamics study of the mechanism of solvent transport. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2005</b> , 461, 273-296	2.4	13
17	High-Reynolds-number steady flow in a collapsible channel. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 569, 151	3.7	13
16	The interaction between stirring and osmosis. Part 2. <i>Journal of Fluid Mechanics</i> , <b>1981</b> , 107, 281	3.7	12
15	Stability of high-Reynolds-number flow in a collapsible channel. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 714, 536-561	3.7	10
14	Stability of two-dimensional collapsible-channel flow at high Reynolds number. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 705, 371-386	3.7	10
13	Flow and oscillations in collapsible tubes: Physiological applications and low-dimensional models. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , <b>2015</b> , 40, 891-909	1	9
12	Orientalional relaxation time of bottom-heavy squirmers in a semi-dilute suspension. <i>Journal of Theoretical Biology</i> , <b>2007</b> , 249, 296-306	2.3	9

11	Gyrotaxis in uniform vorticity. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 762,	3.7	8
10	Dispersion of model microorganisms swimming in a nonuniform suspension. <i>Physical Review E</i> , <b>2014</b> , 90, 033008	2.4	7
9	Modelling lateral manoeuvres in fish. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 697, 1-34	3.7	7
8	Stability of dancing Volvox. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 903,	3.7	6
7	Wave Phenomena in Physiological Flows. <i>IMA Journal of Applied Mathematics</i> , <b>1984</b> , 32, 267-287	1	5
6	Stability of arrays of bottom-heavy spherical squirmers. <i>Physical Review Fluids</i> , <b>2019</b> , 4,	2.8	5
5	Rheology of a concentrated suspension of spherical squirmers: monolayer in simple shear flow. <i>Journal of Fluid Mechanics</i> , <b>2021</b> , 914,	3.7	4
4	Flutter in a quasi-one-dimensional model of a collapsible channel. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2014</b> , 470, 20140015	2.4	3
3	Pressure-Flow Relationships in the Lungs <b>1986</b> , 277-293		3
2	Aerodynamic Theory <b>1986</b> , 41-54		2
1	Discussion: Measurements of Velocity Wave Forms in the Dog Aorta [Kiser, K. M., Falsetti, H. L., Yu, K. H., Resitarets, M. R., Francis, G. P., and Carroll, R. J., 1976, ASME J. Fluids Eng., 98, pp. 297B04). <i>Journal of Fluids Engineering, Transactions of the ASME</i> , <b>1977</b> , 99, 262-262	2.1	