

# Timothy Pedley

## 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.

64  
papers

4,075  
citations

34  
h-index

63  
g-index

66  
ext. papers

4,518  
ext. citations

5  
avg, IF

5.63  
L-index

| #  | Paper  | IF  | Citations |
|----|--|-----|-----------|
| 64 | 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         |
| 63 | Stability of dancing Volvox. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 903,  | 3.7 | 6         |
| 62 | Stability of arrays of bottom-heavy spherical squirmers. <i>Physical Review Fluids</i> , <b>2019</b> , 4,  | 2.8 | 5         |
| 61 | 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        |
| 60 | Squirmers with swirl: a model for swimming. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 798, 165-186   | 3.7 | 63        |
| 59 | Spherical squirmers: models for swimming micro-organisms. <i>IMA Journal of Applied Mathematics</i> , <b>2016</b> , 81, 488-521  | 1   | 49        |
| 58 | Gyrotaxis in uniform vorticity. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 762,   | 3.7 | 8         |
| 57 | 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         |
| 56 | Bioconvection under uniform shear: linear stability analysis. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 738, 522-562   | 3.7 | 26        |
| 55 | 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         |
| 54 | 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        |
| 53 | Dispersion of model microorganisms swimming in a nonuniform suspension. <i>Physical Review E</i> , <b>2014</b> , 90, 033008  | 2.4 | 7         |
| 52 | 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        |
| 51 | 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        |
| 50 | Modelling lateral manoeuvres in fish. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 697, 1-34  | 3.7 | 7         |
| 49 | Instability of uniform micro-organism suspensions revisited. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 647, 335-359  | 3.7 | 57        |
| 48 | Collective Behaviour of Swimming Micro-organisms. <i>Experimental Mechanics</i> , <b>2010</b> , 50, 1293-1301  | 2.6 | 17        |

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|----|---|-----|-----|
| 47 | 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 |
| 46 | 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  |
| 45 | Coherent structures in monolayers of swimming particles. <i>Physical Review Letters</i> , <b>2008</b> , 100, 088103   | 7.4 | 153 |
| 44 | 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 |
| 43 | 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 |
| 42 | 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   |
| 41 | High-Reynolds-number steady flow in a collapsible channel. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 569, 151   | 3.7 | 13  |
| 40 | Hydrodynamic interaction of two swimming model micro-organisms. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 568, 119  | 3.7 | 319 |
| 39 | Average nutrient uptake by a self-propelled unsteady squirmer. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 539, 93  | 3.7 | 65  |
| 38 | 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  |
| 37 | Bioconvection. <i>Fluid Dynamics Research</i> , <b>2005</b> , 37, 1-20  | 1.2 | 178 |
| 36 | Falling plumes in bacterial bioconvection. <i>Journal of Fluid Mechanics</i> , <b>2001</b> , 445, 121-149   | 3.7 | 57  |
| 35 | Multiple solutions and flow limitation in collapsible channel flows. <i>Journal of Fluid Mechanics</i> , <b>2000</b> , 420, 301-324   | 3.7 | 53  |
| 34 | 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  |
| 33 | 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  |
| 32 | 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  |
| 31 | 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  |
| 30 | 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  |

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|----|---|-----|-----|
| 29 | Modelling Flow and Oscillations in Collapsible Tubes. <i>Theoretical and Computational Fluid Dynamics</i> , <b>1998</b> , 10, 277-294                                     | 2.3 | 109 |
| 28 | 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  |
| 27 | Bacterial bioconvection: weakly nonlinear theory for pattern selection. <i>Journal of Fluid Mechanics</i> , <b>1998</b> , 370, 249-270                                    | 3.7 | 48  |
| 26 | Bioconvection in suspensions of oxytactic bacteria: linear theory. <i>Journal of Fluid Mechanics</i> , <b>1996</b> , 324, 223-259   | 3.7 | 109 |
| 25 | 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 |
| 24 | 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  |
| 23 | Hydrodynamic Phenomena in Suspensions of Swimming Microorganisms. <i>Annual Review of Fluid Mechanics</i> , <b>1992</b> , 24, 313-358                                     | 22  | 573 |
| 22 | 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 |
| 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 | 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 |
| 19 | The existence of steady flow in a collapsed tube. <i>Journal of Fluid Mechanics</i> , <b>1989</b> , 206, 339-374  | 3.7 | 51  |
| 18 | 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 |
| 17 | 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  |
| 16 | Flow in a channel with a moving indentation. <i>Journal of Fluid Mechanics</i> , <b>1988</b> , 190, 87-112  | 3.7 | 67  |
| 15 | 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  |
| 14 | Aerodynamic Theory <b>1986</b> , 41-54  |     | 2   |
| 13 | Pressure-Flow Relationships in the Lungs <b>1986</b> , 277-293  |     | 3   |
| 12 | 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  |

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|----|---|------|-----|
| 11 | A separated-flow model for collapsible-tube oscillations. <i>Journal of Fluid Mechanics</i> , <b>1985</b> , 157, 375-404  | 3.7  | 146 |
| 10 | Wave Phenomena in Physiological Flows. <i>IMA Journal of Applied Mathematics</i> , <b>1984</b> , 32, 267-287  | 1    | 5   |
| 9  | 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  |
| 8  | Fluid flow along a channel with an asymmetric oscillating constriction. <i>Nature</i> , <b>1983</b> , 305, 692-695  | 50.4 | 23  |
| 7  | The interaction between stirring and osmosis. Part 2. <i>Journal of Fluid Mechanics</i> , <b>1981</b> , 107, 281  | 3.7  | 12  |
| 6  | The interaction between stirring and osmosis. Part 1. <i>Journal of Fluid Mechanics</i> , <b>1980</b> , 101, 843-861  | 3.7  | 26  |
| 5  | 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  |
| 4  | 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  |     |
| 3  | 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  |
| 2  | Viscous boundary layers in reversing flow. <i>Journal of Fluid Mechanics</i> , <b>1976</b> , 74, 59-79  | 3.7  | 36  |
| 1  | A thermal boundary layer in a reversing flow. <i>Journal of Fluid Mechanics</i> , <b>1975</b> , 67, 209-225   | 3.7  | 21  |