Paul A Milewski

List of Publications by Year
in descending order

77 papers	1,667 citations	236925 25 h-index	330143 37 g-index
78 all docs	78 docs citations	78 times ranked	789 citing authors

#	Article	IF	Citations
1	A temperature compensation method for CDOM fluorescence sensors in freshwater. Limnology and Oceanography: Methods, 2011, 9, 296-301.	2.0	94
2	Faraday pilot-wave dynamics: modelling and computation. Journal of Fluid Mechanics, 2015, 778, 361-388.	3.4	67
3	Hydroelastic solitary waves in deep water. Journal of Fluid Mechanics, 2011, 679, 628-640.	3.4	66
4	Dynamics of steep two-dimensional gravityâ€“capillary solitary waves. Journal of Fluid Mechanics, 2010, 664, 466-477.	3.4	61
5	A PseudoSpectral Procedure for the Solution of Nonlinear Wave Equations with Examples from Free-Surface Flows. SIAM Journal of Scientific Computing, 1999, 21, 1102-1114.	2.8	60
6	On the fully-nonlinear shallow-water generalized Serre equations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 1049-1053.	2.1	58
7	Finite volume and pseudo-spectral schemes for the fully nonlinear 1D Serre equations. European Journal of Applied Mathematics, 2013, 24, 761-787.	2.9	57
8	The Generation and Evolution of Lump Solitary Waves in Surface-Tension-Dominated Flows. SIAM Journal on Applied Mathematics, 2000, 61, 731-750.	1.8	52
9	Faraday waveâ€“droplet dynamics: discrete-timeÂanalysis. Journal of Fluid Mechanics, 2017, 821, 296-329.	3.4	52
10	Threeâ€Dimensional Water Waves. Studies in Applied Mathematics, 1996, 97, 149-166.	2.4	50
11	Flow structure beneath rotational water waves with stagnation points. Journal of Fluid Mechanics, 2017, 812, 792-814.	3.4	48
12	A Model Equation for Wavepacket Solitary Waves Arising from Capillaryâ€Gravity Flows. Studies in Applied Mathematics, 2009, 122, 249-274.	2.4	46
13	Tunneling with a hydrodynamic pilot-wave model. Physical Review Fluids, 2017, 2, .	2.5	42
14	Nonlinear Stability of two-layer flows. Communications in Mathematical Sciences, 2004, 2, 427-442.	1.0	36
15	Three-dimensional Localized Solitary Gravity-Capillary Waves. Communications in Mathematical Sciences, 2005, 3, 89-99.	1.0	33
16	Dynamics of Three-Dimensional Gravity-Capillary Solitary Waves in Deep Water. SIAM Journal on Applied Mathematics, 2010, 70, 2390-2408.	1.8	32
17	Two-dimensional flexural-gravity waves of finite amplitude in deep water. IMA Journal of Applied Mathematics, 2013, 78, 750-761.	1.6	32
18	Dynamics of gravityâ€“capillary solitary waves in deep water. Journal of Fluid Mechanics, 2012, 708, 480-501.	3.4	31

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19	Introduction to focus issue on hydrodynamic quantum analogs. Chaos, 2018, 28, 096001.	2.5	31
20	Three Dimensional Flexuralâ€"Gravity Waves. Studies in Applied Mathematics, 2013, 131, 135-148.	2.4	30
21	Time dependent gravity-capillary flows past an obstacle. Wave Motion, 1999, 29, 63-79.	2.0	28
22	Stability Properties and Nonlinear Mappings of Two and Threeâ€Layer Stratified Flows. Studies in Applied Mathematics, 2009, 122, 123-137.	2.4	26
23	Dynamics, emergent statistics, and the mean-pilot-wave potential of walking droplets. Chaos, 2018, 28, 096108.	2.5	26
24	Merging and wetting driven by surface tension. European Journal of Mechanics, B/Fluids, 2000, 19, 491-502.	2.5	25
25	Strongly nonlinear effects on internal solitary waves in three-layer flows. Journal of Fluid Mechanics, 2020, 883, .	3.4	25
26	Faraday pilot-wave dynamics in a circular corral. Journal of Fluid Mechanics, 2020, 891, .	3.4	24
27	Rotational waves generated by currentâ€topography interaction. Studies in Applied Mathematics, 2019, 142, 433-464.	2.4	23
28	EVOLUTION OF PERIODICITY IN PERIODICAL CICADAS. Ecology, 2005, 86, 3200-3211.	3.2	22
29	Resonant Wave Interactions in the Equatorial Waveguide. Journals of the Atmospheric Sciences, 2008, 65, 3398-3418.	1.7	22
30	The Stability of Largeâ€Amplitude Shallow Interfacial Nonâ€Boussinesq Flows. Studies in Applied Mathematics, 2012, 128, 40-58.	2.4	22
31	Shear instability for stratified hydrostatic flows. Communications on Pure and Applied Mathematics, 2009, 62, 183-197.	3.1	21
32	Non-wetting impact of a sphere onto a bath and its application to bouncing droplets. Journal of Fluid Mechanics, 2017, 826, 97-127.	3.4	21
33	A simple model for biological aggregation with asymmetric sensing. Communications in Mathematical Sciences, 2008, 6, 397-416.	1.0	21
34	Numerical study of interfacial solitary waves propagating under an elastic sheet. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20140111.	2.1	19
35	Simulation of Wave Interactions and Turbulence in One-Dimensional Water Waves. SIAM Journal on Applied Mathematics, 2003, 63, 1121-1140.	1.8	18
36	Model Equations for Gravityâ€Capillary Waves in Deep Water. Studies in Applied Mathematics, 2008, 121, 49-69.	2.4	18

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37	Asymmetric gravityâ€“capillary solitary waves on deep water. Journal of Fluid Mechanics, 2014, 759, .	3.4	18
38	Dynamics of fully nonlinear capillaryâ€“gravity solitary waves under normal electric fields. Journal of Engineering Mathematics, 2018, 108, 107-122.	1.2	17
39	Long wave interaction over varying topography. Physica D: Nonlinear Phenomena, 1998, 123, 36-47.	2.8	16
40	The volcano effect in bacterial chemotaxis. Mathematical and Computer Modelling, 2011, 53, 1374-1388.	2.0	16
41	A Formulation for Water Waves over Topography. Studies in Applied Mathematics, 1998, 100, 95-106.	2.4	15
42	Quasi-normal free-surface impacts, capillary rebounds and application to Faraday walkers. Journal of Fluid Mechanics, 2019, 873, 856-888.	3.4	14
43	Steady dark solitary flexural gravity waves. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120485.	2.1	13
44	Transversally periodic solitary gravityâ€“capillary waves. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130537.	2.1	12
45	Conservation law modelling of entrainment in layered hydrostatic flows. Journal of Fluid Mechanics, 2015, 772, 272-294.	3.4	11
46	Stability of periodic traveling flexuralâ€gravity waves in two dimensions. Studies in Applied Mathematics, 2019, 142, 65-90.	2.4	11
47	Resonant Wave Interaction with Random Forcing and Dissipation. Studies in Applied Mathematics, 2002, 108, 123-144.	2.4	10
48	Solitary flexuralâ€“gravity waves in three dimensions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170345.	3.4	10
49	Magnetic nanoparticles in a nematic channel: A one-dimensional study. Physical Review E, 2019, 100, 012703.	2.1	10
50	Capillary-scale solid rebounds: experiments, modelling and simulations. Journal of Fluid Mechanics, 2021, 912, .	3.4	10
51	Mixing Closures for Conservation Laws in Stratified Flows. Studies in Applied Mathematics, 2008, 121, 89-116.	2.4	9
52	Correcting CDOM fluorescence measurements for temperature effects under field conditions in freshwaters. Limnology and Oceanography: Methods, 2014, 12, 23-24.	2.0	9
53	Front Propagation at the Nematic-Isotropic Transition Temperature. SIAM Journal on Applied Mathematics, 2016, 76, 1296-1320.	1.8	9
54	Nonlinear hydroelastic waves on a linear shear current at finite depth. Journal of Fluid Mechanics, 2019, 876, 55-86.	3.4	9

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55	Resonant Interactions between Vortical Flows and Water Waves. Part I: Deep Water. Studies in Applied Mathematics, 1995, 94, 131-167.	2.4	8
56	Modulated two-dimensional patterns in reactionâ€"diffusion systems. European Journal of Applied Mathematics, 1999, 10, 157-184.	2.9	8
57	Breaking and merging of liquid sheets and filaments. Journal of Engineering Mathematics, 2002, 42, 283-290.	1.2	8
58	Resonant Interactions between Vortical Flows and Water Waves. Part II: Shallow Water. Studies in Applied Mathematics, 1995, 94, 225-256.	2.4	7
59	Computation of Three-dimensional Flexural-gravity Solitary Waves in Arbitrary Depth. Procedia IUTAM, 2014, 11, 119-129.	1.2	7
60	Hydroelastic solitary waves with constant vorticity. Wave Motion, 2019, 85, 84-97.	2.0	7
61	A new first-principles model to predict mild and deep surge for a centrifugal compressor. Energy, 2022, 244, 123050.	8.8	6
62	Nonequilibrium statistics of a reduced model for energy transfer in waves. Communications on Pure and Applied Mathematics, 2007, 60, 439-461.	3.1	5
63	A Model for Strongly Nonlinear Long Interfacial Waves with Background Shear. Studies in Applied Mathematics, 2014, 133, 182-213.	2.4	5
64	Development and Validation of a Model for Centrifugal Compressors in Reversed Flow Regimes. Journal of Turbomachinery, 2021, 143, .	1.7	5
65	On the structure of steady parasitic gravity-capillary waves in the small surface tension limit. Journal of Fluid Mechanics, 2021, 922, .	3.4	5
66	Modeling Axisymmetric Centrifugal Compressor Characteristics From First Principles. Journal of Turbomachinery, 2020, 142, .	1.7	5
67	A stability result for solitary waves in nonlinear dispersive equations. Communications in Mathematical Sciences, 2008, 6, 791-797.	1.0	5
68	A reduced model for nonlinear dispersive waves in a rotating environment. Geophysical and Astrophysical Fluid Dynamics, 1999, 90, 139-159.	1.2	4
69	Complete absorption of topologically protected waves. Physical Review E, 2021, 104, 014603.	2.1	4
70	Capillaryâ€gravity solitary waves on water of finite depth interacting with a linear shear current. Studies in Applied Mathematics, 2021, 147, 1036-1057.	2.4	4
71	Singularities on Free Surfaces of Fluid Flows. Studies in Applied Mathematics, 1998, 100, 245-267.	2.4	3
72	Long Nonlinear Waves in Resonance with Topography. Studies in Applied Mathematics, 2003, 110, 21-47.	2.4	3

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73	Self-focusing dynamics of patches of ripples. Physica D: Nonlinear Phenomena, 2016, 333, 235-242.	2.8	3
74	Threeâ€layer flows in the shallow water limit. Studies in Applied Mathematics, 2019, 142, 487.	2.4	3
75	On weakly nonlinear gravityâ€“capillary solitary waves. Wave Motion, 2012, 49, 221-237.	2.0	2
76	The diurnal cycle and the meridional extent of the tropics. Physica D: Nonlinear Phenomena, 2011, 240, 233-240.	2.8	1
77	Nonlinear stability of two-layer shallow water flows with a free surface. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190594.	2.1	1