

Tim Marchant

List of Publications by Year in descending order

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79
papers

1,250
citations

394286

19
h-index

434063

31
g-index

80
all docs

80
docs citations

80
times ranked

602
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling microwave heating. <i>Applied Mathematical Modelling</i> , 1996, 20, 3-15.	2.2	118
2	The extended Korteweg-de Vries equation and the resonant flow of a fluid over topography. <i>Journal of Fluid Mechanics</i> , 1990, 221, 263-287.	1.4	102
3	Soliton interaction for the extended Korteweg-de Vries equation. <i>IMA Journal of Applied Mathematics</i> , 1996, 56, 157-176.	0.8	82
4	Reorientational versus Kerr dark and gray solitary waves using modulation theory. <i>Physical Review E</i> , 2011, 84, 066602.	0.8	52
5	Cubic autocatalytic reaction-diffusion equations: semi-analytical solutions. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002, 458, 873-888.	1.0	37
6	Properties of short-crested waves in water of finite depth. <i>Journal of the Australian Mathematical Society Series B Applied Mathematics</i> , 1987, 29, 103-125.	0.3	36
7	A DRBEM model for microwave heating problems. <i>Applied Mathematical Modelling</i> , 1995, 19, 287-297.	2.2	32
8	Self-heating in compost piles due to biological effects. <i>Chemical Engineering Science</i> , 2007, 62, 4612-4619.	1.9	29
9	Undular bores and the initial-boundary value problem for the modified Korteweg-de Vries equation. <i>Wave Motion</i> , 2008, 45, 540-555.	1.0	29
10	Initial-Boundary Value Problems for the Korteweg-de Vries Equation. <i>IMA Journal of Applied Mathematics</i> , 1991, 47, 247-264.	0.8	28
11	The initial boundary problem for the Korteweg-de Vries equation on the negative quarter-plane. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002, 458, 857-871.	1.0	26
12	Solitary wave interaction and evolution for a higher-order Hirota equation. <i>Wave Motion</i> , 2006, 44, 92-106.	1.0	26
13	Solitary waves in nematic liquid crystals. <i>Physica D: Nonlinear Phenomena</i> , 2014, 268, 106-117.	1.3	25
14	Collisionless shock resolution in nematic liquid crystals. <i>Physical Review A</i> , 2008, 78, .	1.0	24
15	Modulation analysis of boundary-induced motion of optical solitary waves in a nematic liquid crystal. <i>Physical Review A</i> , 2009, 79, .	1.0	24
16	The diffusive Lotka-Volterra predator-prey system with delay. <i>Mathematical Biosciences</i> , 2015, 270, 30-40.	0.9	23
17	Asymptotic solitons for a higher-order modified Korteweg-de Vries equation. <i>Physical Review E</i> , 2002, 66, 046623.	0.8	21
18	Asymptotic solitons for a third-order Korteweg-de Vries equation. <i>Chaos, Solitons and Fractals</i> , 2004, 22, 261-270.	2.5	20

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19	Microwave thawing of cylinders. <i>Applied Mathematical Modelling</i> , 2004, 28, 711-733.	2.2	20
20	Dipole soliton formation in a nematic liquid crystal in the nonlocal limit. <i>Physica D: Nonlinear Phenomena</i> , 2008, 237, 1088-1102.	1.3	20
21	High-Order Interaction of Solitary Waves on Shallow Water. <i>Studies in Applied Mathematics</i> , 2002, 109, 1-17.	1.1	19
22	Approximate solutions for magmon propagation from a reservoir. <i>IMA Journal of Applied Mathematics</i> , 2005, 70, 796-813.	0.8	19
23	Analytical solution for electrolyte concentration distribution in lithium-ion batteries. <i>Journal of Applied Electrochemistry</i> , 2012, 42, 189-199.	1.5	19
24	Asymptotic solitons of the extended Korteweg-de Vries equation. <i>Physical Review E</i> , 1999, 59, 3745-3748.	0.8	18
25	The microwave heating of two-dimensional slabs with small Arrhenius absorptivity. <i>IMA Journal of Applied Mathematics</i> , 1999, 62, 137-166.	0.8	18
26	Semi-analytical solutions for the 1- and 2-D diffusive Nicholson's blowflies equation. <i>IMA Journal of Applied Mathematics</i> , 2014, 79, 175-199.	0.8	17
27	An undular bore solution for the higher-order Korteweg-de Vries equation. <i>Journal of Physics A</i> , 2006, 39, L563-L569.	1.6	16
28	Semi-analytical solutions for the reversible Selkov model with feedback delay. <i>Applied Mathematics and Computation</i> , 2014, 232, 49-59.	1.4	16
29	Cubic autocatalysis with Michaelis-Menten kinetics: semi-analytical solutions for the reaction-diffusion cell. <i>Chemical Engineering Science</i> , 2004, 59, 3433-3440.	1.9	15
30	APPROXIMATE TECHNIQUES FOR DISPERSIVE SHOCK WAVES IN NONLINEAR MEDIA. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2012, 21, 1250035.	1.1	15
31	Solitary wave interaction for the extended BBM equation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2000, 456, 433-453.	1.0	14
32	Semi-analytical solutions for one- and two-dimensional pellet problems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2004, 460, 2381-2394.	1.0	14
33	Mixed quadratic-cubic autocatalytic reaction-diffusion equations: Semi-analytical solutions. <i>Applied Mathematical Modelling</i> , 2014, 38, 5160-5173.	2.2	14
34	Soliton perturbation theory for a higher order Hirota equation. <i>Mathematics and Computers in Simulation</i> , 2009, 80, 770-778.	2.4	13
35	The Steady-State Microwave Heating of Slabs with Small Arrhenius Absorptivity. <i>Journal of Engineering Mathematics</i> , 1998, 33, 219-234.	0.6	12
36	Dispersive shock waves governed by the Whitham equation and their stability. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20180278.	1.0	12

#	ARTICLE	IF	CITATIONS
37	Numerical and analytical study of undular bores governed by the full water wave equations and bidirectional Whitham-Boussinesq equations. <i>Physics of Fluids</i> , 2021, 33, .	1.6	12
38	Microwave heating of materials with impurities. <i>Journal of Engineering Mathematics</i> , 1994, 28, 379-400.	0.6	11
39	Optical dispersive shock waves in defocusing colloidal media. <i>Physica D: Nonlinear Phenomena</i> , 2017, 342, 45-56.	1.3	11
40	Microwave Heating of Materials with Nonohmic Conductance. <i>SIAM Journal on Applied Mathematics</i> , 1993, 53, 1591-1612.	0.8	10
41	Microwave thawing of slabs. <i>Applied Mathematical Modelling</i> , 1999, 23, 363-383.	2.2	10
42	Undular bore solution of the Camassa-Holm equation. <i>Physical Review E</i> , 2006, 73, 057602.	0.8	10
43	Nonlocal validity of an asymptotic one-dimensional nematic solution. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 365201.	0.7	10
44	Semi-analytical solutions for dispersive shock waves in colloidal media. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 145401.	0.6	10
45	Non-smooth feedback control for Belousov-Zhabotinskii reaction-diffusion equations: semi-analytical solutions. <i>Journal of Mathematical Chemistry</i> , 2016, 54, 1632-1657.	0.7	10
46	A perturbation DRBEM model for weakly nonlinear wave run-ups around islands. <i>Engineering Analysis With Boundary Elements</i> , 2009, 33, 63-76.	2.0	9
47	Optical solitary waves in thermal media with non-symmetric boundary conditions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 055201.	0.7	9
48	Microwave heating of materials with temperature-dependent wavespeed. <i>Wave Motion</i> , 1994, 19, 67-81.	1.0	7
49	Numerical solitary wave interaction: the order of the inelastic effect. <i>ANZIAM Journal</i> , 2002, 44, 95-102.	0.3	7
50	Solitary wave interaction for a higher-order nonlinear Schrödinger equation. <i>IMA Journal of Applied Mathematics</i> , 2007, 72, 206-222.	0.8	7
51	Asymptotic solitons on a non-zero mean level. <i>Chaos, Solitons and Fractals</i> , 2007, 32, 1328-1336.	2.5	7
52	Nematic Dispersive Shock Waves from Nonlocal to Local. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 4736.	1.3	7
53	Thermal waves for nonlinear hyperbolic heat conduction. <i>Mathematical and Computer Modelling</i> , 1993, 18, 111-121.	2.0	6
54	Pulse evolution for marangoni-Bénard convection. <i>Mathematical and Computer Modelling</i> , 1998, 28, 45-58.	2.0	6

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55	Evolution of solitary waves for a perturbed nonlinear Schrödinger equation. Applied Mathematics and Computation, 2010, 216, 3642-3651.	1.4	6
56	Coupled Korteweg-de Vries equations describing, to high-order, resonant flow of a fluid over topography. Physics of Fluids, 1999, 11, 1797-1804.	1.6	5
57	On the heating of a two-dimensional slab in a microwave cavity: aperture effects. ANZIAM Journal, 2001, 43, 137-148.	0.3	5
58	The occurrence of limit-cycles during feedback control of microwave heating. Mathematical and Computer Modelling, 2002, 35, 1095-1118.	2.0	5
59	Semi-analytical solutions for a Gray-Scott reaction-diffusion cell with an applied electric field. Chemical Engineering Science, 2008, 63, 495-502.	1.9	5
60	A variational approach to the problem of deep-water waves forming a circular caustic. Journal of Fluid Mechanics, 1988, 194, 581.	1.4	4
61	Semi-analytical solutions for continuous-flow microwave reactors. Journal of Engineering Mathematics, 2002, 44, 125-145.	0.6	4
62	Colloidal solitary waves with temperature dependent compressibility. Journal of Optics (United Kingdom), 2007, 10, 043001.	1.0	4
63	Solitary waves in thermal media with nonsymmetric boundary conditions. Studies in Applied Mathematics, 2019, 142, 586-607.	1.1	4
64	Reflection of nonlinear deep-water waves incident onto a wedge of arbitrary angle. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1990, 32, 61-96.	0.3	3
65	The microwave heating of three-dimensional blocks: semi-analytical solutions. IMA Journal of Applied Mathematics, 2002, 67, 145-175.	0.8	3
66	Dispersive shock waves in colloids with temperature dependent compressibility. Journal of Nonlinear Optical Physics and Materials, 2014, 23, 1450043.	1.1	3
67	Higher-order modulation theory for resonant flow over topography. Physics of Fluids, 2017, 29, 077101.	1.6	3
68	Higher-dimensional extended shallow water equations and resonant soliton radiation. Physical Review Fluids, 2021, 6, .	1.0	3
69	Evolution of Higher-Order Gray Hirota Solitary Waves. Studies in Applied Mathematics, 2008, 121, 117-139.	1.1	2
70	Semi-analytical solutions for cubic autocatalytic reaction-diffusion equations; the effect of a precursor chemical. ANZIAM Journal, 0, 53, 511.	0.0	2
71	Interactions of Self-Localised Optical Wavepackets in Reorientational Soft Matter. Applied Sciences (Switzerland), 2022, 12, 2607.	1.3	2
72	The evolution and interaction of Marangoni-Bénard solitary waves. Wave Motion, 1996, 23, 307-320.	1.0	1

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73	Numerical simulation of contaminant flow in a wool scour. Mathematical and Computer Modelling, 2007, 46, 499-512.	2.0	1
74	Circular dispersive shock waves in colloidal media. Journal of Nonlinear Optical Physics and Materials, 2016, 25, 1650044.	1.1	1
75	Finding your level. New Scientist, 2007, 194, 27.	0.0	0
76	Mathematical modelling of nematicons and their interactions. , 2008, , .		0
77	The analytical evolution of NLS solitons due to the numerical discretization error. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 505205.	0.7	0
78	PROFESSOR JONATHAN M. BORWEIN. Journal of the Australian Mathematical Society, 2016, 101, 289-289.	0.3	0
79	Cubic autocatalysis in a reaction-diffusion annulus: semi-analytical solutions. Zeitschrift Fur Angewandte Mathematik Und Physik, 2016, 67, 1.	0.7	0