Thomas P Witelski

List of Publications by Year
in descending order

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89	2,069	218677	254184
papers	citations	26 h-index	43 g-index

92	92	92	1316
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Uncovering the dynamics of a circadian-dopamine model influenced by the lightâ€“dark cycle. Mathematical Biosciences, 2022, 344, 108764.	1.9	5
2	Acoustohydrodynamic tweezers via spatial arrangement of streaming vortices. Science Advances, 2021, 7, .	10.3	34
3	Taylor dispersion in osmotically driven laminar flows in phloem. Journal of Fluid Mechanics, 2021, 913, .	3.4	7
4	Steady states and dynamics of a thin-film-type equation with non-conserved mass. European Journal of Applied Mathematics, 2020, 31, 968-1001.	2.9	1
5	Dynamics of spiral waves in the complex Ginzburgâ€“Landau equation in bounded domains. Physica D: Nonlinear Phenomena, 2020, 414, 132699.	2.8	2
6	Steady states of thin film droplets on chemically heterogeneous substrates. IMA Journal of Applied Mathematics, 2020, 85, 980-1020.	1.6	5
7	Nonlinear dynamics of dewetting thin films. AIMS Mathematics, 2020, 5, 4229-4259.	1.6	12
8	Pressure-dipole solutions of the thin-film equation. European Journal of Applied Mathematics, 2019, 30, 358-399.	2.9	1
9	Thermal Marangoni-driven dynamics of spinning liquid films. Physical Review Fluids, 2019, 4, .	2.5	1
10	Principles that govern competition or co-existence in Rho-GTPase driven polarization. PLoS Computational Biology, 2018, 14, e1006095.	3.2	63
11	Instability and dynamics of volatile thin films. Physical Review Fluids, 2018, 3, .	2.5	9
12	A vicinal surface model for epitaxial growth with logarithmic free energy. Discrete and Continuous Dynamical Systems - Series B, 2018, 23, 4433-4453.	0.9	0
13	Global existence of solutions to a tear film model with locally elevated evaporation rates. Physica D: Nonlinear Phenomena, 2017, 350, 13-25.	2.8	3
14	Finite-time thin film rupture driven by modified evaporative loss. Physica D: Nonlinear Phenomena, 2017, 342, 1-15.	2.8	18
15	Flow and fouling in a pleated membrane filter. Journal of Fluid Mechanics, 2016, 795, 36-59.	3.4	23
16	Experimental study of regular and chaotic transients in a non-smooth system. International Journal of Non-Linear Mechanics, 2016, 81, 55-64.	2.6	15
17	Oil capture from a water surface by a falling sphere. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 497, 126-132.	4.7	1
18	Obtaining self-similar scalings in focusing flows. Physical Review E, 2015, 92, 043016.	2.1	6

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19	Preface to the special issue on â€œThin films and fluid interfacesâ€. Journal of Engineering Mathematics, 2015, 94, 1-3.	1.2	1
20	A driven system of impacting pendulums: Experiments and simulations. Journal of Sound and Vibration, 2014, 333, 1734-1753.	3.9	15
21	A new model for disturbance waves. International Journal of Multiphase Flow, 2014, 66, 38-45.	3.4	16
22	Exponential Asymptotics for Thin Film Rupture. SIAM Journal on Applied Mathematics, 2013, 73, 232-253.	1.8	14
23	Biaxial extensional motion of an inertially driven radially expanding liquid sheet. Physics of Fluids, 2013, 25, 062105.	4.0	0
24	A PARAMETRICALLY FORCED NONLINEAR SYSTEM WITH REVERSIBLE EQUILIBRIA. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1230020.	1.7	1
25	Anomalous exponents of self-similar blow-up solutions to an aggregation equation in odd dimensions. Applied Mathematics Letters, 2012, 25, 2317-2321.	2.7	6
26	The Effect of Polar Lipids on Tear Film Dynamics. Bulletin of Mathematical Biology, 2011, 73, 1171-1201.	1.9	35
27	Stability and dynamics of self-similarity in evolution equations. Journal of Engineering Mathematics, 2010, 66, 11-31.	1.2	19
28	Motion of spiral waves in the complex Ginzburgâ€“Landau equation. Physica D: Nonlinear Phenomena, 2010, 239, 348-365.	2.8	15
29	On the planar extensional motion of an inertially driven liquid sheet. Physics of Fluids, 2009, 21, 042101.	4.0	4
30	The subtle art of blowing bubbles. Nature Physics, 2009, 5, 315-316.	16.7	1
31	Transient and self-similar dynamics in thin film coarsening. Physica D: Nonlinear Phenomena, 2009, 238, 2380-2394.	2.8	20
32	Short-time pattern formation in thin film equations. Discrete and Continuous Dynamical Systems, 2009, 23, 867-885.	0.9	1
33	Large oscillations of beams and columns including self-weight. International Journal of Non-Linear Mechanics, 2008, 43, 761-771.	2.6	13
34	Nonmonotonic traveling wave solutions of infiltration into porous media. Water Resources Research, 2008, 44, .	4.2	37
35	On Spiking Models for Synaptic Activity and Impulsive Differential Equations. SIAM Review, 2008, 50, 553-569.	9.5	35
36	Interaction of Spiral Waves in the Complex Ginzburg-Landau Equation. Physical Review Letters, 2008, 101, 224101.	7.8	6

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37	Coarsening of unstable thin films subject to gravity. Physical Review E, 2008, 77, 016301.	2.1	23
38	Gravity-driven thin liquid films with insoluble surfactant: smooth traveling waves. European Journal of Applied Mathematics, 2007, 18, 679-708.	2.9	32
39	Boundary-Value Problems for Hyperbolic Equations Related to Steady Granular Flow. Mathematics and Mechanics of Solids, 2007, 12, 665-699.	2.4	2
40	The Linear Limit of the Dipole Problem for the Thin Film Equation. SIAM Journal on Applied Mathematics, 2006, 66, 1727-1748.	1.8	18
41	Growing surfactant waves in thin liquid films driven by gravity. Applied Mathematics Research EXpress, 2006, , .	1.0	3
42	Collision versus collapse of droplets in coarsening of dewetting thin films. Physica D: Nonlinear Phenomena, 2005, 209, 80-104.	2.8	47
43	Motion of wetting fronts moving into partially pre-wet soil. Advances in Water Resources, 2005, 28, 1133-1141.	3.8	31
44	Localized Marangoni forcing in driven thin films. Physica D: Nonlinear Phenomena, 2005, 209, 117-134.	2.8	10
45	Lubrication Models with Small to Large Slip Lengths. Journal of Engineering Mathematics, 2005, 53, 359-383.	1.2	109
46	Introduction to Practical Asymptotics III. Journal of Engineering Mathematics, 2005, 53, 199-199.	1.2	3
47	New Slip Regimes and the Shape of Dewetting Thin Liquid Films. Physical Review Letters, 2005, 95, 127801.	7.8	94
48	Steady-Profile Fingering Flows in Marangoni Driven Thin Films. Physical Review Letters, 2004, 93, 247803.	7.8	24
49	Blowup and dissipation in a critical-case unstable thin film equation. European Journal of Applied Mathematics, 2004, 15, 223-256.	2.9	50
50	Exact solution for the extensional flow of a viscoelastic filament. European Journal of Applied Mathematics, 2004, 15, 679-712.	2.9	12
51	A theory of pad conditioning for chemical-mechanical polishing. Journal of Engineering Mathematics, 2004, 50, 1-24.	1.2	56
52	Intermediate asymptotics for Richards' equation in a finite layer. Journal of Engineering Mathematics, 2003, 45, 379-399.	1.2	12
53	ADI schemes for higher-order nonlinear diffusion equations. Applied Numerical Mathematics, 2003, 45, 331-351.	2.1	115
54	STABILITY OF SHEAR BANDS IN AN ELASTOPLASTIC MODEL FOR GRANULAR FLOW: THE ROLE OF DISCRETENESS. Mathematical Models and Methods in Applied Sciences, 2003, 13, 1629-1671.	3.3	4

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55	Decay of solutions to nonlinear parabolic equations: renormalization and rigorous results. Discrete and Continuous Dynamical Systems - Series B, 2003, 3, 565-588.	0.9	4
56	Linear stability of source-type similarity solutions of the thin film equation. Applied Mathematics Letters, 2002, 15, 599-606.	2.7	25
57	Computing finite-time singularities in interfacial flows. , 2002, , 451-487.		4
58	DYNAMICS AND STABILITY OF VAN-DER-WAALS-DRIVEN THIN FILM RUPTURE. , 2002, , 241-241.		0
59	Rupture of thin viscous films by van der Waals forces: Evolution and self-similarity. Physics of Fluids, 2001, 13, 1130-1140.	4.0	91
60	A discrete model for an ill-posed nonlinear parabolic PDE. Physica D: Nonlinear Phenomena, 2001, 160, 189-221.	2.8	27
61	Critical wave speeds for a family of scalar reaction-diffusion equations. Applied Mathematics Letters, 2001, 14, 65-73.	2.7	5
62	Symmetry and self-similarity in rupture and pinchoff: a geometric bifurcation. European Journal of Applied Mathematics, 2001, 12, 209-232.	2.9	19
63	Dewetting films: bifurcations and concentrations. Nonlinearity, 2001, 14, 1569-1592.	1.4	97
64	Dynamics of three-dimensional thin film rupture. Physica D: Nonlinear Phenomena, 2000, 147, 155-176.	2.8	80
65	ON AXISYMMETRIC TRAVELING WAVES AND RADIAL SOLUTIONS OF SEMIâ€LINEAR ELLIPTIC EQUATIONS. Natural Resource Modelling, 2000, 13, 339-388.	2.0	7
66	Stability of Gas Bearing Sliders for Large Bearing Number: Convective Instability of the Tapered SliderÂ©. Tribology Transactions, 1999, 42, 216-222.	2.0	3
67	Large Bearing Number Stability Analysis for Tango Class Gas Bearing Sliders. Tribology Transactions, 1999, 42, 668-674.	2.0	1
68	Stability of self-similar solutions for van der Waals driven thin film rupture. Physics of Fluids, 1999, 11, 2443-2445.	4.0	91
69	On Spherically Symmetric Gravitational Collapse. Journal of Statistical Physics, 1998, 93, 863-899.	1.2	20
70	Axisymmetric Surface Diffusion: Dynamics and Stability of Self-Similar Pinchoff. Journal of Statistical Physics, 1998, 93, 725-776.	1.2	109
71	Self-similar Asymptotics for Linear and Nonlinear Diffusion Equations. Studies in Applied Mathematics, 1998, 100, 153-193.	2.4	79
72	Equilibrium interface solutions of a degenerate singular Cahn-Hilliard equation. Applied Mathematics Letters, 1998, 11, 127-133.	2.7	19

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73	Horizontal infiltration into wet soil. Water Resources Research, 1998, 34, 1859-1863.	4.2	11
74	Dynamics of air bearing sliders. Physics of Fluids, 1998, 10, 698-708.	4.0	15
75	On the properties of polymer globules in the high density limit. Journal of Chemical Physics, 1998, 108, 9144-9149.	3.0	11
76	Perturbation Analysis for Wetting Fronts in Richard's Equation. Transport in Porous Media, 1997, 27, 121-134.	2.6	32
77	Segregation and mixing in degenerate diffusion in population dynamics. Journal of Mathematical Biology, 1997, 35, 695-712.	1.9	34
78	Similarity solutions of the lubrication equation. Applied Mathematics Letters, 1997, 10, 107-113.	2.7	6
79	Inaccessible States in Timeâ€Dependent Reaction Diffusion. Studies in Applied Mathematics, 1996, 97, 301-319.	2.4	1
80	The Structure of Internal Layers for Unstable Nonlinear Diffusion Equations. Studies in Applied Mathematics, 1996, 97, 277-300.	2.4	30
81	Traveling wave solutions for case II diffusion in polymers. Journal of Polymer Science, Part B: Polymer Physics, 1996, 34, 141-150.	2.1	20
82	Forbidden Regions for Shock Formation in Diffusive Systems. Studies in Applied Mathematics, 1995, 95, 297-317.	2.4	2
83	Perturbed reversible systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 207, 83-86.	2.1	3
84	Merging traveling waves for the porous-Fisher's equation. Applied Mathematics Letters, 1995, 8, 57-62.	2.7	36
85	Shocks in nonlinear diffusion. Applied Mathematics Letters, 1995, 8, 27-32.	2.7	32
86	Stopping and merging problems for the porous media equation. IMA Journal of Applied Mathematics, 1995, 54, 227-243.	1.6	15
87	Shock Formation in a Multidimensional Viscoelastic Diffusive System. SIAM Journal on Applied Mathematics, 1995, 55, 348-368.	1.8	27
88	An asymptotic solution for traveling waves of a nonlinear-diffusion Fisher's equation. Journal of Mathematical Biology, 1994, 33, 1-16.	1.9	19
89	An Application of Pattern Recognition and Infrared Spectroscopy to Water Analysis. International Journal of Environmental Analytical Chemistry, 1991, 44, 127-136.	3.3	3