Demetrios Papageorgiou

List of Publications by Year
in descending order

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130 papers	3,450 citations	147726 31 h-index	182361 51 g-index
130 all docs	130 docs citations	130 times ranked	1645 citing authors

#	Article	IF	Citations
1	Ordered and disordered dynamics in inertialess stratified three-layer shear flows. Physical Review Fluids, 2022, 7, .	1.0	0
2	Nonlinear gravity electro-capillary waves in two-fluid systems: solitary and periodic waves and their stability. Journal of Engineering Mathematics, 2022, 133, 6.	0.6	1
3	Linear instability of lid- and pressure-driven flows in channels textured with longitudinal superhydrophobic grooves. Journal of Fluid Mechanics, 2022, 932, .	1.4	7
4	Active control of liquid film flows: beyond reduced-order models. Nonlinear Dynamics, 2021, 104, 267-287.	2.7	5
5	Mathematical study of a system of multi-dimensional non-local evolution equations describing surfactant-laden two-fluid shear flows. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, .	1.0	2
6	Spontaneous onset of convection in a uniform phoretic channel. Soft Matter, 2020, 16, 1259-1269.	1.2	8
7	Stability of falling liquid films on flexible substrates. Journal of Fluid Mechanics, 2020, 900, .	1.4	10
8	Instability and dripping of electrified liquid films flowing down inverted substrates. Physical Review Fluids, 2020, 5, .	1.0	17
9	Analysis and computations of a non-local thin-film model for two-fluid shear driven flows. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190367.	1.0	5
10	Effects of slowly varying meniscus curvature on internal flows in the Cassie state. Journal of Fluid Mechanics, 2019, 872, 272-307.	1.4	15
11	Optimal Control of Thin Liquid Films and Transverse Mode Effects. SIAM Journal on Applied Dynamical Systems, 2019, 18, 117-149.	0.7	10
12	Film Flows in the Presence of Electric Fields. Annual Review of Fluid Mechanics, 2019, 51, 155-187.	10.8	56
13	Dynamics of gravity-driven viscoelastic films on wavy walls. Physical Review Fluids, 2019, 4, .	1.0	10
14	Nusselt Numbers for Poiseuille Flow Over Isoflux Parallel Ridges for Arbitrary Meniscus Curvature. Journal of Heat Transfer, 2018, 140, .	1.2	13
15	Solution of the Extended Graetzâ€“Nusselt Problem for Liquid Flow Over Isothermal Parallel Ridges. Journal of Heat Transfer, 2018, 140, .	1.2	2
16	Nonlinear interfacial instability in two-fluid viscoelastic Couette flow. Journal of Non-Newtonian Fluid Mechanics, 2018, 251, 17-27.	1.0	5
17	Nonlinear dynamics of a dispersive anisotropic Kuramotoâ€“Sivashinsky equation in two space dimensions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170687.	1.0	7
18	Dynamics of fully nonlinear capillaryâ€“gravity solitary waves under normal electric fields. Journal of Engineering Mathematics, 2018, 108, 107-122.	0.6	17

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19	Three-dimensional high speed drop impact onto solid surfaces at arbitrary angles. International Journal of Multiphase Flow, 2018, 107, 192-207.	1.6	30
20	Stabilizing non-trivial solutions of the generalized Kuramotoâ€“Sivashinsky equation using feedback and optimal control. IMA Journal of Applied Mathematics, 2017, 82, 158-194.	0.8	28
21	Two-layer electrified pressure-driven flow in topographically structured channels. Journal of Fluid Mechanics, 2017, 814, 222-248.	1.4	10
22	Reduced Models for Thick Liquid Layers with Inertia on Highly Curved Substrates. SIAM Journal on Applied Mathematics, 2017, 77, 881-904.	0.8	7
23	Ice formation within a thin film flowing over aÂflat plate. Journal of Fluid Mechanics, 2017, 817, 455-489.	1.4	11
24	Solution of the Graetzâ€“Nusselt Problem for Liquid Flow Over Isothermal Parallel Ridges. Journal of Heat Transfer, 2017, 139, .	1.2	4
25	Nusselt numbers for Poiseuille flow over isoflux parallel ridges accounting for meniscusÂcurvature. Journal of Fluid Mechanics, 2017, 811, 315-349.	1.4	27
26	Nonlinear stability in three-layer channel flows. Journal of Fluid Mechanics, 2017, 829, .	1.4	7
27	Three-dimensional wave evolution on electrified falling films. Journal of Fluid Mechanics, 2017, 822, 54-79.	1.4	14
28	Electric field stabilization of viscous liquid layers coating the underside of a surface. Physical Review Fluids, 2017, 2, .	1.0	9
29	Accurate low-order modeling of electrified falling films at moderate Reynolds number. Physical Review Fluids, 2017, 2, .	1.0	13
30	Physical mechanisms relevant to flow resistance in textured microchannels. Physical Review Fluids, 2017, 2, .	1.0	18
31	Stabilising falling liquid film flows using feedback control. Physics of Fluids, 2016, 28, .	1.6	25
32	Capturing nonlinear dynamics of two-fluid Couette flows with asymptotic models. Journal of Fluid Mechanics, 2016, 806, .	1.4	11
33	Falling liquid films with blowing and suction. Journal of Fluid Mechanics, 2016, 787, 292-330.	1.4	14
34	Nonlinear dynamics of surfactant-laden two-fluid Couette flows in the presence of inertia. Journal of Fluid Mechanics, 2016, 802, 5-36.	1.4	20
35	Kortewegâ€“de Vries solitons on electrified liquid jets. Physical Review E, 2015, 91, 063012.	0.8	1
36	Controlling spatiotemporal chaos in active dissipative-dispersive nonlinear systems. Physical Review E, 2015, 92, 022912.	0.8	14

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37	Electrostatic Suppression of the â€œCoffee-stain Effectâ€• Procedia IUTAM, 2015, 15, 172-177.	1.2	2
38	Electrostatically induced mixing in confined stratified multi-fluid systems. International Journal of Multiphase Flow, 2015, 75, 194-204.	1.6	4
39	An in-depth numerical study of the two-dimensional Kuramotoâ€“Sivashinsky equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140932.	1.0	22
40	Nonlinear Dynamics and Wall Touch-Up in Unstably Stratified Multilayer Flows in Horizontal Channels under the Action of Electric Fields. SIAM Journal on Applied Mathematics, 2015, 75, 92-113.	0.8	12
41	Vanishing viscosity limits of mixed hyperbolicâ€“elliptic systems arising in multilayer channel flows. Nonlinearity, 2015, 28, 1607-1631.	0.6	3
42	Coherent Structures in Nonlocal Dispersive Active-Dissipative Systems. SIAM Journal on Applied Mathematics, 2015, 75, 538-563.	0.8	6
43	On the control and suppression of the Rayleigh-Taylor instability using electric fields. Physics of Fluids, 2014, 26, .	1.6	54
44	Electrostatic Suppression of the â€œCoffee Stain Effectâ€• Langmuir, 2014, 30, 5849-5858.	1.6	53
45	On the generation of nonlinear travelling waves in confined geometries using electric fields. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20140066.	1.6	5
46	Stability of film flow over inclined topography based on a long-wave nonlinear model. Journal of Fluid Mechanics, 2013, 729, 638-671.	1.4	45
47	Electrostatically controlled large-amplitude, non-axisymmetric waves in thin film flows down a cylinder. Journal of Fluid Mechanics, 2013, 736, .	1.4	6
48	On the analyticity of certain dissipative-dispersive systems. Bulletin of the London Mathematical Society, 2013, 45, 52-60.	0.4	11
49	Long-wave equations and direct simulations for the breakup of a viscous fluid thread surrounded by an immiscible viscous fluid. IMA Journal of Applied Mathematics, 2013, 78, 851-867.	0.8	6
50	Nonlinear interfacial dynamics in stratified multilayer channel flows. Journal of Fluid Mechanics, 2013, 734, 114-143.	1.4	10
51	Electrified coating flows on vertical fibres: enhancement or suppression of interfacial dynamics. Journal of Fluid Mechanics, 2013, 735, 427-456.	1.4	16
52	Non-linear waves in electrified viscous film flow down a vertical cylinder. IMA Journal of Applied Mathematics, 2012, 77, 430-440.	0.8	14
53	Computational Study of the Dispersively Modified Kuramotoâ€“Sivashinsky Equation. SIAM Journal of Scientific Computing, 2012, 34, A792-A813.	1.3	22
54	Viscous pressure-driven flows and their stability in channels with vertically oscillating walls. Physics of Fluids, 2012, 24, 023604.	1.6	7

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55	Using surfactants to stabilize two-phase pipe flows of coreâ€“annular type. Journal of Fluid Mechanics, 2012, 704, 333-359.	1.4	20
56	Surfactant destabilization and non-linear phenomena in two-fluid shear flows at small Reynolds numbers. IMA Journal of Applied Mathematics, 2012, 77, 351-360.	0.8	14
57	Compound viscous thread with electrostatic and electrokinetic effects. Journal of Fluid Mechanics, 2012, 701, 171-200.	1.4	6
58	Suppression of Rayleighâ€“Taylor instability using electric fields. Mathematics and Computers in Simulation, 2012, 82, 1008-1016.	2.4	38
59	The influence of electric fields and surface tension on Kelvinâ€“Helmholtz instability in two-dimensional jets. Zeitschrift Fur Angewandte Mathematik Und Physik, 2012, 63, 125-144.	0.7	7
60	Interfacial instability in electrified plane Couette flow. Journal of Fluid Mechanics, 2011, 666, 155-188.	1.4	12
61	Dynamics of a viscous thread surrounded by another viscous fluid in a cylindrical tube under the action of a radial electric field: breakup and touchdown singularities. Journal of Fluid Mechanics, 2011, 683, 27-56.	1.4	28
62	Electrified film flow over step topography at zero Reynolds number: an analytical and computational study. Journal of Engineering Mathematics, 2011, 69, 169-183.	0.6	12
63	Breakup of an electrified, perfectly conducting, viscous thread in an AC field. Physical Review E, 2011, 83, 066314.	0.8	11
64	Noise Induced State Transitions, Intermittency, and Universality in the Noisy Kuramoto-Sivashinksy Equation. Physical Review Letters, 2011, 106, 060602.	2.9	44
65	Breakup of an electrified viscous thread with charged surfactants. Physics of Fluids, 2011, 23, .	1.6	27
66	Linearly implicit methods for a semilinear parabolic system arising in two-phase flows. IMA Journal of Numerical Analysis, 2011, 31, 299-321.	1.5	17
67	Dynamics and stability of an annular electrolyte film. Journal of Fluid Mechanics, 2010, 656, 481-506.	1.4	23
68	Electrified falling-film flow over topography in the presence of a finite electrode. Journal of Engineering Mathematics, 2010, 68, 339-353.	0.6	10
69	Nonlinear development of two-layer Couetteâ€“Poiseuille flow in the presence of surfactant. Physics of Fluids, 2010, 22, .	1.6	20
70	Dynamics of an electrostatically modified Kuramotoâ€“Sivashinskyâ€“Kortewegâ€“de Vries equation arising in falling film flows. Physical Review E, 2010, 82, 016322.	0.8	12
71	Dynamics of liquid jets and threads under the action of radial electric fields: Microthread formation and touchdown singularities. Physics of Fluids, 2009, 21, .	1.6	31
72	Flow in a channel with accelerating or decelerating wall velocity: A comparison between self-similar solutions and Navierâ€“Stokes computations in finite domains. Physics of Fluids, 2009, 21, .	1.6	8

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73	Buoyancy-driven motion of a two-dimensional bubble or drop through a viscous liquid in the presence of a vertical electric field. Theoretical and Computational Fluid Dynamics, 2009, 23, 375-399.	0.9	15
74	Numerical study of electric field effects on the deformation of two-dimensional liquid drops in simple shear flow at arbitrary Reynolds number. Journal of Fluid Mechanics, 2009, 626, 367-393.	1.4	41
75	Viscous Electrified Film Flow over Step Topography. SIAM Journal on Applied Mathematics, 2009, 70, 845-865.	0.8	13
76	Nonlinear dynamics of core-annular film flows in the presence of surfactant. Journal of Fluid Mechanics, 2009, 626, 415-448.	1.4	16
77	Breakup of surfactant-laden jets above the critical micelle concentration. Journal of Fluid Mechanics, 2009, 629, 195-219.	1.4	38
78	Axisymmetric waves in electrohydrodynamic flows. Journal of Engineering Mathematics, 2008, 62, 133-148.	0.6	9
79	Influence of insoluble surfactant on the deformation and breakup of a bubble or thread in a viscous fluid. Journal of Fluid Mechanics, 2008, 594, 307-340.	1.4	35
80	Effect of an electric field on film flow down a corrugated wall at zero Reynolds number. Physics of Fluids, 2008, 20, .	1.6	37
81	Electrified viscous thin film flow over topography. Journal of Fluid Mechanics, 2008, 597, 449-475.	1.4	60
82	A new application of the Kortewegâ€“de Vries Benjamin-Ono equation in interfacial electrohydrodynamics. Physics of Fluids, 2007, 19, 031703.	1.6	31
83	Nonlinear Dynamics of Electrified Thin Liquid Films. SIAM Journal on Applied Mathematics, 2007, 67, 1310-1329.	0.8	31
84	Numerical and analytical studies of non-linear gravity capillary waves in fluid layers under normal electric fields. IMA Journal of Applied Mathematics, 2007, 72, 832-853.	0.8	15
85	Linear stability of a two-fluid interface for electrohydrodynamic mixing in a channel. Journal of Fluid Mechanics, 2007, 583, 347-377.	1.4	82
86	Interfacial capillary waves in the presence of electric fields. European Journal of Mechanics, B/Fluids, 2007, 26, 404-421.	1.2	24
87	Monodisperse Drop Formation in Square Microchannels. Physical Review Letters, 2006, 96, 144501.	2.9	78
88	Theory and experiments on the stagnant cap regime in the motion of spherical surfactant-laden bubbles. Journal of Fluid Mechanics, 2006, 559, 1.	1.4	87
89	Wave evolution on electrified falling films. Journal of Fluid Mechanics, 2006, 556, 361.	1.4	83
90	The absolute instability of an inviscid compound jet. Journal of Fluid Mechanics, 2006, 549, 81.	1.4	20

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91	Nonlinear stability of a charged electrified viscous liquid sheet under the action of a horizontal electric field. Physics of Fluids, 2006, 18, 042102.	1.6	20
92	A global attracting set for nonlocal Kuramotoâ€“Sivashinsky equations arising in interfacial electrohydrodynamics. European Journal of Applied Mathematics, 2006, 17, 677.	1.4	33
93	Absolute and Convective Instability for Evolution PDEs on the Half-Line. Studies in Applied Mathematics, 2005, 114, 95-114.	1.1	13
94	Gravity capillary waves in fluid layers under normal electric fields. Physical Review E, 2005, 72, 051601.	0.8	35
95	Accurate and Efficient Boundary Integral Methods for Electrified Liquid Bridge Problems. SIAM Journal of Scientific Computing, 2005, 26, 2102-2132.	1.3	9
96	On compound liquid threads with large viscosity contrasts. Journal of Fluid Mechanics, 2005, 533, .	1.4	25
97	Antisymmetric capillary waves in electrified fluid sheets. European Journal of Applied Mathematics, 2004, 15, 609-623.	1.4	35
98	Generation of interfacial instabilities in charged electrified viscous liquid films. Journal of Engineering Mathematics, 2004, 50, 223-240.	0.6	35
99	Large-amplitude capillary waves in electrified fluid sheets. Journal of Fluid Mechanics, 2004, 508, 71-88.	1.4	65
100	An experimental investigation of the convective instability of a jet. Chemical Engineering Science, 2003, 58, 2421-2432.	1.9	20
101	Chaotic flows in pulsating cylindrical tubes: a class of exact NavierStokes solutions. Journal of Fluid Mechanics, 2003, 481, 187-213.	1.4	11
102	Pinchoff and satellite formation in compound viscous threads. Physics of Fluids, 2003, 15, 3409-3428.	1.6	14
103	The effect of electric fields on the rupture of thin viscous films by van der Waals forces. Physics of Fluids, 2003, 15, 641-652.	1.6	35
104	Pinchoff and satellite formation in surfactant covered viscous threads. Physics of Fluids, 2002, 14, 1364-1376.	1.6	89
105	Using surfactants to control the formation and size of wakes behind moving bubbles at order-one Reynolds numbers. Journal of Fluid Mechanics, 2002, 453, 1-19.	1.4	14
106	The onset of particle segregation in plane Couette flows of concentrated suspensions. International Journal of Multiphase Flow, 2002, 28, 127-136.	1.6	5
107	Fully nonlinear gravity-capillary solitary waves in a two-fluid system of finite depth. Journal of Engineering Mathematics, 2002, 42, 321-339.	0.6	10
108	Dynamics and rupture of planar electrified liquid sheets. Physics of Fluids, 2001, 13, 3547-3563.	1.6	62

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109	Temporal instability of compound threads and jets. Journal of Fluid Mechanics, 2000, 420, 1-25.	1.4	66
110	The Modulational Stability of Taylor Vortices in a Curved Channel. SIAM Journal on Applied Mathematics, 2000, 60, 1543-1564.	0.8	3
111	Increased mobility of a surfactant-retarded bubble at high bulk concentrations. Journal of Fluid Mechanics, 1999, 390, 251-270.	1.4	43
112	The onset of chaos in a class of Navierâ€“Stokes solutions. Journal of Fluid Mechanics, 1999, 393, 59-87.	1.4	25
113	Study of Cylindrical Jet Breakup Using One-Dimensional Approximations of the Euler Equations. SIAM Journal on Applied Mathematics, 1998, 59, 286-317.	0.8	16
114	On the Modulational Instability of O(1) Amplitude Waves in Supersonic Boundary Layers. SIAM Journal on Applied Mathematics, 1997, 57, 929-958.	0.8	1
115	Temporal and spatial instability of an inviscid compound jet. Rheologica Acta, 1996, 35, 567-583.	1.1	33
116	On the breakup of viscous liquid threads. Physics of Fluids, 1995, 7, 1529-1544.	1.6	484
117	Analytical description of the breakup of liquid jets. Journal of Fluid Mechanics, 1995, 301, 109-132.	1.4	83
118	Stability of oscillatory two-phase Couette flow. IMA Journal of Applied Mathematics, 1994, 53, 75-93.	0.8	18
119	Breakup of Cylindrical Jets Governed by the Navier-Stokes Equations. ICASE/LaRC Interdisciplinary Series in Science and Engineering, 1994, , 225-234.	0.1	1
120	Modulational stability of periodic solutions of the Kuramoto-Sivashinsky equation. , 1993, , 255-263.		2
121	An asymptotic theory for the linear stability of a coreâ€“annular flow in the thin annular limit. Journal of Fluid Mechanics, 1992, 243, 653.	1.4	31
122	The double layerâ€“capillary stability of an annular electrolyte fluid surrounding a dielectric-fluid core in a tube. Journal of Fluid Mechanics, 1991, 226, 149-174.	1.4	12
123	The stability of twoâ€dimensional wakes and shear layers at high Mach numbers. Physics of Fluids A, Fluid Dynamics, 1991, 3, 793-802.	1.6	14
124	Predicting chaos for infinite dimensional dynamical systems: the Kuramoto-Sivashinsky equation, a case study.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 11129-11132.	3.3	58
125	Linear instability of the supersonic wake behind a flat plate aligned with a uniform stream. Theoretical and Computational Fluid Dynamics, 1990, 1, 327-348.	0.9	37
126	Nonlinear interfacial stability of coreâ€annular film flows. Physics of Fluids A, Fluid Dynamics, 1990, 2, 340-352.	1.6	110

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127	Accurate Calculation and Instability of Supersonic Wake Flows. Advances in Soil Science, 1990, , 216-229.	0.7	21
128	Linear instability of the wake behind a flat plate placed parallel to a uniform stream. Journal of Fluid Mechanics, 1989, 208, 67-89.	1.4	49
129	Linearly implicit schemes for multi-dimensional Kuramotoâ€“Sivashinsky type equations arising in falling film flows. IMA Journal of Numerical Analysis, 0, , drv011.	1.5	4
130	Using electric fields to induce patterning in leaky dielectric fluids in a rod-annular geometry. IMA Journal of Applied Mathematics, 0, , hxw017.	0.8	3