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	On the breakup of viscous liquid threads. Physics of Fluids, 1995, 7, 1529-1544.	1.6	484
2	Nonlinear interfacial stability of coreâ€annular film flows. Physics of Fluids A, Fluid Dynamics, 1990, 2, 340-352.	1.6	110
3	Pinchoff and satellite formation in surfactant covered viscous threads. Physics of Fluids, 2002, 14, 1364-1376.	1.6	89
4	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
5	Analytical description of the breakup of liquid jets. Journal of Fluid Mechanics, 1995, 301, 109-132.	1.4	83
6	Wave evolution on electrified falling films. Journal of Fluid Mechanics, 2006, 556, 361.	1.4	83
7	Linear stability of a two-fluid interface for electrohydrodynamic mixing in a channel. Journal of Fluid Mechanics, 2007, 583, 347-377.	1.4	82
8	Monodisperse Drop Formation in Square Microchannels. Physical Review Letters, 2006, 96, 144501.	2.9	78
9	Temporal instability of compound threads and jets. Journal of Fluid Mechanics, 2000, 420, 1-25.	1.4	66
10	Large-amplitude capillary waves in electrified fluid sheets. Journal of Fluid Mechanics, 2004, 508, 71-88.	1.4	65
11	Dynamics and rupture of planar electrified liquid sheets. Physics of Fluids, 2001, 13, 3547-3563.	1.6	62
12	Electrified viscous thin film flow over topography. Journal of Fluid Mechanics, 2008, 597, 449-475.	1.4	60
13	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
14	Film Flows in the Presence of Electric Fields. Annual Review of Fluid Mechanics, 2019, 51, 155-187.	10.8	56
15	On the control and suppression of the Rayleigh-Taylor instability using electric fields. Physics of Fluids, 2014, 26, .	1.6	54
16	Electrostatic Suppression of the â€œCoffee Stain Effectâ€• Langmuir, 2014, 30, 5849-5858.	1.6	53
17	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
18	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

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19	Noise Induced State Transitions, Intermittency, and Universality in the Noisy Kuramoto-Sivashinksy Equation. Physical Review Letters, 2011, 106, 060602.	2.9	44
20	Increased mobility of a surfactant-retarded bubble at high bulk concentrations. Journal of Fluid Mechanics, 1999, 390, 251-270.	1.4	43
21	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
22	Breakup of surfactant-laden jets above the critical micelle concentration. Journal of Fluid Mechanics, 2009, 629, 195-219.	1.4	38
23	Suppression of Rayleighâ€“Taylor instability using electric fields. Mathematics and Computers in Simulation, 2012, 82, 1008-1016.	2.4	38
24	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
25	Effect of an electric field on film flow down a corrugated wall at zero Reynolds number. Physics of Fluids, 2008, 20, .	1.6	37
26	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
27	Antisymmetric capillary waves in electrified fluid sheets. European Journal of Applied Mathematics, 2004, 15, 609-623.	1.4	35
28	Generation of interfacial instabilities in charged electrified viscous liquid films. Journal of Engineering Mathematics, 2004, 50, 223-240.	0.6	35
29	Gravity capillary waves in fluid layers under normal electric fields. Physical Review E, 2005, 72, 051601.	0.8	35
30	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
31	Temporal and spatial instability of an inviscid compound jet. Rheologica Acta, 1996, 35, 567-583.	1.1	33
32	A global attracting set for nonlocal Kuramotoâ€“Sivashinsky equations arising in interfacial electrohydrodynamics. European Journal of Applied Mathematics, 2006, 17, 677.	1.4	33
33	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
34	A new application of the Kortewegâ€“de Vries Benjamin-Ono equation in interfacial electrohydrodynamics. Physics of Fluids, 2007, 19, 031703.	1.6	31
35	Nonlinear Dynamics of Electrified Thin Liquid Films. SIAM Journal on Applied Mathematics, 2007, 67, 1310-1329.	0.8	31
36	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

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37	Three-dimensional high speed drop impact onto solid surfaces at arbitrary angles. International Journal of Multiphase Flow, 2018, 107, 192-207.	1.6	30
38	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
39	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
40	Breakup of an electrified viscous thread with charged surfactants. Physics of Fluids, 2011, 23, .	1.6	27
41	Nusselt numbers for Poiseuille flow over isoflux parallel ridges accounting for meniscusÂcurvature. Journal of Fluid Mechanics, 2017, 811, 315-349.	1.4	27
42	The onset of chaos in a class of Navierâ€“Stokes solutions. Journal of Fluid Mechanics, 1999, 393, 59-87.	1.4	25
43	On compound liquid threads with large viscosity contrasts. Journal of Fluid Mechanics, 2005, 533, .	1.4	25
44	Stabilising falling liquid film flows using feedback control. Physics of Fluids, 2016, 28, .	1.6	25
45	Interfacial capillary waves in the presence of electric fields. European Journal of Mechanics, B/Fluids, 2007, 26, 404-421.	1.2	24
46	Dynamics and stability of an annular electrolyte film. Journal of Fluid Mechanics, 2010, 656, 481-506.	1.4	23
47	Computational Study of the Dispersively Modified Kuramotoâ€“Sivashinsky Equation. SIAM Journal of Scientific Computing, 2012, 34, A792-A813.	1.3	22
48	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
49	Accurate Calculation and Instability of Supersonic Wake Flows. Advances in Soil Science, 1990, , 216-229.	0.7	21
50	An experimental investigation of the convective instability of a jet. Chemical Engineering Science, 2003, 58, 2421-2432.	1.9	20
51	The absolute instability of an inviscid compound jet. Journal of Fluid Mechanics, 2006, 549, 81.	1.4	20
52	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
53	Nonlinear development of two-layer Couetteâ€“Poiseuille flow in the presence of surfactant. Physics of Fluids, 2010, 22, .	1.6	20
54	Using surfactants to stabilize two-phase pipe flows of coreâ€“annular type. Journal of Fluid Mechanics, 2012, 704, 333-359.	1.4	20

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55	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
56	Stability of oscillatory two-phase Couette flow. IMA Journal of Applied Mathematics, 1994, 53, 75-93.	0.8	18
57	Physical mechanisms relevant to flow resistance in textured microchannels. Physical Review Fluids, 2017, 2, .	1.0	18
58	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
59	Dynamics of fully nonlinear capillaryâ€“gravity solitary waves under normal electric fields. Journal of Engineering Mathematics, 2018, 108, 107-122.	0.6	17
60	Instability and dripping of electrified liquid films flowing down inverted substrates. Physical Review Fluids, 2020, 5, .	1.0	17
61	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
62	Nonlinear dynamics of core-annular film flows in the presence of surfactant. Journal of Fluid Mechanics, 2009, 626, 415-448.	1.4	16
63	Electrified coating flows on vertical fibres: enhancement or suppression of interfacial dynamics. Journal of Fluid Mechanics, 2013, 735, 427-456.	1.4	16
64	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
65	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
66	Effects of slowly varying meniscus curvature on internal flows in the Cassie state. Journal of Fluid Mechanics, 2019, 872, 272-307.	1.4	15
67	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
68	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
69	Pinchoff and satellite formation in compound viscous threads. Physics of Fluids, 2003, 15, 3409-3428.	1.6	14
70	Non-linear waves in electrified viscous film flow down a vertical cylinder. IMA Journal of Applied Mathematics, 2012, 77, 430-440.	0.8	14
71	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
72	Controlling spatiotemporal chaos in active dissipative-dispersive nonlinear systems. Physical Review E, 2015, 92, 022912.	0.8	14

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73	Falling liquid films with blowing and suction. Journal of Fluid Mechanics, 2016, 787, 292-330.	1.4	14
74	Three-dimensional wave evolution on electrified falling films. Journal of Fluid Mechanics, 2017, 822, 54-79.	1.4	14
75	Absolute and Convective Instability for Evolution PDEs on the Half-Line. Studies in Applied Mathematics, 2005, 114, 95-114.	1.1	13
76	Viscous Electrified Film Flow over Step Topography. SIAM Journal on Applied Mathematics, 2009, 70, 845-865.	0.8	13
77	Nusselt Numbers for Poiseuille Flow Over Isoflux Parallel Ridges for Arbitrary Meniscus Curvature. Journal of Heat Transfer, 2018, 140, .	1.2	13
78	Accurate low-order modeling of electrified falling films at moderate Reynolds number. Physical Review Fluids, 2017, 2, .	1.0	13
79	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
80	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
81	Interfacial instability in electrified plane Couette flow. Journal of Fluid Mechanics, 2011, 666, 155-188.	1.4	12
82	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
83	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
84	Chaotic flows in pulsating cylindrical tubes: a class of exact NavierStokes solutions. Journal of Fluid Mechanics, 2003, 481, 187-213.	1.4	11
85	Breakup of an electrified, perfectly conducting, viscous thread in an AC field. Physical Review E, 2011, 83, 066314.	0.8	11
86	On the analyticity of certain dissipative-dispersive systems. Bulletin of the London Mathematical Society, 2013, 45, 52-60.	0.4	11
87	Capturing nonlinear dynamics of two-fluid Couette flows with asymptotic models. Journal of Fluid Mechanics, 2016, 806, .	1.4	11
88	Ice formation within a thin film flowing over aÂflat plate. Journal of Fluid Mechanics, 2017, 817, 455-489.	1.4	11
89	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
90	Electrified falling-film flow over topography in the presence of a finite electrode. Journal of Engineering Mathematics, 2010, 68, 339-353.	0.6	10

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91	Nonlinear interfacial dynamics in stratified multilayer channel flows. Journal of Fluid Mechanics, 2013, 734, 114-143.	1.4	10
92	Two-layer electrified pressure-driven flow in topographically structured channels. Journal of Fluid Mechanics, 2017, 814, 222-248.	1.4	10
93	Optimal Control of Thin Liquid Films and Transverse Mode Effects. SIAM Journal on Applied Dynamical Systems, 2019, 18, 117-149.	0.7	10
94	Stability of falling liquid films on flexible substrates. Journal of Fluid Mechanics, 2020, 900, .	1.4	10
95	Dynamics of gravity-driven viscoelastic films on wavy walls. Physical Review Fluids, 2019, 4, .	1.0	10
96	Accurate and Efficient Boundary Integral Methods for Electrified Liquid Bridge Problems. SIAM Journal of Scientific Computing, 2005, 26, 2102-2132.	1.3	9
97	Axisymmetric waves in electrohydrodynamic flows. Journal of Engineering Mathematics, 2008, 62, 133-148.	0.6	9
98	Electric field stabilization of viscous liquid layers coating the underside of a surface. Physical Review Fluids, 2017, 2, .	1.0	9
99	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
100	Spontaneous onset of convection in a uniform phoretic channel. Soft Matter, 2020, 16, 1259-1269.	1.2	8
101	Viscous pressure-driven flows and their stability in channels with vertically oscillating walls. Physics of Fluids, 2012, 24, 023604.	1.6	7
102	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
103	Reduced Models for Thick Liquid Layers with Inertia on Highly Curved Substrates. SIAM Journal on Applied Mathematics, 2017, 77, 881-904.	0.8	7
104	Nonlinear stability in three-layer channel flows. Journal of Fluid Mechanics, 2017, 829, .	1.4	7
105	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
106	Linear instability of lid- and pressure-driven flows in channels textured with longitudinal superhydrophobic grooves. Journal of Fluid Mechanics, 2022, 932, .	1.4	7
107	Compound viscous thread with electrostatic and electrokinetic effects. Journal of Fluid Mechanics, 2012, 701, 171-200.	1.4	6
108	Electrostatically controlled large-amplitude, non-axisymmetric waves in thin film flows down a cylinder. Journal of Fluid Mechanics, 2013, 736, .	1.4	6

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109	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
110	Coherent Structures in Nonlocal Dispersive Active-Dissipative Systems. SIAM Journal on Applied Mathematics, 2015, 75, 538-563.	0.8	6
111	The onset of particle segregation in plane Couette flows of concentrated suspensions. International Journal of Multiphase Flow, 2002, 28, 127-136.	1.6	5
112	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
113	Nonlinear interfacial instability in two-fluid viscoelastic Couette flow. Journal of Non-Newtonian Fluid Mechanics, 2018, 251, 17-27.	1.0	5
114	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
115	Active control of liquid film flows: beyond reduced-order models. Nonlinear Dynamics, 2021, 104, 267-287.	2.7	5
116	Electrostatically induced mixing in confined stratified multi-fluid systems. International Journal of Multiphase Flow, 2015, 75, 194-204.	1.6	4
117	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
118	Solution of the Graetzâ€“Nusselt Problem for Liquid Flow Over Isothermal Parallel Ridges. Journal of Heat Transfer, 2017, 139, .	1.2	4
119	The Modulational Stability of Taylor Vortices in a Curved Channel. SIAM Journal on Applied Mathematics, 2000, 60, 1543-1564.	0.8	3
120	Vanishing viscosity limits of mixed hyperbolicâ€“elliptic systems arising in multilayer channel flows. Nonlinearity, 2015, 28, 1607-1631.	0.6	3
121	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
122	Electrostatic Suppression of the â€œCoffee-stain Effectâ€• Procedia IUTAM, 2015, 15, 172-177.	1.2	2
123	Solution of the Extended Graetzâ€“Nusselt Problem for Liquid Flow Over Isothermal Parallel Ridges. Journal of Heat Transfer, 2018, 140, .	1.2	2
124	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
125	Modulational stability of periodic solutions of the Kuramoto-Sivashinsky equation. , 1993, , 255-263.		2
126	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

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127	Kortewegâ€“de Vries solitons on electrified liquid jets. Physical Review E, 2015, 91, 063012.	0.8	1
128	Breakup of Cylindrical Jets Governed by the Navier-Stokes Equations. ICASE/LaRC Interdisciplinary Series in Science and Engineering, 1994, , 225-234.	0.1	1
129	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
130	Ordered and disordered dynamics in inertialess stratified three-layer shear flows. Physical Review Fluids, 2022, 7, .	1.0	0