Yannis Dimakopoulos

List of Publications by Year
in descending order

71 papers	1,830 citations	279487 23 h-index	288905 40 g-index
72 all docs	72 docs citations	72 times ranked	896 citing authors

#	Article	IF	Citations
1	Steady bubble rise and deformation in Newtonian and viscoplastic fluids and conditions for bubble entrapment. Journal of Fluid Mechanics, 2008, 601, 123-164.	1.4	135
2	Steady bubble rise in Herschelâ€“Bulkley fluids and comparison of predictions via the Augmented Lagrangian Method with those via the Papanastasiou model. Journal of Non-Newtonian Fluid Mechanics, 2013, 200, 34-51.	1.0	102
3	Yielding the yield-stress analysis: a study focused on the effects of elasticity on the settling of a single spherical particle in simple yield-stress fluids. Soft Matter, 2016, 12, 5378-5401.	1.2	91
4	A quasi-elliptic transformation for moving boundary problems with large anisotropic deformations. Journal of Computational Physics, 2003, 192, 494-522.	1.9	89
5	How viscoelastic is human blood plasma?. Soft Matter, 2018, 14, 4238-4251.	1.2	83
6	On the velocity discontinuity at a critical volume of a bubble rising in a viscoelastic fluid. Journal of Fluid Mechanics, 2016, 789, 310-346.	1.4	75
7	Transient displacement of a viscoplastic material by air in straight and suddenly constricted tubes. Journal of Non-Newtonian Fluid Mechanics, 2003, 112, 43-75.	1.0	73
8	Modeling the rheology of thixotropic elasto-visco-plastic materials. Journal of Rheology, 2019, 63, 609-639.	1.3	60
9	A critical analysis of some popular methods for the discretisation of the gradient operator in finite volume methods. Physics of Fluids, 2017, 29, .	1.6	55
10	Yielding the yield stress analysis: A thorough comparison of recently proposed elasto-visco-plastic (EVP) fluid models. Journal of Non-Newtonian Fluid Mechanics, 2016, 236, 104-122.	1.0	49
11	On the elliptic mesh generation in domains containing multiple inclusions and undergoing large deformations. Journal of Computational Physics, 2009, 228, 1980-2011.	1.9	45
12	On the gas-penetration in straight tubes completely filled with a viscoelastic fluid. Journal of Non-Newtonian Fluid Mechanics, 2004, 117, 117-139.	1.0	42
13	Transition between solid and liquid state of yield-stress fluids under purely extensional deformations. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12611-12617.	3.3	39
14	Transient displacement of Newtonian and viscoplastic liquids by air in complex tubes. Journal of Non-Newtonian Fluid Mechanics, 2007, 142, 162-182.	1.0	37
15	The PAL (Penalized Augmented Lagrangian) method for computing viscoplastic flows: A new fast converging scheme. Journal of Non-Newtonian Fluid Mechanics, 2018, 256, 23-41.	1.0	37
16	A new finite element formulation for viscoelastic flows: Circumventing simultaneously the LBB condition and the high-Weissenberg number problem. Journal of Non-Newtonian Fluid Mechanics, 2019, 267, 78-97.	1.0	37
17	On the origin of extrusion instabilities: Linear stability analysis of the viscoelastic die swell. Journal of Non-Newtonian Fluid Mechanics, 2015, 224, 61-77.	1.0	32
18	Theoretical study of the flow in a fluid damper containing high viscosity silicone oil: Effects of shear-thinning and viscoelasticity. Physics of Fluids, 2018, 30, 030708.	1.6	32

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19	Hemodynamics in stenotic vessels of small diameter under steady state conditions: Effect of viscoelasticity and migration ofÂredÂblood cells. Biorheology, 2015, 52, 183-210.	1.2	31
20	Advanced Constitutive Modeling of the Thixotropic Elasto-Visco-Plastic Behavior of Blood: Description of the Model and Rheological Predictions. Materials, 2020, 13, 4184.	1.3	31
21	Evaluation of tube models for linear entangled polymers in simple and complex flows. Journal of Rheology, 2018, 62, 25-47.	1.3	29
22	Transient displacement of a Newtonian fluid by air in straight or suddenly constricted tubes. Physics of Fluids, 2003, 15, 1973-1991.	1.6	28
23	Stress-gradient induced migration of polymers in corrugated channels. Journal of Rheology, 2014, 58, 911-947.	1.3	26
24	Steady viscoelastic film flow over 2D topography: I. The effect of viscoelastic properties under creeping flow. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 576-591.	1.0	22
25	Bubble Deformation and Growth Inside Viscoelastic Filaments Undergoing Very Large Extensions. Industrial & Engineering Chemistry Research, 2014, 53, 7548-7569.	1.8	22
26	PEGAFEM-V: A new petrov-galerkin finite element method for free surface viscoelastic flows. Journal of Non-Newtonian Fluid Mechanics, 2020, 284, 104365.	1.0	22
27	Steady film flow over a substrate with rectangular trenches forming air inclusions. Physical Review Fluids, 2017, 2, .	1.0	21
28	On the transient coating of a straight tube with a viscoelastic material. Journal of Non-Newtonian Fluid Mechanics, 2009, 159, 95-114.	1.0	20
29	Injection of a viscoplastic material inside a tube or between two parallel disks: Conditions for wall detachment of the advancing front. Journal of Rheology, 2009, 53, 1155-1191.	1.3	20
30	A direct comparison between volume and surface tracking methods with a boundary-fitted coordinate transformation and third-order upwinding. Journal of Computational Physics, 2007, 227, 1428-1469.	1.9	18
31	Discretization of three-dimensional free surface flows and moving boundary problems via elliptic grid methods based on variational principles. Journal of Computational Physics, 2017, 344, 127-150.	1.9	18
32	Viscoplastic flow in an extrusion damper. Journal of Non-Newtonian Fluid Mechanics, 2016, 232, 102-124.	1.0	17
33	Electro-osmotic flow of electrolyte solutions of PEO in microfluidic channels. Journal of Colloid and Interface Science, 2020, 563, 381-393.	5.0	17
34	A finite volume method for the simulation of elastoviscoplastic flows and its application to the lid-driven cavity case. Journal of Non-Newtonian Fluid Mechanics, 2020, 275, 104216.	1.0	17
35	Numerical simulation of multiple bubbles growing in a Newtonian liquid filament undergoing stretching. Physics of Fluids, 2006, 18, 042106.	1.6	16
36	Gas-assisted injection molding with fluids partially occupying straight or complex tubes. Polymer Engineering and Science, 2006, 46, 47-68.	1.5	16

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37	Yielding the yield stress analysis: A thorough comparison of recently proposed elasto-visco-plastic (EVP) fluid models. Journal of Non-Newtonian Fluid Mechanics, 2016, 238, 170-188.	1.0	16
38	Dynamics of viscoplastic filament stretching. Journal of Non-Newtonian Fluid Mechanics, 2020, 284, 104371.	1.0	16
39	The concept of elasto-visco-plasticity and its application to a bubble rising in yield stress fluids. Journal of Non-Newtonian Fluid Mechanics, 2021, 297, 104670.	1.0	16
40	Steady viscoelastic film flow over 2D Topography: II. The effect of capillarity, inertia and substrate geometry. Journal of Non-Newtonian Fluid Mechanics, 2016, 234, 201-214.	1.0	15
41	Origin of the Sharkskin Instability: Nonlinear Dynamics. Physical Review Letters, 2021, 127, 088001.	2.9	15
42	Quantifying the non-Newtonian effects of pulsatile hemodynamics in tubes. Journal of Non-Newtonian Fluid Mechanics, 2021, 298, 104673.	1.0	15
43	Flow of two immiscible fluids in a periodically constricted tube: Transitions to stratified, segmented, churn, spray, or segregated flow. Physics of Fluids, 2015, 27, .	1.6	14
44	Transient flow of gravity-driven viscous films over substrates with rectangular topographical features. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	13
45	Transient flow of gravity-driven viscous films over 3D patterned substrates: conditions leading to Wenzel, Cassie and intermediate states. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	13
46	Advanced Constitutive Modeling of the Thixotropic Elasto-Visco-Plastic Behavior of Blood: Steady-State Blood Flow in Microtubes. Materials, 2021, 14, 367.	1.3	13
47	Oscillations of small bubbles and medium yielding in elastoviscoplastic fluids. Physical Review Fluids, 2019, 4, .	1.0	13
48	An efficient parallel and fully implicit algorithm for the simulation of transient free-surface flows of multimode viscoelastic liquids. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 409-424.	1.0	11
49	Dynamics and motion of a gas bubble in aÂviscoplastic medium under acoustic excitation. Journal of Fluid Mechanics, 2019, 865, 381-413.	1.4	11
50	Investigation of the extensional properties of elasto-visco-plastic materials in cross-slot geometries. Journal of Non-Newtonian Fluid Mechanics, 2021, 296, 104627.	1.0	11
51	Direct numerical simulation of a 2D-stented aortic heart valve at physiological flow rates. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 1157-1179.	0.9	10
52	The Free (Open) Boundary Condition at inflow boundaries. Journal of Non-Newtonian Fluid Mechanics, 2012, 187-188, 16-31.	1.0	10
53	On the degree of wetting of a slit by a liquid film flowing along an inclined plane. Journal of Fluid Mechanics, 2017, 820, 5-41.	1.4	10
54	Adhesion, cavitation, and fibrillation during the debonding process of pressure sensitive adhesives. Physical Review Fluids, 2021, 6, .	1.0	10

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55	Viscoelastic film flows over an inclined substrate with sinusoidal topography. I. Steady state. Physical Review Fluids, 2019, 4, .	1.0	10
56	The rising velocity of a slowly pulsating bubble in a shear-thinning fluid. Physics of Fluids, 2019, 31, 083103.	1.6	9
57	Comparison of spectral and finite element methods applied to the study of the core-annular flow in an undulating tube. International Journal for Numerical Methods in Fluids, 2002, 39, 41-73.	0.9	8
58	Fully developed flow of a viscoelastic film down a vertical cylindrical or planar wall. Rheologica Acta, 2009, 48, 1031-1048.	1.1	8
59	Viscous effects on the oscillations of two equal and deformable bubbles under a step change in pressure. Journal of Fluid Mechanics, 2011, 673, 513-547.	1.4	8
60	Steady flow of a viscoelastic film over an inclined plane featuring periodic slits. Journal of Non-Newtonian Fluid Mechanics, 2020, 278, 104243.	1.0	8
61	Stress-gradient induced migration of polymers in thin films flowing over smoothly corrugated surfaces. Journal of Non-Newtonian Fluid Mechanics, 2016, 228, 79-95.	1.0	7
62	Viscoelastic film flows over an inclined substrate with sinusoidal topography. II. Linear stability analysis. Physical Review Fluids, 2019, 4, .	1.0	7
63	Experimental investigation and mathematical modeling of triode PEM fuel cells. Electrochimica Acta, 2017, 248, 518-533.	2.6	6
64	On the flow characteristics of the conical Minoan pipes used in water supply systems, via computational fluid dynamics simulations. Journal of Archaeological Science, 2013, 40, 2057-2068.	1.2	5
65	Dynamics and apparent permeability of the glycocalyx layer: Start-up and pulsating shear experiments in silico. Physical Review Fluids, 2022, 7, .	1.0	5
66	Transient displacement of Newtonian liquids by gas in periodically constricted tubes. AICHE Journal, 2006, 52, 2707-2726.	1.8	4
67	Stability analysis of viscoelastic film flows over an inclined substrate with rectangular trenches. Journal of Fluid Mechanics, 2021, 915, .	1.4	4
68	Stability analysis of a Newtonian film flow over hydrophobic microtextured substrates. Physical Review Fluids, 2022, 7, .	1.0	4
69	Transient Coating of the Inner Wall of a Straight Tube with a Viscoelastic Material. AIP Conference Proceedings, 2008, , .	0.3	0
70	Acknowledgement to Reviewers of Fluids in 2018. Fluids, 2019, 4, 9.	0.8	0
71	Commentary on Volume I-Issue II of the Journal of Oil, Gas and Petrochemical Sciences. Journal of Oil Gas and Petrochemical Sciences, 2018, 1, 67-67.	0.6	0