

# John Tsamopoulos

## List of Publications by Year in descending order

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121  
papers

4,098  
citations

117625

34  
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133252

59  
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124  
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124  
docs citations

124  
times ranked

1943  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reduced and increased flow resistance in shear-dominated flows of Oldroyd-B fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 300, 104698.	2.4	11
2	Dynamics and apparent permeability of the glycocalyx layer: Start-up and pulsating shear experiments <i>in silico</i> . <i>Physical Review Fluids</i> , 2022, 7, .	2.5	5
3	Stability analysis of a Newtonian film flow over hydrophobic microtextured substrates. <i>Physical Review Fluids</i> , 2022, 7, .	2.5	4
4	Numerical simulations of interfacial and elastic instabilities. , 2022, 3, 100053.		2
5	Evaluation of constitutive models for shear-banding wormlike micellar solutions in simple and complex flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 307, 104855.	2.4	5
6	Advanced Constitutive Modeling of the Thixotropic Elasto-Visco-Plastic Behavior of Blood: Steady-State Blood Flow in Microtubes. <i>Materials</i> , 2021, 14, 367.	2.9	13
7	Stability analysis of viscoelastic film flows over an inclined substrate with rectangular trenches. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	3.4	4
8	Origin of the Sharkskin Instability: Nonlinear Dynamics. <i>Physical Review Letters</i> , 2021, 127, 088001.	7.8	15
9	Investigation of the extensional properties of elasto-visco-plastic materials in cross-slot geometries. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 296, 104627.	2.4	11
10	Structure-property relationship of a soft colloidal glass in simple and mixed flows. <i>Journal of Colloid and Interface Science</i> , 2021, 601, 454-466.	9.4	15
11	Adhesion, cavitation, and fibrillation during the debonding process of pressure sensitive adhesives. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	10
12	The concept of elasto-visco-plasticity and its application to a bubble rising in yield stress fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 297, 104670.	2.4	16
13	Quantifying the non-Newtonian effects of pulsatile hemodynamics in tubes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 298, 104673.	2.4	15
14	Electro-osmotic flow of electrolyte solutions of PEO in microfluidic channels. <i>Journal of Colloid and Interface Science</i> , 2020, 563, 381-393.	9.4	17
15	A finite volume method for the simulation of elastoviscoplastic flows and its application to the lid-driven cavity case. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 275, 104216.	2.4	17
16	PEGAFEM-V: A new petrov-galerkin finite element method for free surface viscoelastic flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 284, 104365.	2.4	22
17	Dynamics of viscoplastic filament stretching. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 284, 104371.	2.4	16
18	Advanced Constitutive Modeling of the Thixotropic Elasto-Visco-Plastic Behavior of Blood: Description of the Model and Rheological Predictions. <i>Materials</i> , 2020, 13, 4184.	2.9	31

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19	Asymmetric flows of complex fluids past confined cylinders: A comprehensive numerical study with experimental validation. <i>Physics of Fluids</i> , 2020, 32, 053103.	4.0	48
20	Steady flow of a viscoelastic film over an inclined plane featuring periodic slits. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 278, 104243.	2.4	8
21	Transition between solid and liquid state of yield-stress fluids under purely extensional deformations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12611-12617.	7.1	39
22	The rising velocity of a slowly pulsating bubble in a shear-thinning fluid. <i>Physics of Fluids</i> , 2019, 31, 083103.	4.0	9
23	Modeling the rheology of thixotropic elasto-visco-plastic materials. <i>Journal of Rheology</i> , 2019, 63, 609-639.	2.6	60
24	A new finite element formulation for viscoelastic flows: Circumventing simultaneously the LBB condition and the high-Weissenberg number problem. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 267, 78-97.	2.4	37
25	Dynamics and motion of a gas bubble in a viscoplastic medium under acoustic excitation. <i>Journal of Fluid Mechanics</i> , 2019, 865, 381-413.	3.4	11
26	Oscillations of small bubbles and medium yielding in elastoviscoplastic fluids. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	13
27	Viscoelastic film flows over an inclined substrate with sinusoidal topography. I. Steady state. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	10
28	Viscoelastic film flows over an inclined substrate with sinusoidal topography. II. Linear stability analysis. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	7
29	Theoretical study of the flow in a fluid damper containing high viscosity silicone oil: Effects of shear-thinning and viscoelasticity. <i>Physics of Fluids</i> , 2018, 30, 030708.	4.0	32
30	The PAL (Penalized Augmented Lagrangian) method for computing viscoplastic flows: A new fast converging scheme. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 256, 23-41.	2.4	37
31	How viscoelastic is human blood plasma?. <i>Soft Matter</i> , 2018, 14, 4238-4251.	2.7	83
32	Evaluation of tube models for linear entangled polymers in simple and complex flows. <i>Journal of Rheology</i> , 2018, 62, 25-47.	2.6	29
33	Transient flow of gravity-driven viscous films over 3D patterned substrates: conditions leading to Wenzel, Cassie and intermediate states. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	2.2	13
34	Discretization of three-dimensional free surface flows and moving boundary problems via elliptic grid methods based on variational principles. <i>Journal of Computational Physics</i> , 2017, 344, 127-150.	3.8	18
35	On the degree of wetting of a slit by a liquid film flowing along an inclined plane. <i>Journal of Fluid Mechanics</i> , 2017, 820, 5-41.	3.4	10
36	Numerical simulations of complex yield-stress fluid flows. <i>Rheologica Acta</i> , 2017, 56, 231-258.	2.4	100

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37	Experimental investigation and mathematical modeling of triode PEM fuel cells. <i>Electrochimica Acta</i> , 2017, 248, 518-533.	5.2	6
38	A critical analysis of some popular methods for the discretisation of the gradient operator in finite volume methods. <i>Physics of Fluids</i> , 2017, 29, .	4.0	55
39	Steady film flow over a substrate with rectangular trenches forming air inclusions. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	21
40	Steady viscoelastic film flow over 2D Topography: II. The effect of capillarity, inertia and substrate geometry. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 234, 201-214.	2.4	15
41	Yielding the yield stress analysis: A thorough comparison of recently proposed elasto-visco-plastic (EVP) fluid models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 238, 170-188.	2.4	16
42	On the velocity discontinuity at a critical volume of a bubble rising in a viscoelastic fluid. <i>Journal of Fluid Mechanics</i> , 2016, 789, 310-346.	3.4	75
43	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. <i>Soft Matter</i> , 2016, 12, 5378-5401.	2.7	91
44	Yielding the yield stress analysis: A thorough comparison of recently proposed elasto-visco-plastic (EVP) fluid models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 236, 104-122.	2.4	49
45	Viscoplastic flow in an extrusion damper. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 232, 102-124.	2.4	17
46	Transient flow of gravity-driven viscous films over substrates with rectangular topographical features. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	2.2	13
47	Stress-gradient induced migration of polymers in thin films flowing over smoothly corrugated surfaces. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 228, 79-95.	2.4	7
48	Hemodynamics in stenotic vessels of small diameter under steady state conditions: Effect of viscoelasticity and migration of ÅredÅ blood cells. <i>Biorheology</i> , 2015, 52, 183-210.	0.4	31
49	Flow of two immiscible fluids in a periodically constricted tube: Transitions to stratified, segmented, churn, spray, or segregated flow. <i>Physics of Fluids</i> , 2015, 27, .	4.0	14
50	On the origin of extrusion instabilities: Linear stability analysis of the viscoelastic die swell. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2015, 224, 61-77.	2.4	32
51	Bubble Deformation and Growth Inside Viscoelastic Filaments Undergoing Very Large Extensions. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 7548-7569.	3.7	22
52	Stress-gradient induced migration of polymers in corrugated channels. <i>Journal of Rheology</i> , 2014, 58, 911-947.	2.6	26
53	On the flow characteristics of the conical Minoan pipes used in water supply systems, via computational fluid dynamics simulations. <i>Journal of Archaeological Science</i> , 2013, 40, 2057-2068.	2.4	5
54	On the stick-slip flow from slit and cylindrical dies of a Phan-Thien and Tanner fluid model. II. Linear stability analysis. <i>Physics of Fluids</i> , 2013, 25, 093105.	4.0	18

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55	Steady bubble rise in Herschel–Bulkley fluids and comparison of predictions via the Augmented Lagrangian Method with those via the Papanastasiou model. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 200, 34-51.	2.4	102
56	Viscous effects on the oscillations of two equal and deformable bubbles under a step change in pressure. <i>Journal of Fluid Mechanics</i> , 2011, 673, 513-547.	3.4	8
57	Steady viscoelastic film flow over 2D topography: I. The effect of viscoelastic properties under creeping flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 576-591.	2.4	22
58	On the stick-slip flow from slit and cylindrical dies of a Phan-Thien and Tanner fluid model. I. Steady state. <i>Physics of Fluids</i> , 2009, 21, .	4.0	12
59	Fully developed flow of a viscoelastic film down a vertical cylindrical or planar wall. <i>Rheologica Acta</i> , 2009, 48, 1031-1048.	2.4	8
60	On the elliptic mesh generation in domains containing multiple inclusions and undergoing large deformations. <i>Journal of Computational Physics</i> , 2009, 228, 1980-2011.	3.8	45
61	On the transient coating of a straight tube with a viscoelastic material. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 159, 95-114.	2.4	20
62	Injection of a viscoplastic material inside a tube or between two parallel disks: Conditions for wall detachment of the advancing front. <i>Journal of Rheology</i> , 2009, 53, 1155-1191.	2.6	20
63	Steady extrusion of viscoelastic materials from an annular die. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 154, 136-152.	2.4	29
64	Steady bubble rise and deformation in Newtonian and viscoplastic fluids and conditions for bubble entrapment. <i>Journal of Fluid Mechanics</i> , 2008, 601, 123-164.	3.4	135
65	Transient Coating of the Inner Wall of a Straight Tube with a Viscoelastic Material. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
66	On the Interaction of an Air Jet with a Viscoelastic Tubular Film Produced during the Film Blowing Process. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
67	Transient displacement of Newtonian and viscoplastic liquids by air in complex tubes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 142, 162-182.	2.4	37
68	Two- and three-dimensional instabilities in the film blowing process. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 141, 193-220.	2.4	10
69	A direct comparison between volume and surface tracking methods with a boundary-fitted coordinate transformation and third-order upwinding. <i>Journal of Computational Physics</i> , 2007, 227, 1428-1469.	3.8	18
70	Numerical simulation of multiple bubbles growing in a Newtonian liquid filament undergoing stretching. <i>Physics of Fluids</i> , 2006, 18, 042106.	4.0	16
71	Gas-assisted injection molding with fluids partially occupying straight or complex tubes. <i>Polymer Engineering and Science</i> , 2006, 46, 47-68.	3.1	16
72	Transient squeeze flow of viscoplastic materials. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 133, 35-56.	2.4	48

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73	Transient displacement of Newtonian liquids by gas in periodically constricted tubes. AICHE Journal, 2006, 52, 2707-2726.	3.6	4
74	Risk analysis of industrial structures under extreme transient loads. Soil Dynamics and Earthquake Engineering, 2004, 24, 435-448.	3.8	27
75	On the gas-penetration in straight tubes completely filled with a viscoelastic fluid. Journal of Non-Newtonian Fluid Mechanics, 2004, 117, 117-139.	2.4	42
76	Numerical simulation of bubble growth in Newtonian and viscoelastic filaments undergoing stretching. Journal of Non-Newtonian Fluid Mechanics, 2004, 122, 177-200.	2.4	26
77	Spherical capsules in three-dimensional unbounded Stokes flows: effect of the membrane constitutive law and onset of buckling. Journal of Fluid Mechanics, 2004, 516, 303-334.	3.4	215
78	A quasi-elliptic transformation for moving boundary problems with large anisotropic deformations. Journal of Computational Physics, 2003, 192, 494-522.	3.8	89
79	Transient displacement of a viscoplastic material by air in straight and suddenly constricted tubes. Journal of Non-Newtonian Fluid Mechanics, 2003, 112, 43-75.	2.4	73
80	Transient displacement of a Newtonian fluid by air in straight or suddenly constricted tubes. Physics of Fluids, 2003, 15, 1973-1991.	4.0	28
81	Dynamics of the axisymmetric core-annular flow. II. The less viscous fluid in the core, saw tooth waves. Physics of Fluids, 2002, 14, 1011-1029.	4.0	44
82	Core-annular flow in a periodically constricted circular tube. Part 2. Nonlinear dynamics. Journal of Fluid Mechanics, 2002, 470, 181-222.	3.4	16
83	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.	1.6	8
84	The 3rd International Conference of the Hellenic Society of Rheology (HSR). Applied Rheology, 2002, 12, 35-36.	5.2	0
85	Linear stability of a gas boundary layer flowing past a thin liquid film over a flat plate. Journal of Fluid Mechanics, 2001, 436, 321-352.	3.4	11
86	Core-annular flow in a periodically constricted circular tube. Part 1. Steady-state, linear stability and energy analysis. Journal of Fluid Mechanics, 2001, 432, 31-68.	3.4	17
87	Dynamics of axisymmetric core-annular flow in a straight tube. I. The more viscous fluid in the core, bamboo waves. Physics of Fluids, 2001, 13, 841-858.	4.0	61
88	Squeeze flow of Bingham plastics. Journal of Non-Newtonian Fluid Mechanics, 2001, 100, 165-189.	2.4	114
89	Boundary layer flow of air past solid surfaces in the presence of rainfall. Journal of Fluid Mechanics, 2000, 425, 79-110.	3.4	8
90	The steady annular extrusion of a Newtonian liquid under gravity and surface tension. International Journal for Numerical Methods in Fluids, 2000, 33, 1099-1119.	1.6	22

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91	Concentric core-annular flow in a circular tube of slowly varying cross-section. <i>Chemical Engineering Science</i> , 2000, 55, 5509-5530.	3.8	16
92	Unsteady extrusion of a viscoelastic annular film. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2000, 88, 229-259.	2.4	18
93	Unsteady extrusion of a viscoelastic annular film. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2000, 88, 303-325.	2.4	12
94	Cooling of a viscoelastic film during unsteady extrusion from an annular die. <i>Rheologica Acta</i> , 2000, 39, 44-61.	2.4	9
95	Unsteady state operation of catalytic particles with constant and periodically changing degree of external wetting. <i>Chemical Engineering Science</i> , 1998, 53, 3129-3142.	3.8	13
96	Unsteady flow of an axisymmetric annular film under gravity. <i>Physics of Fluids</i> , 1998, 10, 2500-2516.	4.0	19
97	Squeeze Flow of Bingham Plastic. , 1998, , 159-160.		1
98	Dynamics of charged and conducting drops via the hybrid finite-boundary element method. <i>Engineering Analysis With Boundary Elements</i> , 1995, 15, 339-348.	3.7	5
99	Transient rotational flow of an Oldroyd fluid over a disk. <i>Physics of Fluids</i> , 1994, 6, 1144-1157.	4.0	7
100	Start-up flow of an upper convected maxwell fluid over a rotating disk. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1994, 55, 163-189.	2.4	7
101	Bjerknes forces between two bubbles. Part 2. Response to an oscillatory pressure field. <i>Journal of Fluid Mechanics</i> , 1993, 254, 501-527.	3.4	69
102	Nonlinear dynamics of capillary bridges: theory. <i>Journal of Fluid Mechanics</i> , 1993, 255, 373.	3.4	59
103	Nonlinear dynamics of capillary bridges: experiments. <i>Journal of Fluid Mechanics</i> , 1993, 255, 411.	3.4	57
104	Bjerknes forces between two bubbles. Part 1. Response to a step change in pressure. <i>Journal of Fluid Mechanics</i> , 1993, 254, 467-499.	3.4	60
105	Viscous oscillations of capillary bridges. <i>Journal of Fluid Mechanics</i> , 1992, 235, 579.	3.4	56
106	A hybrid finite-boundary element method for inviscid flows with free surface. <i>Journal of Computational Physics</i> , 1992, 101, 231-251.	3.8	22
107	Capillary bridges between parallel and non-parallel surfaces and their stability. <i>Journal of Colloid and Interface Science</i> , 1992, 151, 49-69.	9.4	42
108	A model for the catalytic growth of carbon filaments. <i>Carbon</i> , 1992, 30, 285-293.	10.3	44

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109	Nonlinear oscillations of liquid shells in zero gravity. <i>Journal of Fluid Mechanics</i> , 1991, 230, 541-582.	3.4	15
110	Boundary-layer analysis of the dynamics of axisymmetric capillary bridges. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 2866-2874.	1.6	56
111	Inflation dynamics of fluid annular menisci inside a mold cavity"II. Deformation driven by large gas pressures. <i>Chemical Engineering Science</i> , 1991, 46, 597-608.	3.8	11
112	Inflation dynamics of fluid annular menisci inside a mold cavity" I. Deformation driven by small gas pressures. <i>Chemical Engineering Science</i> , 1991, 46, 215-232.	3.8	23
113	Nonisothermal parison inflation in blow molding. <i>AIChE Journal</i> , 1990, 36, 1837-1850.	3.6	29
114	Equilibrium shapes and stability of charged and conducting drops. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990, 2, 1328-1340.	1.6	48
115	Gasification of graphite by the channeling action of metal catalysts. <i>Journal of Catalysis</i> , 1989, 117, 549-557.	6.2	4
116	Modeling the channeling action of catalysts in gas-carbon reactions. <i>AIChE Journal</i> , 1989, 35, 686-689.	3.6	8
117	Equilibrium shapes and stability of captive annular menisci. <i>Journal of Fluid Mechanics</i> , 1988, 197, 523-549.	3.4	17
118	Dynamic centering of liquid shells. <i>Physics of Fluids</i> , 1987, 30, 27.	1.4	15
119	Creeping motion of a sphere through a Bingham plastic. <i>Journal of Fluid Mechanics</i> , 1985, 158, 219-244.	3.4	393
120	Resonant oscillations of inviscid charged drops. <i>Journal of Fluid Mechanics</i> , 1984, 147, 373.	3.4	76
121	Nonlinear oscillations of inviscid drops and bubbles. <i>Journal of Fluid Mechanics</i> , 1983, 127, 519.	3.4	227