Roney L Thompson

List of Publications by Year
in descending order

83	1,495	331259 21	360668 35
papers	citations	h-index	g-index

88	88	88	847
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A unified approach to model elasto-viscoplastic thixotropic yield-stress materials and apparent yield-stress fluids. Rheologica Acta, 2013, 52, 673-694.	1.1	121
2	A critical overview of elasto-viscoplastic thixotropic modeling. Journal of Non-Newtonian Fluid Mechanics, 2012, 187-188, 8-15.	1.0	103
3	Viscoplastic dimensionless numbers. Journal of Non-Newtonian Fluid Mechanics, 2016, 238, 57-64.	1.0	77
4	A methodology to evaluate statistical errors in DNS data of plane channel flows. Computers and Fluids, 2016, 130, 1-7.	1.3	50
5	The quasilinear large-amplitude viscoelastic regime and its significance in the rheological characterization of soft matter. Journal of Rheology, 2014, 58, 537-561.	1.3	48
6	Numerical investigation on gas-displacement of a shear-thinning liquid and a visco-plastic material in capillary tubes. Journal of Non-Newtonian Fluid Mechanics, 2007, 144, 149-159.	1.0	44
7	Critical quantities on the yielding process of waxy crude oils. Rheologica Acta, 2015, 54, 479-499.	1.1	44
8	Persistence of straining and flow classification. International Journal of Engineering Science, 2005, 43, 79-105.	2.7	43
9	The yield stress tensor. Journal of Non-Newtonian Fluid Mechanics, 2018, 261, 211-219.	1.0	43
10	Time-dependent yield stress materials. Current Opinion in Colloid and Interface Science, 2019, 43, 15-25.	3.4	42
11	The use of the Reynolds force vector in a physics informed machine learning approach for predictive turbulence modeling. Computers and Fluids, 2019, 192, 104258.	1.3	39
12	Model-based material functions for SAOS and LAOS analyses. Journal of Non-Newtonian Fluid Mechanics, 2015, 215, 19-30.	1.0	33
13	A new constitutive equation and its performance in contraction flows. Journal of Non-Newtonian Fluid Mechanics, 1999, 86, 375-388.	1.0	32
14	Some perspectives on the dynamic history of a material element. International Journal of Engineering Science, 2008, 46, 224-249.	2.7	31
15	Conditioning and accurate solutions of Reynolds average Navierâ€“Stokes equations with data-driven turbulence closures. Journal of Fluid Mechanics, 2021, 915, .	1.4	30
16	Statistics and tensor analysis of polymer coilâ€“stretch mechanism in turbulent drag reducing channel flow. Journal of Fluid Mechanics, 2017, 824, 135-173.	1.4	29
17	Flow regimes for the immiscible liquidâ€“liquid displacement in capillary tubes with complete wetting of the displaced liquid. Journal of Fluid Mechanics, 2009, 641, 63-84.	1.4	28
18	Influence of Adding Asphaltenes and Gas Condensate on CO₂ Hydrate Formation in Waterâ€“CO₂â€“Oil Systems. Energy & Fuels, 2019, 33, 7138-7146.	2.5	25

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19	Active and hibernating turbulence in drag-reducing plane Couette flows. Physical Review Fluids, 2017, 2, .	1.0	25
20	A general transformation procedure for differential viscoelastic models. Journal of Non-Newtonian Fluid Mechanics, 2003, 111, 151-174.	1.0	24
21	Further remarks on numerical investigation on gas displacement of a shear-thinning liquid and a visco-plastic material in capillary tubes. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 448-452.	1.0	24
22	A constitutive model for non-Newtonian materials based onÂthe persistence-of-straining tensor. Meccanica, 2011, 46, 1035-1045.	1.2	22
23	Constructing a thixotropy model from rheological experiments. Journal of Non-Newtonian Fluid Mechanics, 2018, 261, 1-8.	1.0	22
24	Considerations on kinematic flow classification criteria. Journal of Non-Newtonian Fluid Mechanics, 2005, 128, 109-115.	1.0	21
25	Analysis of CO‹sub›2‹/sub› Hydrates in Crude Oils from a Rheological Point of View. Energy & Fuels, 2018, 32, 2733-2741.	2.5	21
26	Emulsion effects on the yield stress of gelled waxy crude oils. Fuel, 2018, 222, 444-456.	3.4	20
27	An objective perspective for classic flow classification criteria. Comptes Rendus - Mecanique, 2016, 344, 52-59.	2.1	19
28	An experimental investigation on the Newtonianâ€“Newtonian and viscoplasticâ€“Newtonian displacement in a capillary tube. Journal of Non-Newtonian Fluid Mechanics, 2017, 247, 207-220.	1.0	19
29	Rheological material functions at yielding. Journal of Rheology, 2020, 64, 615-624.	1.3	19
30	Immiscible Newtonian displacement by a viscoplastic material in a capillary plane channel. Rheologica Acta, 2011, 50, 403-422.	1.1	18
31	Viscoplasticâ€“viscoplastic displacement in a plane channel with interfacial tension effects. Chemical Engineering Science, 2013, 91, 54-64.	1.9	18
32	Rheological effects on the acidizing process in carbonate reservoirs. Journal of Petroleum Science and Engineering, 2021, 207, 109122.	2.1	18
33	A thermodynamic framework to model thixotropic materials. International Journal of Non-Linear Mechanics, 2013, 55, 48-54.	1.4	17
34	The â€œavalanche effectâ€•of an elasto-viscoplastic thixotropic material on an inclined plane. Journal of Non-Newtonian Fluid Mechanics, 2017, 247, 165-177.	1.0	17
35	Plane flow of thixotropic elasto-viscoplastic materials through a 1:4 sudden expansion. Journal of Non-Newtonian Fluid Mechanics, 2015, 220, 162-174.	1.0	16
36	Elliptical, parabolic, and hyperbolic exchanges of energy in drag reducing plane Couette flows. Physics of Fluids, 2017, 29, .	1.6	15

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37	Is the von Mises criterion generally applicable to soft solids?. Soft Matter, 2020, 16, 7576-7584.	1.2	15
38	A methodology to quantify the nonlinearity of the Reynolds stress tensor. Journal of Turbulence, 2010, 11, N33.	0.5	14
39	Friction losses for power-law and viscoplastic materials in an entrance of a tube and an abrupt contraction. Journal of Petroleum Science and Engineering, 2011, 76, 224-235.	2.1	14
40	Residual mass and flow regimes for the immiscible liquidâ€“liquid displacement in a plane channel. International Journal of Multiphase Flow, 2011, 37, 640-646.	1.6	14
41	Transient motions of elasto-viscoplastic thixotropic materials subjected to an imposed stress field and to stress-based free-surface boundary conditions. International Journal of Engineering Science, 2016, 109, 165-201.	2.7	14
42	Analysis of uncertainties and convergence of the statistical quantities in turbulent wall-bounded flows by means of a physically based criterion. Physics of Fluids, 2018, 30, .	1.6	14
43	Normal and oblique drop impact of yield stress fluids with thixotropic effects. Journal of Fluid Mechanics, 2019, 876, 642-679.	1.4	13
44	Eigenvector perturbation methodology for uncertainty quantification of turbulence models. Physical Review Fluids, 2019, 4, .	1.0	13
45	Further remarks on persistence of straining and flow classification. International Journal of Engineering Science, 2007, 45, 504-508.	2.7	12
46	Immiscible liquidâ€“liquid pressure-driven flow in capillary tubes: Experimental results and numerical comparison. Physics of Fluids, 2015, 27, .	1.6	12
47	Common features between the Newtonian laminarâ€“turbulent transition and the viscoelastic drag-reducing turbulence. Journal of Fluid Mechanics, 2019, 877, 405-428.	1.4	12
48	Impact of capillary drops of complex fluids on a solid surface. Physics of Fluids, 2019, 31, .	1.6	12
49	A simple method to analyze materials under quasilinear large amplitude oscillatory shear flow (QL-LAOS). Journal of Rheology, 2019, 63, 305-317.	1.3	10
50	Motion of a power-law long drop in a capillary tube filled by a Newtonian fluid. Chemical Engineering Science, 2012, 72, 126-141.	1.9	9
51	Anisotropic Reynolds stress tensor representation in shear flows using DNS and experimental data. Journal of Turbulence, 2016, 17, 602-632.	0.5	9
52	Friction Coefficients for Bingham and Power-Law Fluids in Abrupt Contractions and Expansions. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	0.8	9
53	Numerical investigation of shear-thinning and viscoelastic binary droplet collision. Journal of Non-Newtonian Fluid Mechanics, 2022, 302, 104750.	1.0	8
54	Experimental investigation of the enhanced oil recovery process using a polymeric solution. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2012, 34, 285-293.	0.8	7

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55	Reynolds and Weissenberg numbers in viscoelastic flows. Journal of Non-Newtonian Fluid Mechanics, 2021, 292, 104550.	1.0	7
56	Performance of an elasto-viscoplastic model in some benchmark problems. Mechanics of Time-Dependent Materials, 2015, 19, 419-438.	2.3	4
57	Pre-processing DNS data to improve statistical convergence and accuracy of mean velocity fields in invariant data-driven turbulence models. Theoretical and Computational Fluid Dynamics, 2022, 36, 435-463.	0.9	4
58	Comments on â€œIntrinsically unsteady viscometric and quasi-viscometric flowsâ€•by R.R. Huilgol. Journal of Non-Newtonian Fluid Mechanics, 2006, 136, 179-180.	1.0	3
59	An alternative assessment of weak-equilibrium conditions in turbulent closure modeling. International Journal of Engineering Science, 2010, 48, 1633-1640.	2.7	3
60	Modeling turbulent-bounded flow using non-Newtonian viscometric functions. Journal of Turbulence, 2011, 12, N15.	0.5	3
61	A note on some insights from decoupling the time derivative of an objective tensor. International Journal of Engineering Science, 2014, 82, 22-27.	2.7	3
62	Development of nonlinear Reynolds average turbulent <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e2346" altimg="si77.svg"><mml:mrow><mml:mi>Î²</mml:mi><mml:mo linebreak="goodbreak" linebreakstyle="after">â^’</mml:mo><mml:mover accent="true"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow><mml:mrow><mml:mo>Ì‡</mml:mo></mml:mrow></mml:mover></mml:mrow> models. Mechanics Research Communications, 2022, 120, 103853.	1.0	3
63	Comments on â€œObjective flow classification parameters and their use in general steady flowsâ€•by P.O. Brunn. Rheologica Acta, 2008, 47, 959-961.	1.1	2
64	Flow classification for viscoelastic materials. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2009, 1, 69-83.	0.7	2
65	The eagle and the rat: Nonâ€“equilibrium dynamics in time-dependent materials. Journal of Non-Newtonian Fluid Mechanics, 2020, 281, 104313.	1.0	2
66	Gravitational Effects in the Collision of Elasto-Viscoplastic Drops on a Vertical Plane. Fluids, 2020, 5, 61.	0.8	2
67	The use of a general convected time derivative to compute the Reynolds stress tensor for a compressible turbulent flow. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	0.8	2
68	Influence of the Plastic Number on the Evolution of a Yield Stress Material Subjected to a Dam Break. Journal of Applied Fluid Mechanics, 2019, 12, 1967-1978.	0.4	2
69	Computational study of planar extrudate swell flows with a viscous liquidâ€gas interface. AICHE Journal, 2022, 68, e17503.	1.8	2
70	An Invariant and Highlyâ€“Accurate Strategy for Data-Driven Turbulence Modelling. SSRN Electronic Journal, 0, , .	0.4	2
71	A non-isothermal approach to evaluate the impact of the cooling stage on the startup flow of waxy crude oils. Journal of Non-Newtonian Fluid Mechanics, 2022, 304, 104793.	1.0	2
72	Analysis of the flow between parallel coaxial discs with relative axial motion and rotation. Journal of Non-Newtonian Fluid Mechanics, 2020, 285, 104404.	1.0	1

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73	Error propagation and conditioning analysis of DNS data of turbulent viscoelastic channel flows. Journal of Non-Newtonian Fluid Mechanics, 2021, 296, 104632.	1.0	1
74	Turbulence modeling based on non-Newtonian constitutive laws. Journal of Physics: Conference Series, 2011, 318, 042030.	0.3	0
75	Model analysis of the turbulent flows in a convergentâ€“divergent channel and around a sphere. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2018, 40, 1.	0.8	0
76	Persistenceâ€“ofâ€“straining and polymer alignment in viscoelastic turbulence. Applications in Engineering Science, 2020, 4, 100026.	0.5	0
77	Nonlinear subgrid-scale models employing the non-persistence-of-straining tensor. Mechanics Research Communications, 2021, 113, 103671.	1.0	0
78	A New Criterion for Classification of Flows. , 2003, , .		0
79	Considerations on Flow Classification Criteria. , 2004, , .		0
80	On the Extension of Polymer Molecules in Turbulent Viscoelastic Flows: Statistical and Tensor Investigation. ERCOFTAC Series, 2016, , 171-180.	0.1	0
81	On Objective and Non-objective Kinematic Flow Classification Criteria. ERCOFTAC Series, 2016, , 419-428.	0.1	0
82	Recent developments on yield stress materials. , 2022, 2, 100021.		0
83	Relations between solutions of the Zorawski condition and motions with constant stretch history. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2022, 44, .	0.8	0