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	Computational study of planar extrudate swell flows with a viscous liquidâ€gas interface. AICHE Journal, 2022, 68, e17503.	1.8	2
2	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
3	Numerical investigation of shear-thinning and viscoelastic binary droplet collision. Journal of Non-Newtonian Fluid Mechanics, 2022, 302, 104750.	1.0	8
4	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
5	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
6	Recent developments on yield stress materials. , 2022, 2, 100021.		0
7	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
8	Conditioning and accurate solutions of Reynolds average Navierâ€“Stokes equations with data-driven turbulence closures. Journal of Fluid Mechanics, 2021, 915, .	1.4	30
9	Nonlinear subgrid-scale models employing the non-persistence-of-straining tensor. Mechanics Research Communications, 2021, 113, 103671.	1.0	0
10	Reynolds and Weissenberg numbers in viscoelastic flows. Journal of Non-Newtonian Fluid Mechanics, 2021, 292, 104550.	1.0	7
11	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
12	Rheological effects on the acidizing process in carbonate reservoirs. Journal of Petroleum Science and Engineering, 2021, 207, 109122.	2.1	18
13	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
14	Is the von Mises criterion generally applicable to soft solids?. Soft Matter, 2020, 16, 7576-7584.	1.2	15
15	Persistenceâ€“ofâ€“straining and polymer alignment in viscoelastic turbulence. Applications in Engineering Science, 2020, 4, 100026.	0.5	0
16	The eagle and the rat: Nonâ€“equilibrium dynamics in time-dependent materials. Journal of Non-Newtonian Fluid Mechanics, 2020, 281, 104313.	1.0	2
17	Rheological material functions at yielding. Journal of Rheology, 2020, 64, 615-624.	1.3	19
18	Gravitational Effects in the Collision of Elasto-Viscoplastic Drops on a Vertical Plane. Fluids, 2020, 5, 61.	0.8	2

#	Article	IF	Citations
19	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
20	Normal and oblique drop impact of yield stress fluids with thixotropic effects. Journal of Fluid Mechanics, 2019, 876, 642-679.	1.4	13
21	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
22	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
23	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
24	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
25	Time-dependent yield stress materials. Current Opinion in Colloid and Interface Science, 2019, 43, 15-25.	3.4	42
26	Impact of capillary drops of complex fluids on a solid surface. Physics of Fluids, 2019, 31, .	1.6	12
27	Eigenvector perturbation methodology for uncertainty quantification of turbulence models. Physical Review Fluids, 2019, 4, .	1.0	13
28	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
29	Analysis of CO₂ Hydrates in Crude Oils from a Rheological Point of View. Energy & Fuels, 2018, 32, 2733-2741.	2.5	21
30	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
31	Emulsion effects on the yield stress of gelled waxy crude oils. Fuel, 2018, 222, 444-456.	3.4	20
32	The yield stress tensor. Journal of Non-Newtonian Fluid Mechanics, 2018, 261, 211-219.	1.0	43
33	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
34	Constructing a thixotropy model from rheological experiments. Journal of Non-Newtonian Fluid Mechanics, 2018, 261, 1-8.	1.0	22
35	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
36	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

#	Article	IF	Citations
37	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
38	Elliptical, parabolic, and hyperbolic exchanges of energy in drag reducing plane Couette flows. Physics of Fluids, 2017, 29, .	1.6	15
39	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
40	Active and hibernating turbulence in drag-reducing plane Couette flows. Physical Review Fluids, 2017, 2, .	1.0	25
41	Viscoplastic dimensionless numbers. Journal of Non-Newtonian Fluid Mechanics, 2016, 238, 57-64.	1.0	77
42	Anisotropic Reynolds stress tensor representation in shear flows using DNS and experimental data. Journal of Turbulence, 2016, 17, 602-632.	0.5	9
43	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
44	An objective perspective for classic flow classification criteria. Comptes Rendus - Mecanique, 2016, 344, 52-59.	2.1	19
45	A methodology to evaluate statistical errors in DNS data of plane channel flows. Computers and Fluids, 2016, 130, 1-7.	1.3	50
46	On the Extension of Polymer Molecules in Turbulent Viscoelastic Flows: Statistical and Tensor Investigation. ERCOFTAC Series, 2016, , 171-180.	0.1	0
47	On Objective and Non-objective Kinematic Flow Classification Criteria. ERCOFTAC Series, 2016, , 419-428.	0.1	0
48	Immiscible liquidâ€“liquid pressure-driven flow in capillary tubes: Experimental results and numerical comparison. Physics of Fluids, 2015, 27, .	1.6	12
49	Performance of an elasto-viscoplastic model in some benchmark problems. Mechanics of Time-Dependent Materials, 2015, 19, 419-438.	2.3	4
50	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
51	Critical quantities on the yielding process of waxy crude oils. Rheologica Acta, 2015, 54, 479-499.	1.1	44
52	Model-based material functions for SAOS and LAOS analyses. Journal of Non-Newtonian Fluid Mechanics, 2015, 215, 19-30.	1.0	33
53	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
54	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

#	Article	IF	Citations
55	A thermodynamic framework to model thixotropic materials. International Journal of Non-Linear Mechanics, 2013, 55, 48-54.	1.4	17
56	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
57	Viscoplasticâ€“viscoplastic displacement in a plane channel with interfacial tension effects. Chemical Engineering Science, 2013, 91, 54-64.	1.9	18
58	A critical overview of elasto-viscoplastic thixotropic modeling. Journal of Non-Newtonian Fluid Mechanics, 2012, 187-188, 8-15.	1.0	103
59	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
60	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
61	Turbulence modeling based on non-Newtonian constitutive laws. Journal of Physics: Conference Series, 2011, 318, 042030.	0.3	0
62	Modeling turbulent-bounded flow using non-Newtonian viscometric functions. Journal of Turbulence, 2011, 12, N15.	0.5	3
63	A constitutive model for non-Newtonian materials based onÂthe persistence-of-straining tensor. Meccanica, 2011, 46, 1035-1045.	1.2	22
64	Immiscible Newtonian displacement by a viscoplastic material in a capillary plane channel. Rheologica Acta, 2011, 50, 403-422.	1.1	18
65	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
66	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
67	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
68	An alternative assessment of weak-equilibrium conditions in turbulent closure modeling. International Journal of Engineering Science, 2010, 48, 1633-1640.	2.7	3
69	A methodology to quantify the nonlinearity of the Reynolds stress tensor. Journal of Turbulence, 2010, 11, N33.	0.5	14
70	Flow classification for viscoelastic materials. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2009, 1, 69-83.	0.7	2
71	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
72	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

#	Article	IF	Citations
73	Some perspectives on the dynamic history of a material element. International Journal of Engineering Science, 2008, 46, 224-249.	2.7	31
74	Further remarks on persistence of straining and flow classification. International Journal of Engineering Science, 2007, 45, 504-508.	2.7	12
75	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
76	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
77	Considerations on kinematic flow classification criteria. Journal of Non-Newtonian Fluid Mechanics, 2005, 128, 109-115.	1.0	21
78	Persistence of straining and flow classification. International Journal of Engineering Science, 2005, 43, 79-105.	2.7	43
79	Considerations on Flow Classification Criteria. , 2004, , .		0
80	A general transformation procedure for differential viscoelastic models. Journal of Non-Newtonian Fluid Mechanics, 2003, 111, 151-174.	1.0	24
81	A New Criterion for Classification of Flows. , 2003, , .		0
82	A new constitutive equation and its performance in contraction flows. Journal of Non-Newtonian Fluid Mechanics, 1999, 86, 375-388.	1.0	32
83	An Invariant and Highlyâ€“Accurate Strategy for Data-Driven Turbulence Modelling. SSRN Electronic Journal, 0, , .	0.4	2