

Murray Rudman

List of Publications by Year in descending order

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107
papers

4,223
citations

159585

30
h-index

118850

62
g-index

116
all docs

116
docs citations

116
times ranked

2835
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of volume and aspect ratio of liquid bridges on capillary breakup rheometry. <i>Physics of Fluids</i> , 2022, 34, .	4.0	1
2	Application of SPH to Single and Multiphase Geophysical, Biophysical and Industrial Fluid Flows. <i>International Journal of Computational Fluid Dynamics</i> , 2021, 35, 22-78.	1.2	15
3	Predicting Rebound of Ellipsoidal Granules Using SPH. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 673-691.	0.4	1
4	Lagrangian Transport and Chaotic Advection in Three-Dimensional Laminar Flows. <i>Applied Mechanics Reviews</i> , 2021, 73, .	10.1	18
5	Collisional SPH: A method to model frictional collisions with SPH. <i>Applied Mathematical Modelling</i> , 2021, 94, 13-35.	4.2	12
6	Turbulent coarse-particle non-Newtonian suspension flow in a pipe. <i>International Journal of Multiphase Flow</i> , 2021, 142, 103698.	3.4	16
7	Experimental Realization of Periodic Deep-Water Wave Envelopes with and without Dissipation. <i>Water Waves</i> , 2020, 2, 113-122.	1.0	4
8	Turbulent coarse-particle suspension flow: Measurement and modelling. <i>Powder Technology</i> , 2020, 373, 647-659.	4.2	24
9	Measuring atrial stasis during sinus rhythm in patients with paroxysmal atrial fibrillation using 4 Dimensional flow imaging. <i>International Journal of Cardiology</i> , 2020, 315, 45-50.	1.7	9
10	Global organization of three-dimensional, volume-preserving flows: Constraints, degenerate points, and Lagrangian structure. <i>Chaos</i> , 2020, 30, 033124.	2.5	2
11	Generating stable solitary waves with a piston-type wavemaker. <i>Coastal Engineering</i> , 2020, 157, 103633.	4.0	15
12	Experimental Investigation on Solitary Wave Interaction With Vertical Porous Barriers. <i>Journal of Offshore Mechanics and Arctic Engineering</i> , 2020, 142, .	1.2	8
13	Optimal Operating Conditions for Capillary Breakup Rheometry Based on Half-times of Liquid Bridges. , 2020, , .		0
14	Smoothed Particle Hydrodynamics modelling of fresh and salt water dynamics in porous media. <i>Journal of Hydrology</i> , 2019, 576, 370-380.	5.4	13
15	Direct numerical simulation of turbulent non-Newtonian flow using OpenFOAM. <i>Applied Mathematical Modelling</i> , 2019, 72, 50-67.	4.2	26
16	Solitary Wave Interaction With Vertical Porous Barriers. , 2019, , .		0
17	Exact solutions of the Navier-Stokes equations generalized for flow in porous media. <i>European Physical Journal Plus</i> , 2018, 133, 1.	2.6	2
18	Wave interaction with a tethered buoy: SPH simulation and experimental validation. <i>Ocean Engineering</i> , 2018, 156, 306-317.	4.3	22

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19	The ventricular residence time distribution derived from 4D flow particle tracing: a novel marker of myocardial dysfunction. <i>International Journal of Cardiovascular Imaging</i> , 2018, 34, 1927-1935.	1.5	5
20	Reynolds number effects in pipe flow turbulence of generalized Newtonian fluids. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	13
21	A numerical approach for simulating flow through thin porous media. <i>European Journal of Mechanics, B/Fluids</i> , 2017, 65, 31-44.	2.5	9
22	Impact of discontinuous deformation upon the rate of chaotic mixing. <i>Physical Review E</i> , 2017, 95, 022213.	2.1	7
23	The influence of shear-dependent rheology on turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , 2017, 822, 848-879.	3.4	27
24	The effect of yield stress on pipe flow turbulence for generalised newtonian fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 249, 53-62.	2.4	21
25	SPH modelling of multi-fluid lock-exchange over and within porous media. <i>Advances in Water Resources</i> , 2017, 108, 15-28.	3.8	16
26	Localized shear generates three-dimensional transport. <i>Chaos</i> , 2017, 27, 043102.	2.5	6
27	The linear stability of swirling vortex rings. <i>Physics of Fluids</i> , 2016, 28, 114106.	4.0	10
28	A reduced-order model of three-dimensional unsteady flow in a cavity based on the resolvent operator. <i>Journal of Fluid Mechanics</i> , 2016, 798, .	3.4	57
29	Bifurcations and degenerate periodic points in a three dimensional chaotic fluid flow. <i>Chaos</i> , 2016, 26, 053106.	2.5	9
30	Mixing of discontinuously deforming media. <i>Chaos</i> , 2016, 26, 023113.	2.5	16
31	Streamwise-varying steady transpiration control in turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , 2016, 796, 588-616.	3.4	11
32	The influence of mooring system in rogue wave impact on an offshore platform. <i>Ocean Engineering</i> , 2016, 115, 168-181.	4.3	32
33	The importance of rheology characterization in predicting turbulent pipe flow of generalized Newtonian fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 232, 11-21.	2.4	28
34	Creating analytically divergence-free velocity fields from grid-based data. <i>Journal of Computational Physics</i> , 2016, 323, 75-94.	3.8	11
35	The evolution of swirling axisymmetric vortex rings. <i>Physics of Fluids</i> , 2015, 27, 087101.	4.0	7
36	Aggregate densification in the thickening of flocculated suspensions in an un-networked bed. <i>Chemical Engineering Science</i> , 2015, 122, 585-595.	3.8	25

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37	On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. <i>Physics of Fluids</i> , 2014, 26, .	4.0	14
38	Control mechanisms for the global structure of scalar dispersion in chaotic flows. <i>Physical Review E</i> , 2014, 90, 022908.	2.1	8
39	Temperature and strain rate effects in cold spray investigated by smoothed particle hydrodynamics. <i>Surface and Coatings Technology</i> , 2014, 254, 121-130.	4.8	46
40	Rogue wave impact on a tension leg platform: The effect of wave incidence angle and mooring line tension. <i>Ocean Engineering</i> , 2013, 61, 123-138.	4.3	43
41	Comparative study on the accuracy and stability of SPH schemes in simulating energetic free-surface flows. <i>European Journal of Mechanics, B/Fluids</i> , 2012, 36, 1-16.	2.5	43
42	Large Scale Simulation of Industrial, Engineering and Geophysical Flows Using Particle Methods. <i>Computational Methods in Applied Sciences (Springer)</i> , 2011, , 89-111.	0.3	7
43	Aggregate densification and batch settling. <i>Chemical Engineering Journal</i> , 2011, 171, 141-151.	12.7	48
44	A DNS Investigation of the Effect of Yield Stress for Turbulent Non-Newtonian Suspension Flow in Open Channels. <i>Particulate Science and Technology</i> , 2011, 29, 209-228.	2.1	5
45	The Effect of Pressure Solution in SPH Simulations of Sloshing Flow. , 2011, , .		0
46	Direct numerical simulation (DNS) investigation of turbulent open channel flow of a Herschel-Bulkley fluid. , 2011, , .		0
47	Pilot and full-scale validation of thickener and feedwell modelling. , 2011, , .		3
48	A DNS Investigation of Non-Newtonian Turbulent Open Channel Flow. , 2010, , .		0
49	Experimental validation of a 1-D continuous thickening model using a pilot column. <i>Chemical Engineering Science</i> , 2010, 65, 3937-3946.	3.8	20
50	Macroscopic dynamics of flocculated colloidal suspensions. <i>Chemical Engineering Science</i> , 2010, 65, 6362-6378.	3.8	18
51	Efficiency of raking in gravity thickeners. <i>International Journal of Mineral Processing</i> , 2010, 95, 30-39.	2.6	21
52	Efficient simulation of surface tension-dominated flows through enhanced interface geometry interrogation. <i>Journal of Computational Physics</i> , 2010, 229, 7520-7544.	3.8	28
53	The effect of shear on gravity thickening: Pilot scale modelling. <i>Chemical Engineering Science</i> , 2010, 65, 4293-4301.	3.8	27
54	An experimental and theoretical study of the mixing characteristics of a periodically reoriented irrotational flow. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 2147-2162.	3.4	21

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55	Scalar dispersion in a periodically reoriented potential flow: Acceleration via Lagrangian chaos. <i>Physical Review E</i> , 2010, 81, 046319.	2.1	27
56	Lagrangian topology of a periodically reoriented potential flow: Symmetry, optimization, and mixing. <i>Physical Review E</i> , 2009, 80, 036208.	2.1	33
57	Centrifugal pump performance calculation for homogeneous suspensions. <i>Canadian Journal of Chemical Engineering</i> , 2009, 87, 526-533.	1.7	11
58	Low Reynolds number scalar transport enhancement in viscous and non-Newtonian fluids. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 655-664.	4.8	42
59	Extreme wave interaction with a floating oil rig: prediction using SPH. <i>Progress in Computational Fluid Dynamics</i> , 2009, 9, 332.	0.2	16
60	Raking in gravity thickeners. <i>International Journal of Mineral Processing</i> , 2008, 86, 114-130.	2.6	29
61	Global parametric solutions of scalar transport. <i>Journal of Computational Physics</i> , 2008, 227, 3032-3057.	3.8	31
62	Chaotic diffusion in steady wavy vortex flow—Dependence on wave state and correlation with Eulerian symmetry measures. <i>Fluid Dynamics Research</i> , 2008, 40, 45-67.	1.3	2
63	Nonmixing vortex cores in wavy Taylor vortex flow. <i>Physics of Fluids</i> , 2008, 20, 063602.	4.0	6
64	Rogue Wave Impact on a Semi-Submersible Offshore Platform. , 2008, , .		6
65	Complete parametric scalar dispersion. <i>Proceedings of SPIE</i> , 2007, , .	0.8	2
66	Computational modelling of free surface flows for offshore application. <i>Marine Systems and Ocean Technology</i> , 2007, 3, 113-122.	1.0	2
67	A parametric study of droplet deformation through a microfluidic contraction: Shear thinning liquids. <i>International Journal of Multiphase Flow</i> , 2007, 33, 545-556.	3.4	25
68	An analysis of parasitic current generation in Volume of Fluid simulations. <i>Applied Mathematical Modelling</i> , 2006, 30, 1056-1066.	4.2	146
69	A parametric study of droplet deformation through a microfluidic contraction: Low viscosity Newtonian droplets. <i>Chemical Engineering Science</i> , 2006, 61, 5149-5158.	3.8	41
70	The flow of non-Newtonian fluids down inclines. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 136, 64-75.	2.4	14
71	Direct numerical simulation of turbulent non-Newtonian flow using a spectral element method. <i>Applied Mathematical Modelling</i> , 2006, 30, 1229-1248.	4.2	75
72	A 3D unsplit-advection volume tracking algorithm with planarity-preserving interface reconstruction. <i>Computers and Fluids</i> , 2006, 35, 1011-1032.	2.5	79

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73	High concentration suspension pumping. Minerals Engineering, 2006, 19, 471-477.	4.3	23
74	Composing chaos: An experimental and numerical study of an open duct mixing flow. AIChE Journal, 2006, 52, 9-28.	3.6	59
75	Flow regime analysis of non-Newtonian duct flows. Physics of Fluids, 2006, 18, 013101.	4.0	7
76	Topological mixing study of non-Newtonian duct flows. Physics of Fluids, 2006, 18, 103103.	4.0	38
77	Effect of Shear on Particulate Suspension Dewatering. Chemical Engineering Research and Design, 2005, 83, 933-936.	5.6	49
78	Turbulent pipe flow of shear-thinning fluids. Journal of Non-Newtonian Fluid Mechanics, 2004, 118, 33-48.	2.4	107
79	Flow visualisation and computational prediction in thickener rake models. Minerals Engineering, 2003, 16, 93-102.	4.3	21
80	Turbulent Pipe Flow of Non-Newtonian Fluids. , 2003, , 687-692.		2
81	VOLUME-OF-FLUID CALCULATION OF HEAT OR MASS TRANSFER ACROSS DEFORMING INTERFACES IN TWO-FLUID FLOW. Numerical Heat Transfer, Part B: Fundamentals, 2002, 41, 291-308.	0.9	94
82	Numerical modelling of free surface flows in metallurgical vessels. Applied Mathematical Modelling, 2002, 26, 113-140.	4.2	32
83	A Volume of Fluid (VOF) Method for the Simulation of Metallurgical Flows. ISIJ International, 2001, 41, 225-233.	1.4	49
84	The separate roles of shear rate and mixing on gibbsite precipitation. Chemical Engineering Science, 2001, 56, 2521-2530.	3.8	20
85	Analytical Modeling and Numerical Simulation of Forces in an Endoluminal Graft. Journal of Endovascular Therapy, 2001, 8, 358-371.	1.5	105
86	Predicting chaotic dispersion with Eulerian symmetry measures: Wavy Taylor-vortex flow. Physics of Fluids, 2001, 13, 2522-2528.	4.0	19
87	Analytical Modeling and Numerical Simulation of Forces in an Endoluminal Graft. Journal of Endovascular Therapy, 2001, 8, 358-371.	1.5	81
88	Recent developments in techniques and methodologies for improving thickener performance. Chemical Engineering Journal, 2000, 80, 149-155.	12.7	29
89	A hybrid method for simulation of axial flow impeller driven mixing vessels. Applied Mathematical Modelling, 2000, 24, 795-805.	4.2	5
90	An investigation of the flow regimes resulting from splashing drops. Physics of Fluids, 2000, 12, 747-763.	4.0	119

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91	Experimental and numerical comparisons of the break-up of a large bubble. Experiments in Fluids, 1999, 26, 524-534.	2.4	37
92	An SPH Projection Method. Journal of Computational Physics, 1999, 152, 584-607.	3.8	738
93	Flow and axial dispersion simulation for traveling axisymmetric Taylor vortices. AIChE Journal, 1998, 44, 255-262.	3.6	14
94	Mixing and particle dispersion in the wavy vortex regime of Taylor-Couette flow. AIChE Journal, 1998, 44, 1015-1026.	3.6	53
95	A volume-tracking method for incompressible multifluid flows with large density variations. International Journal for Numerical Methods in Fluids, 1998, 28, 357-378.	1.6	275
96	Computed oscillations of a confined submerged liquid jet. Applied Mathematical Modelling, 1998, 22, 843-850.	4.2	31
97	Particle transport in a bottom-feed separation vessel. Applied Mathematical Modelling, 1998, 22, 1023-1036.	4.2	3
98	A volume-tracking method for incompressible multifluid flows with large density variations. International Journal for Numerical Methods in Fluids, 1998, 28, 357-378.	1.6	4
99	One-field equations for two-phase flows. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1997, 39, 149-170.	0.2	5
100	VOLUME-TRACKING METHODS FOR INTERFACIAL FLOW CALCULATIONS. International Journal for Numerical Methods in Fluids, 1997, 24, 671-691.	1.6	639
101	VOLUME-TRACKING METHODS FOR INTERFACIAL FLOW CALCULATIONS. , 1997, 24, 671.		4
102	The feedback loop in impinging two-dimensional high-subsonic and supersonic jets. Experimental Thermal and Fluid Science, 1996, 12, 265-270.	2.7	8
103	Simulation of the near field of a jet in a cross flow. Experimental Thermal and Fluid Science, 1996, 12, 134-141.	2.7	38
104	ASSESSMENT OF HIGHER-ORDER UPWIND SCHEMES INCORPORATING FCT FOR CONVECTION-DOMINATED PROBLEMS. Numerical Heat Transfer, Part B: Fundamentals, 1995, 27, 1-21.	0.9	33
105	Two-phase natural convection: implications for crystal settling in magma chambers. Physics of the Earth and Planetary Interiors, 1992, 72, 153-172.	1.9	27
106	A parametric study of droplet deformation through a microfluidic contraction. ANZIAM Journal, 0, 46, 150.	0.0	12
107	Dense non-Newtonian suspension flow: Effect of solids properties and pipe size. AIChE Journal, 0, , .	3.6	3