James T Jenkins

List of Publications by Year
in descending order

89 papers	5,937 citations	145106 33 h-index	78623 77 g-index
89 all docs	89 docs citations	89 times ranked	2169 citing authors

#	Article	IF	Citations
1	A theory for the rapid flow of identical, smooth, nearly elastic, spherical particles. Journal of Fluid Mechanics, 1983, 130, 187.	1.4	1,239
2	Kinetic theory for plane flows of a dense gas of identical, rough, inelastic, circular disks. Physics of Fluids, 1985, 28, 3485.	1.4	450
3	Grad's 13-moment system for a dense gas of inelastic spheres. Archive for Rational Mechanics and Analysis, 1985, 87, 355-377.	1.1	423
4	Balance Laws and Constitutive Relations for Plane Flows of a Dense, Binary Mixture of Smooth, Nearly Elastic, Circular Disks. Journal of Applied Mechanics, Transactions ASME, 1987, 54, 27-34.	1.1	221
5	The role of particle collisions in pneumatic transport. Journal of Fluid Mechanics, 1991, 231, 345-359.	1.4	206
6	Kinetic theory for binary mixtures of smooth, nearly elastic spheres. Physics of Fluids A, Fluid Dynamics, 1989, 1, 2050-2057.	1.6	202
7	Kinetic theory for identical, frictional, nearly elastic spheres. Physics of Fluids, 2002, 14, 1228-1235.	1.6	188
8	On two-phase sediment transport: sheet flow of massive particles. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 2223-2250.	1.0	183
9	Boundary conditions for plane flows of smooth, nearly elastic, circular disks. Journal of Fluid Mechanics, 1986, 171, 53.	1.4	176
10	Saltating particles in a turbulent boundary layer: experiment and theory. Journal of Fluid Mechanics, 2009, 625, 47-74.	1.4	175
11	Plane simple shear of smooth inelastic circular disks: the anisotropy of the second moment in the dilute and dense limits. Journal of Fluid Mechanics, 1988, 192, 313-328.	1.4	156
12	Boundary Conditions for Rapid Granular Flow: Flat, Frictional Walls. Journal of Applied Mechanics, Transactions ASME, 1992, 59, 120-127.	1.1	153
13	Superstable Granular Heap in a Thin Channel. Physical Review Letters, 2003, 91, 264301.	2.9	151
14	Collisional sheet flows of sediment driven by a turbulent fluid. Journal of Fluid Mechanics, 1998, 370, 29-52.	1.4	149
15	Dense shearing flows of inelastic disks. Physics of Fluids, 2006, 18, 103307.	1.6	134
16	Dense inclined flows of inelastic spheres: tests of an extension of kinetic theory. Granular Matter, 2010, 12, 151-158.	1.1	120
17	Segregation in Binary Mixtures under Gravity. Physical Review Letters, 2002, 88, 194301.	2.9	114
18	Dense inclined flows of inelastic spheres. Granular Matter, 2007, 10, 47-52.	1.1	107

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19	On two-phase sediment transport: Dilute flow. Journal of Geophysical Research, 2003, 108, .	3.3	101
20	On the flux of fluctuation energy in a collisional grain flow at a flat, frictional wall. Physics of Fluids, 1997, 9, 2835-2840.	1.6	90
21	An analysis of texture and plastic spin for planar polycrystals. Journal of the Mechanics and Physics of Solids, 1993, 41, 1357-1382.	2.3	65
22	Boundary conditions for rapid granular flows: phase interfaces. Journal of Fluid Mechanics, 1991, 223, 497.	1.4	55
23	A theoretical analysis of free-surface flows of saturated granularâ€“liquid mixtures. Journal of Fluid Mechanics, 2008, 608, 393-410.	1.4	53
24	Static Equilibrium of Granular Materials. Journal of Applied Mechanics, Transactions ASME, 1975, 42, 603-606.	1.1	48
25	Steady shearing flows of deformable, inelastic spheres. Soft Matter, 2015, 11, 4799-4808.	1.2	48
26	The Thickness of Steady Plane Shear Flows of Circular Disks Driven by Identical Boundaries. Journal of Applied Mechanics, Transactions ASME, 1988, 55, 969-974.	1.1	47
27	A theory of magnetic fluids. Archive for Rational Mechanics and Analysis, 1972, 46, 42-60.	1.1	45
28	Segregation and mixture profiles in dense, inclined flows of two types of spheres. Physics of Fluids, 2013, 25, .	1.6	43
29	The evolution of segregation in dense inclined flows of binary mixtures of spheres. Journal of Fluid Mechanics, 2015, 782, 405-429.	1.4	42
30	Binary mixtures of inelastic spheres: Simplified constitutive theory. Physics of Fluids, 2004, 16, 4543-4550.	1.6	39
31	The initial response of an idealized granular material. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 735-758.	1.0	38
32	Kinetic theory applied to inclined flows. Granular Matter, 2012, 14, 79-84.	1.1	38
33	Anomalous Frictional Behavior in Collisions of Thin Disks. Journal of Applied Mechanics, Transactions ASME, 1999, 66, 146-152.	1.1	34
34	Extended kinetic theory for granular flow over and within an inclined erodible bed. Journal of Fluid Mechanics, 2020, 885, .	1.4	33
35	A Mechanical Model for Mammalian Tendon. Journal of Applied Mechanics, Transactions ASME, 1975, 42, 755-758.	1.1	32
36	Surface flows of inelastic spheres. Physics of Fluids, 2011, 23, .	1.6	32

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37	The influence of different speciesâ€™ granular temperatures on segregation in a binary mixture of dissipative grains. Physics of Fluids, 2006, 18, 073303.	1.6	30
38	Aeolian transport with collisional suspension. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 1625-1646.	1.6	29
39	Kinetic theory for identical, frictional, nearly elastic disks. Physics of Fluids, 2005, 17, 083301.	1.6	27
40	Density inversion in rapid granular flows: the supported regime. European Physical Journal E, 2007, 22, 17-24.	0.7	26
41	The incremental response of random aggregates of identical round particles. European Physical Journal E, 2004, 13, 113-123.	0.7	25
42	Periodic saltation over hydrodynamically roughÂbeds: aeolian to aquatic. Journal of Fluid Mechanics, 2016, 786, 190-209.	1.4	24
43	Periodic trajectories in aeolian sand transport. Physics of Fluids, 2014, 26, .	1.6	22
44	Hydraulic theory for a debris flow supported on a collisional shear layer. Chaos, 1999, 9, 654-658.	1.0	21
45	Experimental investigation and kinetic-theory-based model of a rapid granular shear flow. Journal of Fluid Mechanics, 2008, 602, 63-79.	1.4	21
46	Continuum model for steady, fully developed saltation above a horizontal particle bed. Physical Review E, 2010, 82, 020301.	0.8	21
47	Steady inclined flows of granular-fluid mixtures. Journal of Fluid Mechanics, 2009, 641, 359-387.	1.4	20
48	Hydrodynamic interaction of rough spheres. Granular Matter, 2005, 7, 13-18.	1.1	17
49	Erodible, granular beds are fragile. Soft Matter, 2019, 15, 7173-7178.	1.2	17
50	The balance of momentum and energy at an interface between colliding and freely flying grains in a rapid granular flow. Physics of Fluids A, Fluid Dynamics, 1993, 5, 781-783.	1.6	16
51	Rapid Granular Flow Down Inclines. Applied Mechanics Reviews, 1994, 47, S240-S244.	4.5	16
52	Evaluation of Material Functions for Steady Elongational Flows. Journal of Rheology, 1975, 19, 397-450.	0.6	15
53	A higher-order boundary layer analysis for lipid vesicles with two fluid domains. Journal of Fluid Mechanics, 2008, 597, 429-448.	1.4	14
54	Bed failure induced by internal solitary waves. Journal of Geophysical Research: Oceans, 2017, 122, 5468-5485.	1.0	14

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55	Fluidity, anisotropy, and velocity correlations in frictionless, collisional grain flows. Physical Review Fluids, 2018, 3, .	1.0	14
56	The Circumferential Contact Problem for the Belted Radial Tire. Journal of Applied Mechanics, Transactions ASME, 1980, 47, 513-518.	1.1	12
57	The threshold for continuing saltation on Earth and other solar system bodies. Journal of Geophysical Research F: Earth Surface, 2017, 122, 1374-1388.	1.0	12
58	Comments on avalanche flow models based on the concept of random kinetic energy. Journal of Glaciology, 2018, 64, 148-164.	1.1	10
59	Elongation upon torsion in a theory for the inelastic behavior of metals. Journal of Applied Physics, 1980, 51, 953-958.	1.1	9
60	Two-phase continuum theory for windblown sand. Physical Review Fluids, 2018, 3, .	1.0	9
61	Localization in Granular Materials. Applied Mechanics Reviews, 1990, 43, S194-S195.	4.5	7
62	The influence of granular segregation on gravity-driven particle-fluid flows. Advances in Water Resources, 2019, 129, 365-372.	1.7	7
63	Granular Materials and the Risks They Pose for Success on the Moon and Mars. AIP Conference Proceedings, 2005, , .	0.3	6
64	On a Material Coefficient in Cholesteric Liquid Crstals. Molecular Crystals and Liquid Crystals, 1972, 18, 309-312.	0.9	5
65	Singular Perturbation Solutions of the Circumferential Contact Problem for the Belted Radial Truck and Bus Tire. Journal of Applied Mechanics, Transactions ASME, 1980, 47, 519-524.	1.1	5
66	Dense, layered, inclined flows of spheres. Physical Review Fluids, 2017, 2, .	1.0	5
67	Singular behavior of the stresses in the limit of random close packing in collisional, simple shearing flows of frictionless spheres. Physical Review Fluids, 2020, 5, .	1.0	5
68	An analytical determination of microstructure and stresses in a dense, sheared monolayer of non-Brownian spheres. Journal of Fluid Mechanics, 2015, 763, 218-236.	1.4	4
69	Bedforms Produced on a Particle Bed by Vertical Oscillations of a Plate. Physical Review Letters, 2019, 123, 058501.	2.9	4
70	Segregation in a dense, inclined, granular flow with basal layering. Granular Matter, 2020, 22, 1.	1.1	3
71	Predictions of microstructure and stress in planar extensional flows of a dense viscous suspension. Journal of Fluid Mechanics, 2021, 912, .	1.4	3
72	Stress and Strain in Flat Piling of Disks. Journal of the Physical Society of Japan, 2004, 73, 926-931.	0.7	2

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73	Report on the Program â€œFluid-mediated particle transport in geophysical flowsâ€•at the Kavli Institute for Theoretical Physics, UC Santa Barbara, September 23 to December 12, 2013. Physics of Fluids, 2015, 27, 096601.	1.6	2
74	Propagating Plane Disinclination Surfaces in Nematic Liquid Crystals. Molecular Crystals and Liquid Crystals, 1974, 27, 105-109.	0.9	1
75	Analysis of the Motion of a Frictional Elastic Ball Dropped on an Inclined Surface. Journal of Applied Mechanics, Transactions ASME, 1997, 64, 707-709.	1.1	1
76	Constant Pressure Axisymmetric Compression of an Aggregate of Identical, Elastic, Frictional Spheres. , 2009, , .		1
77	A Chute Flow of Inelastic Spheres. Progress of Theoretical Physics Supplement, 2010, 184, 49-56.	0.2	1
78	Size Segregation in Dry Granular Flows of Binary Mixtures. , 2010, , .		1
79	Acoustic signals generated in inclined granular flows. Journal of Geophysical Research F: Earth Surface, 2015, 120, 2027-2039.	1.0	1
80	A micro-mechanical model for the Biot theory of acoustic waves in a fully saturated granular material. Proceedings of Meetings on Acoustics, 2018, , .	0.3	1
81	Particle segregation in inclined high-speed granular flows. Journal of Fluid Mechanics, 2022, 935, .	1.4	1
82	Symposium on Material Instability. Applied Mechanics Reviews, 1990, 43, S185-S185.	4.5	0
83	Simulation of Sediment Suspension Using Two-Phase Approach. , 2002, , 1386.		0
84	The Influence of Size Segregation in Particle-Fluid Flows. , 2009, , .		0
85	Microstructure and Particle-Phase Stress in a Dense Suspension. , 2010, , .		0
86	Steady, Inclined Flow of a Mixture of Grains and Fluid over a Rigid Base. , 2010, , .		0
87	Segregation in dense, dry, inclined flows of binary mixtures of grains. , 2013, , .		0
88	New formulas for the motion resistance of debris flows. WIT Transactions on Engineering Sciences, 2010, , .	0.0	0
89	How vertical oscillatory motion above a saturated sand bed leads to heap formation. Physical Review E, 2022, 105, .	0.8	0