

Michel Louge

List of Publications by Year in descending order

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78
papers

2,780
citations

218592

26
h-index

175177

52
g-index

79
all docs

79
docs citations

79
times ranked

1613
citing authors

#	ARTICLE	IF	CITATIONS
1	Measurements of the collision properties of small spheres. <i>Physics of Fluids</i> , 1994, 6, 1108-1115.	1.6	485
2	Inelastic microstructure in rapid granular flows of smooth disks. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 47-57.	1.6	235
3	The role of particle collisions in pneumatic transport. <i>Journal of Fluid Mechanics</i> , 1991, 231, 345-359.	1.4	206
4	Measurements of impact properties of small, nearly spherical particles. <i>Experimental Mechanics</i> , 1997, 37, 292-298.	1.1	143
5	On dense granular flows down flat frictional inclines. <i>Physics of Fluids</i> , 2001, 13, 1213-1233.	1.6	106
6	Computer simulations of rapid granular flows of spheres interacting with a flat, frictional boundary. <i>Physics of Fluids</i> , 1994, 6, 2253-2269.	1.6	100
7	Towards a theoretical picture of dense granular flows down inclines. <i>Nature Materials</i> , 2007, 6, 99-108.	13.3	96
8	On the flux of fluctuation energy in a collisional grain flow at a flat, frictional wall. <i>Physics of Fluids</i> , 1997, 9, 2835-2840.	1.6	90
9	Fluid dynamic similarity of circulating fluidized beds. <i>Powder Technology</i> , 1992, 70, 259-270.	2.1	79
10	Model for dense granular flows down bumpy inclines. <i>Physical Review E</i> , 2003, 67, 061303.	0.8	77
11	Anomalous behavior of normal kinematic restitution in the oblique impacts of a hard sphere on an elastoplastic plate. <i>Physical Review E</i> , 2002, 65, 021303.	0.8	76
12	Rheology of Confined Granular Flows: Scale Invariance, Glass Transition, and Friction Weakening. <i>Physical Review Letters</i> , 2008, 101, 248002.	2.9	75
13	Pressure and voidage gradients in vertical gas-solid risers. <i>Powder Technology</i> , 1990, 60, 197-201.	2.1	65
14	High apparent adhesion energy in the breakdown of normal restitution for binary impacts of small spheres at low speed. <i>Mechanics Research Communications</i> , 2009, 36, 364-368.	1.0	52
15	Solutions of the kinetic theory for bounded collisional granular flows. <i>Continuum Mechanics and Thermodynamics</i> , 2003, 15, 321-349.	1.4	50
16	Shock tube study of cyanogen oxidation kinetics. <i>International Journal of Chemical Kinetics</i> , 1984, 16, 231-250.	1.0	48
17	Measurements of the effective dielectric permittivity of suspensions. <i>Powder Technology</i> , 1990, 62, 85-94.	2.1	44
18	Heat transfer in the pneumatic transport of massive particles. <i>International Journal of Heat and Mass Transfer</i> , 1993, 36, 265-275.	2.5	44

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19	High temperature kinetics of NCO. <i>Combustion and Flame</i> , 1984, 58, 291-300.	2.8	42
20	The structure of powder snow avalanches. <i>Comptes Rendus Physique</i> , 2015, 16, 97-104.	0.3	40
21	Optical fiber measurements of particle concentration in dense suspensions: calibration and simulation. <i>Applied Optics</i> , 1992, 31, 5106.	2.1	36
22	Application of capacitance instrumentation to the measurement of density and velocity of flowing snow. <i>Cold Regions Science and Technology</i> , 1997, 25, 47-63.	1.6	35
23	QUANTITATIVE CAPACITIVE MEASUREMENTS OF VOIDAGE IN GAS-SOLID FLOWS. <i>Particulate Science and Technology</i> , 1989, 7, 51-59.	1.1	34
24	Measurements of voidage near the wall of a circulating fluidized bed riser. <i>Powder Technology</i> , 1990, 62, 269-276.	2.1	32
25	Measurement errors in the mean and fluctuation velocities of spherical grains from a computer analysis of digital images. <i>Review of Scientific Instruments</i> , 2004, 75, 811-819.	0.6	28
26	Computer simulations of rapid granular shear flows between parallel bumpy boundaries. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990, 2, 1042-1044.	1.6	26
27	Role of pore pressure gradients in sustaining frontal particle entrainment in eruption currents: The case of powder snow avalanches. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	24
28	Statistical mechanics of unsaturated porous media. <i>Physical Review E</i> , 2015, 92, 062405.	0.8	24
29	A portable capacitance snow sounding instrument. <i>Cold Regions Science and Technology</i> , 1998, 28, 73-81.	1.6	21
30	Frontal dynamics of powder snow avalanches. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 913-924.	1.0	20
31	Microbial Characterization of Qatari Barchan Sand Dunes. <i>PLoS ONE</i> , 2016, 11, e0161836.	1.1	18
32	On the structure of three-dimensional shear flows. <i>Mechanics of Materials</i> , 1993, 16, 179-187.	1.7	16
33	O- and N-atom measurements in high temperature C ₂ N ₂ + O kinetics. <i>Combustion and Flame</i> , 1986, 64, 167-176.	2.8	15
34	The scaling of cluster velocity at the wall of circulating fluidized bed risers. <i>Chemical Engineering Science</i> , 1998, 53, 2475-2477.	1.9	15
35	A verification of Clicksman's reduced scaling under conditions analogous to pressurized circulating fluidization. <i>Chemical Engineering Science</i> , 2004, 59, 2633-2638.	1.9	15
36	Heat transfer enhancement in dense suspensions of agitated solids. Part I: Theory. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 5108-5118.	2.5	15

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37	Temperature and humidity within a mobile barchan sand dune, implications for microbial survival. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 2392-2405.	1.0	15
38	Capacitance measurements of the volume fraction and velocity of dielectric solids near a grounded wall. <i>Review of Scientific Instruments</i> , 1996, 67, 1869-1877.	0.6	14
39	Measurements of cyclone performance under conditions analogous to pressurized circulating fluidization. <i>Chemical Engineering Science</i> , 2004, 59, 3059-3070.	1.9	13
40	Heat transfer enhancement in suspensions of agitated solids. Part III: Thermophoretic transport of nanoparticles in the diffusion limit. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 5130-5143.	2.5	12
41	Seepage-induced penetration of water vapor and dust beneath ripples and dunes. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	12
42	Shock tube study of NCO kinetics. <i>Proceedings of the Combustion Institute</i> , 1985, 20, 665-672.	0.3	11
43	Quantitative high temperature absorption spectroscopy of NCO at 305 and 440 nm. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1984, 32, 353-362.	1.1	10
44	Packing variations on a ripple of nearly monodisperse dry sand. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	10
45	The surprising relevance of a continuum description to granular clusters. <i>Journal of Fluid Mechanics</i> , 2014, 742, 1-4.	1.4	10
46	Optical fiber measurements of particle velocity using laser-induced phosphorescence. <i>Applied Optics</i> , 1991, 30, 1976.	2.1	9
47	On binary impacts of small liquid-filled shells. <i>Physics of Fluids</i> , 1997, 9, 3670-3677.	1.6	9
48	Granular flows on a dissipative base. <i>Physical Review E</i> , 2015, 92, 022204.	0.8	9
49	Program for the Epidemiological Evaluation of Stroke in Tandil, Argentina (PREVISTA) Study: Rationale and Design. <i>International Journal of Stroke</i> , 2013, 8, 591-597.	2.9	8
50	Granular Segregation in Collisional Shearing Flows. , 2001, , 239-252.		8
51	Volume growth of a powder snow avalanche. <i>Annals of Glaciology</i> , 2012, 53, 57-60.	2.8	7
52	The relaxation of the second moments in rapid shear flows of smooth disks. <i>Mechanics of Materials</i> , 1993, 16, 199-203.	1.7	6
53	On the dynamics of pressurized and atmospheric circulating fluidized bed risers. <i>Chemical Engineering Science</i> , 1999, 54, 1811-1824.	1.9	6
54	Granular Materials and the Risks They Pose for Success on the Moon and Mars. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	6

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55	Role of fluid density in shaping eruption currents driven by frontal particle blow-out. <i>Physics of Fluids</i> , 2012, 24, .	1.6	6
56	Dense, bounded shear flows of agitated solid spheres in a gas at intermediate Stokes and finite Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2009, 618, 181-208.	1.4	5
57	Pore pressure in a wind-swept rippled bed below the suspension threshold. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 2574-2590.	1.0	5
58	Simultaneous, noninvasive measurements of convective heat transfer and solid volume fraction at the wall of an entrained gas-solid suspension. <i>Review of Scientific Instruments</i> , 2000, 71, 2922-2927.	0.6	4
59	Statistical mechanics of the triple contact line. <i>Physical Review E</i> , 2017, 95, 032804.	0.8	4
60	Non-invasive, continuous, quantitative detection of powder level and mass holdup in a metal feed tube. <i>Powder Technology</i> , 2021, 382, 467-477.	2.1	4
61	Microgravity Segregation in Collisional Granular Shearing Flows. <i>Solid Mechanics and Its Applications</i> , 2000, , 103-112.	0.1	4
62	Water Vapor Transport Across an Arid Sand Surface—Non-Linear Thermal Coupling, Wind-Driven Pore Advection, Subsurface Waves, and Exchange With the Atmospheric Boundary Layer. <i>Journal of Geophysical Research F: Earth Surface</i> , 2022, 127, .	1.0	4
63	Heat transfer enhancement in dense suspensions of agitated solids. Part II: Experiments in the exchange limit. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 5119-5129.	2.5	3
64	Granular physics. <i>Comptes Rendus Physique</i> , 2015, 16, 1-2.	0.3	3
65	Commentary on “The reduction of friction in long-runout landslides as an emergent phenomenon” by Brandon C. Johnson, Charles S. Campbell, and H. Jay Melosh. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1106-1107.	1.0	3
66	Basal Pressure Variations Induced by a Turbulent Flow Over a Wavy Surface. <i>Frontiers in Physics</i> , 2021, 9, .	1.0	3
67	Model for surface packing and aeolian transport on sand ripples. , 2009, , .		2
68	Rheology of confined granular flows. , 2010, , .		2
69	“Phonon”-conductivity along a column of spheres in contact. <i>Granular Matter</i> , 2012, 14, 203-208.	1.1	2
70	Rheology of Confined Granular Flows : from Gas to Glass. , 2009, , .		1
71	Reply to comment by P. A. Bartelt and O. Buser on “Role of pore pressure gradients in sustaining frontal particle entrainment in eruption currents: The case of powder snow avalanches”. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	1
72	The fate of <i>Scincus mitranus</i> in the face of climate change: A Qatar case study. <i>Qscience Proceedings</i> , 2016, 2016, 44.	0.0	1

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73	Microgravity spreading of water spheres on hydrophobic capillary plates. EPJ Web of Conferences, 2017, 140, 16001.	0.1	1
74	Flow development of a gas-solid suspension in a microgravity Couette apparatus. , 2001, , .		1
75	Studies of gas-particle interactions in a microgravity flow cell. AIP Conference Proceedings, 2000, , .	0.3	0
76	Model of inertial spreading and imbibition of a liquid drop on a capillary plate. AIChE Journal, 2017, 63, 5474-5481.	1.8	0
77	Particle Segregation in Collisional Shearing Flows. Solid Mechanics and Its Applications, 2000, , 223-229.	0.1	0
78	Collisional Granular Flows with and Without Gas Interactions in Microgravity. , 2005, , 229-240.		0