

Christophe Ancy

List of Publications by Year in descending order

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Version: 2024-02-01

99
papers

4,192
citations

101384

36
h-index

118652

62
g-index

117
all docs

117
docs citations

117
times ranked

2559
citing authors

#	ARTICLE	IF	CITATIONS
1	Plasticity and geophysical flows: A review. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 142, 4-35.	1.0	325
2	Rheophysical classification of concentrated suspensions and granular pastes. <i>Physical Review E</i> , 1999, 59, 4445-4457.	0.8	200
3	Refractive-index and density matching in concentrated particle suspensions: a review. <i>Experiments in Fluids</i> , 2011, 50, 1183-1206.	1.1	175
4	Entrainment and motion of coarse particles in a shallow water stream down a steep slope. <i>Journal of Fluid Mechanics</i> , 2008, 595, 83-114.	1.4	166
5	Improved SPH methods for simulating free surface flows of viscous fluids. <i>Applied Numerical Mathematics</i> , 2009, 59, 251-271.	1.2	124
6	Segregation, recirculation and deposition of coarse particles near two-dimensional avalanche fronts. <i>Journal of Fluid Mechanics</i> , 2009, 629, 387-423.	1.4	119
7	Rheological interpretation of deposits of yield stress fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1996, 66, 55-70.	1.0	114
8	Multi-component particle-size segregation in shallow granular avalanches. <i>Journal of Fluid Mechanics</i> , 2011, 678, 535-588.	1.4	113
9	Experimental investigation into segregating granular flows down chutes. <i>Physics of Fluids</i> , 2011, 23, .	1.6	104
10	Yield stress for particle suspensions within a clay dispersion. <i>Journal of Rheology</i> , 2001, 45, 297-319.	1.3	99
11	A theoretical framework for granular suspensions in a steady simple shear flow. <i>Journal of Rheology</i> , 1999, 43, 1673-1699.	1.3	98
12	Dry granular flows down an inclined channel: Experimental investigations on the frictional-collisional regime. <i>Physical Review E</i> , 2001, 65, 011304.	0.8	98
13	Statistical description of sediment transport experiments. <i>Physical Review E</i> , 2006, 74, 011302.	0.8	98
14	Underlying Asymmetry within Particle Size Segregation. <i>Physical Review Letters</i> , 2015, 114, 238001.	2.9	97
15	A microstructural approach to bed load transport: mean behaviour and fluctuations of particle transport rates. <i>Journal of Fluid Mechanics</i> , 2014, 744, 129-168.	1.4	91
16	Stochastic modeling in sediment dynamics: Exner equation for planar bed incipient bed load transport conditions. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	87
17	The dam-break problem for Herschel-Bulkley viscoplastic fluids down steep flumes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 158, 18-35.	1.0	81
18	Saltating motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2002, 66, 036306.	0.8	76

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19	Flow behaviour and runout modelling of a complex debris flow in a clay-shale basin. <i>Earth Surface Processes and Landforms</i> , 2005, 30, 479-488.	1.2	67
20	Computing extreme avalanches. <i>Cold Regions Science and Technology</i> , 2004, 39, 161-180.	1.6	65
21	Bedload transport: a walk between randomness and determinism. Part 1. The state of the art. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2020, 58, 1-17.	0.7	64
22	An exact solution for ideal dam-break floods on steep slopes. <i>Water Resources Research</i> , 2008, 44, .	1.7	62
23	Experimental investigation of the spreading of viscoplastic fluids on inclined planes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 158, 73-84.	1.0	62
24	Frictional-collisional regime for granular suspension flows down an inclined channel. <i>Physical Review E</i> , 2000, 62, 8349-8360.	0.8	58
25	Solving the Couette inverse problem using a wavelet-vaguelette decomposition. <i>Journal of Rheology</i> , 2005, 49, 441-460.	1.3	55
26	Bedload transport: a walk between randomness and determinism. Part 2. Challenges and prospects. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2020, 58, 18-33.	0.7	53
27	Particle-size and density segregation in granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2015, 779, 622-668.	1.4	50
28	Impulse waves generated by snow avalanches: Momentum and energy transfer to a water body. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 2399-2423.	1.0	48
29	Stochastic interpretation of the advection-diffusion equation and its relevance to bed load transport. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 2529-2551.	1.0	46
30	Entrainment, motion, and deposition of coarse particles transported by water over a sloping mobile bed. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1931-1952.	1.0	44
31	Powder snow avalanches: Approximation as non-Boussinesq clouds with a Richardson number-dependent entrainment function. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	42
32	Tracking the free surface of time-dependent flows: image processing for the dam-break problem. <i>Experiments in Fluids</i> , 2007, 44, 59-71.	1.1	42
33	Statistics of bedload transport over steep slopes: Separation of time scales and collective motion. <i>Geophysical Research Letters</i> , 2013, 40, 128-133.	1.5	42
34	Dynamics of glide avalanches and snow gliding. <i>Reviews of Geophysics</i> , 2015, 53, 745-784.	9.0	40
35	Role of lubricated contacts in concentrated polydisperse suspensions. <i>Journal of Rheology</i> , 2001, 45, 1421-1439.	1.3	39
36	Inverse problem in avalanche dynamics models. <i>Water Resources Research</i> , 2003, 39, .	1.7	37

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37	Estimating bulk rheological properties of flowing snow avalanches from field data. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	37
38	Fluctuations of the solid discharge of gravity-driven particle flows in a turbulent stream. <i>Physical Review E</i> , 2004, 69, 061307.	0.8	36
39	Two-dimensional motion of a set of particles in a free surface flow with image processing. <i>Experiments in Fluids</i> , 2006, 41, 1-11.	1.1	36
40	Image processing for the study of bedload transport of two-size spherical particles in a supercritical flow. <i>Experiments in Fluids</i> , 2010, 49, 1095-1107.	1.1	36
41	Are Bedload Transport Pulses in Gravel Bed Rivers Created by Bar Migration or Sediment Waves?. <i>Geophysical Research Letters</i> , 2018, 45, 5501-5508.	1.5	36
42	Spatial correlations in bed load transport: Evidence, importance, and modeling. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 1751-1767.	1.0	35
43	Monte Carlo calibration of avalanches described as Coulomb fluid flows. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2005, 363, 1529-1550.	1.6	34
44	Viscoplastic dambreak waves: Review of simple computational approaches and comparison with experiments. <i>Advances in Water Resources</i> , 2012, 48, 79-91.	1.7	33
45	Stochastic-deterministic modeling of bed load transport in shallow water flow over erodible slope: Linear stability analysis and numerical simulation. <i>Advances in Water Resources</i> , 2015, 83, 36-54.	1.7	33
46	21 Debris Flows and Related Phenomena. <i>Lecture Notes in Physics</i> , 2001, , 528-547.	0.3	33
47	Towards a conceptual approach to predetermining long-return-period avalanche run-out distances. <i>Journal of Glaciology</i> , 2004, 50, 268-278.	1.1	31
48	Rolling motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2003, 67, 011303.	0.8	30
49	Internal dynamics of Newtonian and viscoplastic fluid avalanches down a sloping bed. <i>Physics of Fluids</i> , 2012, 24, .	1.6	30
50	Segregation of large particles in dense granular flows suggests a granular Saffman effect. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	30
51	The dam-break problem for viscous fluids in the high-capillary-number limit. <i>Journal of Fluid Mechanics</i> , 2009, 624, 1-22.	1.4	29
52	Kulikovskiyâ€“Sveshnikovaâ€“Beghin model of powder snow avalanches: Development and application. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	27
53	Snow Avalanches. , 2001, , 319-338.		26
54	Examination of the possibility of a fluid-mechanics treatment of dense granular flows. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 1996, 1, 385-403.	1.2	25

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55	Bed load transport over a broad range of timescales: Determination of three regimes of fluctuations. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 2653-2673.	1.0	25
56	Particle diffusion in non-equilibrium bedload transport simulations. <i>Applied Mathematical Modelling</i> , 2016, 40, 7474-7492.	2.2	23
57	Asymmetric breaking size-segregation waves in dense granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2016, 794, 460-505.	1.4	22
58	Are there "dragon-kings" events (i.e. genuine outliers) among extreme avalanches?. <i>European Physical Journal: Special Topics</i> , 2012, 205, 117-129.	1.2	20
59	Estimating Mean Bedload Transport Rates and Their Uncertainty. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2020JF005534.	1.0	20
60	Scanning PIV of turbulent flows over and through rough porous beds using refractive index matching. <i>Experiments in Fluids</i> , 2020, 61, 1.	1.1	20
61	Using a Data Driven Approach to Predict Waves Generated by Gravity Driven Mass Flows. <i>Water (Switzerland)</i> , 2020, 12, 600.	1.2	19
62	Hydraulic Reconstruction of the 1818 GiÃ©tro Glacial Lake Outburst Flood. <i>Water Resources Research</i> , 2019, 55, 8840-8863.	1.7	17
63	An experimental scaling law for particle-size segregation in dense granular flows. <i>Journal of Fluid Mechanics</i> , 2021, 916, .	1.4	17
64	Fitting avalanche-dynamics models with documented events from the Col du Lautaret site (France) using the conceptual approach. <i>Cold Regions Science and Technology</i> , 2004, 39, 55-66.	1.6	16
65	The dam-break problem for concentrated suspensions of neutrally buoyant particles. <i>Journal of Fluid Mechanics</i> , 2013, 724, 95-122.	1.4	14
66	Snow avalanches striking water basins: behaviour of the avalanche's centre of mass and front. <i>Natural Hazards</i> , 2017, 88, 1297-1323.	1.6	13
67	Front dynamics of supercritical non-Boussinesq gravity currents. <i>Water Resources Research</i> , 2006, 42, .	1.7	12
68	Granular suspension avalanches. I. Macro-viscous behavior. <i>Physics of Fluids</i> , 2013, 25, .	1.6	11
69	Breaking size-segregation waves and mobility feedback in dense granular avalanches. <i>Granular Matter</i> , 2018, 20, 1.	1.1	11
70	Decoupling the Role of Inertia, Friction, and Cohesion in Dense Granular Avalanche Pressure Buildup on Obstacles. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2019JF005192.	1.0	11
71	Large particle segregation in two-dimensional sheared granular flows. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	10
72	L'avalanche de PÃ©clerey du 9 fÃ©vrier 1999. <i>Houille Blanche</i> , 2000, 86, 45-53.	0.3	10

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73	Existence and features of similarity solutions for non-Boussinesq gravity currents. <i>Physica D: Nonlinear Phenomena</i> , 2007, 226, 32-54.	1.3	9
74	Granular suspension avalanches. II. Plastic regime. <i>Physics of Fluids</i> , 2013, 25, .	1.6	9
75	The dam-break problem for eroding viscoplastic fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 243, 64-78.	1.0	9
76	An experimental study of particle-driven gravity currents on steep slopes with entrainment of particles. <i>Natural Hazards and Earth System Sciences</i> , 2002, 2, 181-185.	1.5	8
77	Visco-plastic fluids: From Theory to Application. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 158, 1-3.	1.0	8
78	Basal entrainment by Newtonian gravity-driven flows. <i>Physics of Fluids</i> , 2016, 28, .	1.6	8
79	The effects of slide cohesion on impulse-wave formation. <i>Experiments in Fluids</i> , 2019, 60, 1.	1.1	8
80	Physics-based estimates of drag coefficients for the impact pressure calculation of dense snow avalanches. <i>Engineering Structures</i> , 2022, 254, 113478.	2.6	8
81	Gravity flow on steep slope. , 2012, , 372-432.		7
82	Stokes's third problem for Herschel-Bulkley fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 243, 27-37.	1.0	7
83	Continuous Monitoring of Bed-Load Transport in a Laboratory Flume Using an Impact Sensor. <i>Journal of Hydraulic Engineering</i> , 2017, 143, .	0.7	7
84	A conveyor belt experimental setup to study the internal dynamics of granular avalanches. <i>Experiments in Fluids</i> , 2021, 62, 207.	1.1	6
85	The concept of the mobilized domain: how it can explain and predict the forces exerted by a cohesive granular avalanche on an obstacle. <i>Granular Matter</i> , 2022, 24, 45.	1.1	6
86	Visualization of the internal flow properties and the material exchange interface in an entraining viscous Newtonian gravity current. <i>Environmental Fluid Mechanics</i> , 2014, 14, 501-518.	0.7	5
87	An experimental investigation of turbulent free-surface flows over a steep permeable bed. <i>Journal of Fluid Mechanics</i> , 2022, 941, .	1.4	4
88	Modélisation des avalanches denses Approches théorique et numérique. <i>Houille Blanche</i> , 1994, 80, 25-39.	0.3	3
89	T. Jähmann, P. Gauer, P. Issler and K. Lied, eds. 2009. The design of avalanche protection dams: recent practical and theoretical developments. Brussels, European Communities. 195pp. ISBN 978-92-79-08885-8, softback, free.. <i>Journal of Glaciology</i> , 2009, 55, 753-754.	1.1	3
90	The variability of antidune morphodynamics on steep slopes. <i>Earth Surface Processes and Landforms</i> , 2021, 46, 1750-1765.	1.2	3

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91	Rheophysics of highly concentrated coarse-particle suspensions in a wide-gap Couette rheometer. , 2009, , .		2
92	Rheophysical Investigation in Concentrated Particle Suspensions. AIP Conference Proceedings, 2008, , .	0.3	1
93	Stochastic bedload transport in mountain streams. E3S Web of Conferences, 2018, 40, 05046.	0.2	1
94	Introduction to Rheology and Application to Geophysics. Lecture Notes in Physics, 2001, , 52-78.	0.3	1
95	Avalanches of Concentrated Granular Suspensions Down an Inclined Plane. AIP Conference Proceedings, 2008, , .	0.3	0
96	Visco-plastic Fluids: From Theory to Application. Applied Rheology, 2008, 18, 48-50.	3.5	0
97	Experimental study of bed load transport on steep slopes with a two-size mixture of spherical particles. , 2007, , 565-570.		0
98	Mudflow. Encyclopedia of Earth Sciences Series, 2013, , 706-706.	0.1	0
99	10.1063/1.4947242.1. , 2016, , .		0