

Christophe Ancy

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98
papers

3,318
citations

32
h-index

55
g-index

117
ext. papers

3,707
ext. citations

3.4
avg, IF

5.94
L-index

#	Paper	IF	Citations
98	Plasticity and geophysical flows: A review. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007 , 142, 4-35	2.7	259
97	Rheophysical classification of concentrated suspensions and granular pastes. <i>Physical Review E</i> , 1999 , 59, 4445-4457	2.4	178
96	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	3.7	140
95	Refractive-index and density matching in concentrated particle suspensions: a review. <i>Experiments in Fluids</i> , 2011 , 50, 1183-1206	2.5	136
94	Improved SPH methods for simulating free surface flows of viscous fluids. <i>Applied Numerical Mathematics</i> , 2009 , 59, 251-271	2.5	101
93	Segregation, recirculation and deposition of coarse particles near two-dimensional avalanche fronts. <i>Journal of Fluid Mechanics</i> , 2009 , 629, 387-423	3.7	99
92	Rheological interpretation of deposits of yield stress fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1996 , 66, 55-70	2.7	97
91	Experimental investigation into segregating granular flows down chutes. <i>Physics of Fluids</i> , 2011 , 23, 013301	3.7	94
90	Multi-component particle-size segregation in shallow granular avalanches. <i>Journal of Fluid Mechanics</i> , 2011 , 678, 535-588	3.7	93
89	A theoretical framework for granular suspensions in a steady simple shear flow. <i>Journal of Rheology</i> , 1999 , 43, 1673-1699	4.1	91
88	Statistical description of sediment transport experiments. <i>Physical Review E</i> , 2006 , 74, 011302	2.4	87
87	Dry granular flows down an inclined channel: experimental investigations on the frictional-collisional regime. <i>Physical Review E</i> , 2002 , 65, 011304	2.4	83
86	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	3.7	80
85	Yield stress for particle suspensions within a clay dispersion. <i>Journal of Rheology</i> , 2001 , 45, 297-319	4.1	80
84	Underlying Asymmetry within Particle Size Segregation. <i>Physical Review Letters</i> , 2015 , 114, 238001	7.4	76
83	Stochastic modeling in sediment dynamics: Exner equation for planar bed incipient bed load transport conditions. <i>Journal of Geophysical Research</i> , 2010 , 115,		74
82	Saltating motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2002 , 66, 036306	2.4	63

81	The dam-break problem for Herschel-Bulkley viscoplastic fluids down steep flumes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009 , 158, 18-35	2.7	62
80	Computing extreme avalanches. <i>Cold Regions Science and Technology</i> , 2004 , 39, 161-180	3.8	54
79	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	3.7	53
78	Solving the Couette inverse problem using a wavelet-vaguelette decomposition. <i>Journal of Rheology</i> , 2005 , 49, 441-460	4.1	49
77	Frictional-collisional regime for granular suspension flows down an inclined channel. <i>Physical Review E</i> , 2000 , 62, 8349-60	2.4	49
76	Experimental investigation of the spreading of viscoplastic fluids on inclined planes. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009 , 158, 73-84	2.7	44
75	Particle-size and -density segregation in granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2015 , 779, 622-668	3.7	42
74	An exact solution for ideal dam-break floods on steep slopes. <i>Water Resources Research</i> , 2008 , 44,	5.4	42
73	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	3.8	39
72	Powder snow avalanches: Approximation as non-Boussinesq clouds with a Richardson number-dependent entrainment function. <i>Journal of Geophysical Research</i> , 2004 , 109,		36
71	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	3.8	36
70	Statistics of bedload transport over steep slopes: Separation of time scales and collective motion. <i>Geophysical Research Letters</i> , 2013 , 40, 128-133	4.9	35
69	Tracking the free surface of time-dependent flows: image processing for the dam-break problem. <i>Experiments in Fluids</i> , 2007 , 44, 59-71	2.5	35
68	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	2.5	34
67	Inverse problem in avalanche dynamics models. <i>Water Resources Research</i> , 2003 , 39,	5.4	34
66	Monte Carlo calibration of avalanches described as Coulomb fluid flows. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2005 , 363, 1529-50	3	32
65	Role of lubricated contacts in concentrated polydisperse suspensions. <i>Journal of Rheology</i> , 2001 , 45, 1421-1439	4.1	32
64	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	3.8	32

63	Fluctuations of the solid discharge of gravity-driven particle flows in a turbulent stream. <i>Physical Review E</i> , 2004 , 69, 061307	2.4	31
62	Spatial correlations in bed load transport: Evidence, importance, and modeling. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014 , 119, 1751-1767	3.8	30
61	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	2.5	30
60	Estimating bulk rheological properties of flowing snow avalanches from field data. <i>Journal of Geophysical Research</i> , 2004 , 109,		30
59	Rolling motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2003 , 67, 011303	2.4	29
58	Towards a conceptual approach to predetermining long-return-period avalanche run-out distances. <i>Journal of Glaciology</i> , 2004 , 50, 268-278	3.4	29
57	Dynamics of glide avalanches and snow gliding. <i>Reviews of Geophysics</i> , 2015 , 53, 745-784	23.1	28
56	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	4.7	25
55	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	1.9	25
54	Are Bedload Transport Pulses in Gravel Bed Rivers Created by Bar Migration or Sediment Waves?. <i>Geophysical Research Letters</i> , 2018 , 45, 5501-5508	4.9	24
53	The dam-break problem for viscous fluids in the high-capillary-number limit. <i>Journal of Fluid Mechanics</i> , 2009 , 624, 1-22	3.7	24
52	21 Debris Flows and Related Phenomena. <i>Lecture Notes in Physics</i> , 2001 , 528-547	0.8	24
51	Viscoplastic dambreak waves: Review of simple computational approaches and comparison with experiments. <i>Advances in Water Resources</i> , 2012 , 48, 79-91	4.7	22
50	Internal dynamics of Newtonian and viscoplastic fluid avalanches down a sloping bed. <i>Physics of Fluids</i> , 2012 , 24, 053101	4.4	22
49	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		21
48	Segregation of large particles in dense granular flows suggests a granular Saffman effect. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	21
47	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	1.9	20
46	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	3.8	20

45	Asymmetric breaking size-segregation waves in dense granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2016 , 794, 460-505	3.7	20
44	KulikovskiyBveshnikovaBeghin model of powder snow avalanches: Development and application. <i>Journal of Geophysical Research</i> , 2007 , 112,		19
43	Particle diffusion in non-equilibrium bedload transport simulations. <i>Applied Mathematical Modelling</i> , 2016 , 40, 7474-7492	4.5	19
42	Snow Avalanches 2001 , 319-338		19
41	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	3.8	16
40	Are there "dragon-kings" events (i.e. genuine outliers) among extreme avalanches?. <i>European Physical Journal: Special Topics</i> , 2012 , 205, 117-129	2.3	15
39	The dam-break problem for concentrated suspensions of neutrally buoyant particles. <i>Journal of Fluid Mechanics</i> , 2013 , 724, 95-122	3.7	11
38	Hydraulic Reconstruction of the 1818 Giřro Glacial Lake Outburst Flood. <i>Water Resources Research</i> , 2019 , 55, 8840-8863	5.4	10
37	Granular suspension avalanches. I. Macro-viscous behavior. <i>Physics of Fluids</i> , 2013 , 25, 033301	4.4	9
36	Granular suspension avalanches. II. Plastic regime. <i>Physics of Fluids</i> , 2013 , 25, 033302	4.4	9
35	Front dynamics of supercritical non-Boussinesq gravity currents. <i>Water Resources Research</i> , 2006 , 42,	5.4	9
34	Transition frictionnelle/visqueuse pour une suspension granulaire. <i>Comptes Rendus De L'Academie De Sciences - Serie Iib: Mecanique, Physique, Chimie, Astronomie</i> , 1999 , 327, 515-522		9
33	Snow avalanches striking water basins: behaviour of the avalanche's centre of mass and front. <i>Natural Hazards</i> , 2017 , 88, 1297-1323	3	8
32	Decoupling the Role of Inertia, Friction, and Cohesion in Dense Granular Avalanche Pressure Build-up on Obstacles. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2019JF005192	3.8	8
31	Basal entrainment by Newtonian gravity-driven flows. <i>Physics of Fluids</i> , 2016 , 28, 053101	4.4	8
30	Existence and features of similarity solutions for non-Boussinesq gravity currents. <i>Physica D: Nonlinear Phenomena</i> , 2007 , 226, 32-54	3.3	8
29	L'avalanche de Pđlerey du 9 fřrier 1999. <i>Houille Blanche</i> , 2000 , 86, 45-53	0.3	8
28	Breaking size-segregation waves and mobility feedback in dense granular avalanches. <i>Granular Matter</i> , 2018 , 20, 1	2.6	7

27	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	3.9	7
26	Estimating Mean Bedload Transport Rates and Their Uncertainty. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2020JF005534	3.8	6
25	Using a Data Driven Approach to Predict Waves Generated by Gravity Driven Mass Flows. <i>Water (Switzerland)</i> , 2020 , 12, 600	3	6
24	Visco-plastic fluids: From Theory to Application. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009 , 158, 1-3	2.7	6
23	An experimental scaling law for particle-size segregation in dense granular flows. <i>Journal of Fluid Mechanics</i> , 2021 , 916,	3.7	6
22	The dam-break problem for eroding viscoplastic fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017 , 243, 64-78	2.7	5
21	Stokes' third problem for Herschel-Bulkley fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017 , 243, 27-37	2.7	5
20	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	2.2	5
19	Gravity flow on steep slope	372-432	5
18	Continuous Monitoring of Bed-Load Transport in a Laboratory Flume Using an Impact Sensor. <i>Journal of Hydraulic Engineering</i> , 2017 , 143, 04017005	1.8	4
17	Scanning PIV of turbulent flows over and through rough porous beds using refractive index matching. <i>Experiments in Fluids</i> , 2020 , 61, 1	2.5	4
16	Modélisation des avalanches denses Approches théorique et numérique. <i>Houille Blanche</i> , 1994 , 80, 25-39	0.3	3
15	Quelques réflexions autour de la classification des avalanches / Some thoughts on a classification of avalanches. <i>Revue De Géographie Alpine</i> , 1996 , 84, 9-21	0.9	3
14	Large particle segregation in two-dimensional sheared granular flows. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	3
13	Snow Avalanches	39-71	3
12	The effects of slide cohesion on impulse-wave formation. <i>Experiments in Fluids</i> , 2019 , 60, 1	2.5	2
11	Rheophysics of highly concentrated coarse-particle suspensions in a wide-gap Couette rheometer 2009 ,		2
10	T. Jbannesson, 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	3.4	2

9	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	2.6	1
8	Introduction to Rheology and Application to Geophysics. <i>Lecture Notes in Physics</i> , 2001 , 52-78	0.8	1
7	Physics-based estimates of drag coefficients for the impact pressure calculation of dense snow avalanches. <i>Engineering Structures</i> , 2022 , 254, 113478	4.7	0
6	Stochastic bedload transport in mountain streams. <i>E3S Web of Conferences</i> , 2018 , 40, 05046	0.5	0
5	A conveyor belt experimental setup to study the internal dynamics of granular avalanches. <i>Experiments in Fluids</i> , 2021 , 62, 207	2.5	0
4	Visco-plastic Fluids: From Theory to Application. <i>Applied Rheology</i> , 2008 , 18, 48-50	1.2	
3	Experimental study of bed load transport on steep slopes with a two-size mixture of spherical particles 2007 , 565-570		
2	Debris Flows1-37		
1	The variability of antidune morphodynamics on steep slopes. <i>Earth Surface Processes and Landforms</i> , 2021 , 46, 1750-1765	3.7	