

Christophe Ancy

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	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
97	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
96	An experimental scaling law for particle-size segregation in dense granular flows. <i>Journal of Fluid Mechanics</i> , 2021 , 916,	3.7	6
95	The variability of antidune morphodynamics on steep slopes. <i>Earth Surface Processes and Landforms</i> , 2021 , 46, 1750-1765	3.7	
94	Large particle segregation in two-dimensional sheared granular flows. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	3
93	A conveyor belt experimental setup to study the internal dynamics of granular avalanches. <i>Experiments in Fluids</i> , 2021 , 62, 207	2.5	0
92	Estimating Mean Bedload Transport Rates and Their Uncertainty. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2020JF005534	3.8	6
91	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
90	Using a Data Driven Approach to Predict Waves Generated by Gravity Driven Mass Flows. <i>Water (Switzerland)</i> , 2020 , 12, 600	3	6
89	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
88	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
87	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
86	The effects of slide cohesion on impulse-wave formation. <i>Experiments in Fluids</i> , 2019 , 60, 1	2.5	2
85	Hydraulic Reconstruction of the 1818 Giřro Glacial Lake Outburst Flood. <i>Water Resources Research</i> , 2019 , 55, 8840-8863	5.4	10
84	Breaking size-segregation waves and mobility feedback in dense granular avalanches. <i>Granular Matter</i> , 2018 , 20, 1	2.6	7
83	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
82	Segregation of large particles in dense granular flows suggests a granular Saffman effect. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	21

81	Stochastic bedload transport in mountain streams. <i>E3S Web of Conferences</i> , 2018 , 40, 05046	0.5	0
80	The dam-break problem for eroding viscoplastic fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017 , 243, 64-78	2.7	5
79	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
78	Stokes' third problem for Herschel-Bulkley fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017 , 243, 27-37	2.7	5
77	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
76	Basal entrainment by Newtonian gravity-driven flows. <i>Physics of Fluids</i> , 2016 , 28, 053101	4.4	8
75	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
74	Asymmetric breaking size-segregation waves in dense granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2016 , 794, 460-505	3.7	20
73	Particle diffusion in non-equilibrium bedload transport simulations. <i>Applied Mathematical Modelling</i> , 2016 , 40, 7474-7492	4.5	19
72	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
71	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
70	Particle-size and -density segregation in granular free-surface flows. <i>Journal of Fluid Mechanics</i> , 2015 , 779, 622-668	3.7	42
69	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
68	Underlying Asymmetry within Particle Size Segregation. <i>Physical Review Letters</i> , 2015 , 114, 238001	7.4	76
67	Dynamics of glide avalanches and snow gliding. <i>Reviews of Geophysics</i> , 2015 , 53, 745-784	23.1	28
66	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
65	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
64	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

63	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
62	Granular suspension avalanches. I. Macro-viscous behavior. <i>Physics of Fluids</i> , 2013 , 25, 033301	4.4	9
61	The dam-break problem for concentrated suspensions of neutrally buoyant particles. <i>Journal of Fluid Mechanics</i> , 2013 , 724, 95-122	3.7	11
60	Granular suspension avalanches. II. Plastic regime. <i>Physics of Fluids</i> , 2013 , 25, 033302	4.4	9
59	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
58	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
57	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
56	Internal dynamics of Newtonian and viscoplastic fluid avalanches down a sloping bed. <i>Physics of Fluids</i> , 2012 , 24, 053101	4.4	22
55	Multi-component particle-size segregation in shallow granular avalanches. <i>Journal of Fluid Mechanics</i> , 2011 , 678, 535-588	3.7	93
54	Refractive-index and density matching in concentrated particle suspensions: a review. <i>Experiments in Fluids</i> , 2011 , 50, 1183-1206	2.5	136
53	Experimental investigation into segregating granular flows down chutes. <i>Physics of Fluids</i> , 2011 , 23, 013301	4.1	94
52	Stochastic modeling in sediment dynamics: Exner equation for planar bed incipient bed load transport conditions. <i>Journal of Geophysical Research</i> , 2010 , 115,		74
51	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
50	Rheophysics of highly concentrated coarse-particle suspensions in a wide-gap Couette rheometer 2009 ,		2
49	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
48	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
47	Visco-plastic fluids: From Theory to Application. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009 , 158, 1-3	2.7	6
46	Improved SPH methods for simulating free surface flows of viscous fluids. <i>Applied Numerical Mathematics</i> , 2009 , 59, 251-271	2.5	101

45	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
44	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
43	T. J. Bannesson, 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
42	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
41	An exact solution for ideal dam-break floods on steep slopes. <i>Water Resources Research</i> , 2008 , 44,	5.4	42
40	Visco-plastic Fluids: From Theory to Application. <i>Applied Rheology</i> , 2008 , 18, 48-50	1.2	
39	Kulikovskiy, V. V. Veshnikova, B. Beghin model of powder snow avalanches: Development and application. <i>Journal of Geophysical Research</i> , 2007 , 112,		19
38	Plasticity and geophysical flows: A review. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007 , 142, 4-35	2.7	259
37	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
36	Existence and features of similarity solutions for non-Boussinesq gravity currents. <i>Physica D: Nonlinear Phenomena</i> , 2007 , 226, 32-54	3.3	8
35	Experimental study of bed load transport on steep slopes with a two-size mixture of spherical particles 2007 , 565-570		
34	Statistical description of sediment transport experiments. <i>Physical Review E</i> , 2006 , 74, 011302	2.4	87
33	Front dynamics of supercritical non-Boussinesq gravity currents. <i>Water Resources Research</i> , 2006 , 42,	5.4	9
32	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
31	Solving the Couette inverse problem using a wavelet-vaguelette decomposition. <i>Journal of Rheology</i> , 2005 , 49, 441-460	4.1	49
30	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
29	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
28	Estimating bulk rheological properties of flowing snow avalanches from field data. <i>Journal of Geophysical Research</i> , 2004 , 109,		30

27	Powder snow avalanches: Approximation as non-Boussinesq clouds with a Richardson number-dependent entrainment function. <i>Journal of Geophysical Research</i> , 2004 , 109,		36
26	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
25	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
24	Computing extreme avalanches. <i>Cold Regions Science and Technology</i> , 2004 , 39, 161-180	3.8	54
23	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
22	Inverse problem in avalanche dynamics models. <i>Water Resources Research</i> , 2003 , 39,	5.4	34
21	Rolling motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2003 , 67, 011303	2.4	29
20	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
19	Saltating motion of a bead in a rapid water stream. <i>Physical Review E</i> , 2002 , 66, 036306	2.4	63
18	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
17	Yield stress for particle suspensions within a clay dispersion. <i>Journal of Rheology</i> , 2001 , 45, 297-319	4.1	80
16	Role of lubricated contacts in concentrated polydisperse suspensions. <i>Journal of Rheology</i> , 2001 , 45, 1421-1439	4.1	32
15	Snow Avalanches 2001 , 319-338		19
14	21 Debris Flows and Related Phenomena. <i>Lecture Notes in Physics</i> , 2001 , 528-547	0.8	24
13	Introduction to Rheology and Application to Geophysics. <i>Lecture Notes in Physics</i> , 2001 , 52-78	0.8	1
12	Frictional-collisional regime for granular suspension flows down an inclined channel. <i>Physical Review E</i> , 2000 , 62, 8349-60	2.4	49
11	L'avalanche de Pélery du 9 février 1999. <i>Houille Blanche</i> , 2000 , 86, 45-53	0.3	8
10	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

9	A theoretical framework for granular suspensions in a steady simple shear flow. <i>Journal of Rheology</i> , 1999 , 43, 1673-1699	4.1	91
8	Rheophysical classification of concentrated suspensions and granular pastes. <i>Physical Review E</i> , 1999 , 59, 4445-4457	2.4	178
7	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
6	Rheological interpretation of deposits of yield stress fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1996 , 66, 55-70	2.7	97
5	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
4	Modélisation des avalanches denses Approches théorique et numérique. <i>Houille Blanche</i> , 1994 , 80, 25-39	0.3	3
3	Gravity flow on steep slope 372-432		5
2	Debris Flows 1-37		
1	Snow Avalanches 39-71		3