

Richard Iverson

List of Publications by Citations

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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.

57 papers	8,446 citations	33 h-index	58 g-index
58 ext. papers	9,516 ext. citations	8.5 avg, IF	6.68 L-index

#	Paper	IF	Citations
57	The physics of debris flows. <i>Reviews of Geophysics</i> , 1997 , 35, 245-296	23.1	1778
56	Landslide triggering by rain infiltration. <i>Water Resources Research</i> , 2000 , 36, 1897-1910	5.4	1103
55	Flow of variably fluidized granular masses across three-dimensional terrain: 1. Coulomb mixture theory. <i>Journal of Geophysical Research</i> , 2001 , 106, 537-552		593
54	DEBRIS-FLOW MOBILIZATION FROM LANDSLIDES. <i>Annual Review of Earth and Planetary Sciences</i> , 1997 , 25, 85-138	15.3	575
53	Positive feedback and momentum growth during debris-flow entrainment of wet bed sediment. <i>Nature Geoscience</i> , 2011 , 4, 116-121	18.3	326
52	Flow of variably fluidized granular masses across three-dimensional terrain: 2. Numerical predictions and experimental tests. <i>Journal of Geophysical Research</i> , 2001 , 106, 553-566		285
51	The perfect debris flow? Aggregated results from 28 large-scale experiments. <i>Journal of Geophysical Research</i> , 2010 , 115,		249
50	Acute sensitivity of landslide rates to initial soil porosity. <i>Science</i> , 2000 , 290, 513-6	33.3	245
49	Debris-flow deposition: Effects of pore-fluid pressure and friction concentrated at flow margins. <i>Bulletin of the Geological Society of America</i> , 1999 , 111, 1424-1434	3.9	242
48	New views of granular mass flows. <i>Geology</i> , 2001 , 29, 115	5	212
47	Landslide mobility and hazards: implications of the 2014 Oso disaster. <i>Earth and Planetary Science Letters</i> , 2015 , 412, 197-208	5.3	195
46	Grain-size segregation and levee formation in geophysical mass flows. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		177
45	A depth-averaged debris-flow model that includes the effects of evolving dilatancy. I. Physical basis. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20130819	2.4	162
44	Granular avalanches across irregular three-dimensional terrain: 1. Theory and computation. <i>Journal of Geophysical Research</i> , 2004 , 109,		162
43	Dynamic pore-pressure fluctuations in rapidly shearing granular materials. <i>Science</i> , 1989 , 246, 796-9	33.3	161
42	Scaling and design of landslide and debris-flow experiments. <i>Geomorphology</i> , 2015 , 244, 9-20	4.3	157
41	Entrainment of bed material by Earth-surface mass flows: Review and reformulation of depth-integrated theory. <i>Reviews of Geophysics</i> , 2015 , 53, 27-58	23.1	153

40	Dynamics of seismogenic volcanic extrusion at Mount St Helens in 2004-05. <i>Nature</i> , 2006 , 444, 439-43	50.4	153
39	Regulation of landslide motion by dilatancy and pore pressure feedback. <i>Journal of Geophysical Research</i> , 2005 , 110,		150
38	Rainfall, ground-water flow, and seasonal movement at Minor Creek landslide, northwestern California: Physical interpretation of empirical relations. <i>Bulletin of the Geological Society of America</i> , 1987 , 99, 579	3.9	150
37	Elementary theory of bed-sediment entrainment by debris flows and avalanches. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		144
36	Granular avalanches across irregular three-dimensional terrain: 2. Experimental tests. <i>Journal of Geophysical Research</i> , 2004 , 109,		105
35	A depth-averaged debris-flow model that includes the effects of evolving dilatancy. II. Numerical predictions and experimental tests. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20130820	2.4	95
34	Modelling landslide liquefaction, mobility bifurcation and the dynamics of the 2014 Oso disaster. <i>Geotechnique</i> , 2016 , 66, 175-187	3.4	89
33	Gravity-driven groundwater flow and slope failure potential: 1. Elastic Effective-Stress Model. <i>Water Resources Research</i> , 1992 , 28, 925-938	5.4	88
32	Debris flow runoff on vertical barriers and adverse slopes. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016 , 121, 2333-2357	3.8	62
31	Debris flows: behaviour and hazard assessment. <i>Geology Today</i> , 2014 , 30, 15-20	0.4	54
30	A Constitutive Equation for Mass-Movement Behavior. <i>Journal of Geology</i> , 1985 , 93, 143-160	2	52
29	Physical effects of vehicular disturbances on arid landscapes. <i>Science</i> , 1981 , 212, 915-7	33.3	47
28	Debris-flow mechanics 2005 , 105-134		43
27	An exact solution for ideal dam-break floods on steep slopes. <i>Water Resources Research</i> , 2008 , 44,	5.4	42
26	Lahars and Their Deposits 2015 , 649-664		40
25	Unsteady, Nonuniform Landslide Motion: 1. Theoretical Dynamics and the Steady Datum State. <i>Journal of Geology</i> , 1986 , 94, 1-15	2	34
24	Mobility statistics and automated hazard mapping for debris flows and rock avalanches. <i>USGS Scientific Investigations Report</i> ,		33
23	Effects of soil aggregates on debris-flow mobilization: Results from ring-shear experiments. <i>Engineering Geology</i> , 2010 , 114, 84-92	6	32

22	Processes of accelerated pluvial erosion on desert hillslopes modified by vehicular traffic. <i>Earth Surfaces Processes</i> , 1980 , 5, 369-388		31
21	Controls on the breach geometry and flood hydrograph during overtopping of noncohesive earthen dams. <i>Water Resources Research</i> , 2015 , 51, 6701-6724	5.4	29
20	New methodology for computing tsunami generation by subaerial landslides: Application to the 2015 Tyndall Glacier landslide, Alaska. <i>Geophysical Research Letters</i> , 2017 , 44, 7276-7284	4.9	23
19	Steady and Intermittent Slipping in a Model of Landslide Motion Regulated by Pore-Pressure Feedback. <i>SIAM Journal on Applied Mathematics</i> , 2008 , 69, 769-786	1.8	23
18	Differential equations governing slip-induced pore-pressure fluctuations in a water-saturated granular medium. <i>Mathematical Geosciences</i> , 1993 , 25, 1027-1048		21
17	Unsteady, Nonuniform Landslide Motion: 2. Linearized Theory and the Kinematics of Transient Response. <i>Journal of Geology</i> , 1986 , 94, 349-364	2	21
16	Experimental testing of flexible barriers for containment of debris flows. <i>US Geological Survey Open-File Report</i> ,		20
15	Video documentation of experiments at the USGS debris-flow flume 1992–2017. <i>US Geological Survey Open-File Report</i> ,		17
14	Elements of an Improved Model of Debris-flow Motion 2009 ,		14
13	Dynamics of seismogenic volcanic extrusion resisted by a solid surface plug, Mount St. Helens, 2004-2005. <i>US Geological Survey Professional Paper</i> , 425-460		11
12	Measuring Basal Force Fluctuations of Debris Flows Using Seismic Recordings and Empirical Green's Functions. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2020JF005590	3.8	11
11	Comment on “The reduction of friction in long-runout landslides as an emergent phenomenon” by Brandon C. Johnson et al.. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016 , 121, 2238-2242	3.8	8
10	Mount St. Helens: A 30-Year Legacy of Volcanism. <i>Eos</i> , 2010 , 91, 169-170	1.5	7
9	Frictional properties of the Mount St. Helens gouge. <i>US Geological Survey Professional Paper</i> , 415-424		5
8	Basal Stress Equations for Granular Debris Masses on Smooth or Discretized Slopes. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019 , 124, 1464-1484	3.8	4
7	Comment on “Piezometric response in shallow bedrock at CB1: Implications for runoff generation and landsliding” by David R. Montgomery, William E. Dietrich, and John T. Heffner. <i>Water Resources Research</i> , 2004 , 40,	5.4	4
6	Using High Sample Rate Lidar to Measure Debris-Flow Velocity and Surface Geometry. <i>Environmental and Engineering Geoscience</i> , 2021 , 27, 113-126	0.7	4
5	Reconstructing the Velocity and Deformation of a Rapid Landslide Using Multiview Video. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2019JF005348	3.8	2

4	When hazard avoidance is not an option: lessons learned from monitoring the postdisaster Oso landslide, USA. <i>Landslides</i> , 2021 , 18, 2993-3009	6.6	2
3	Landslide Disparities, Flume Discoveries, and Oso Despair. <i>Perspectives of Earth and Space Scientists</i> , 2020 , 1, e2019CN000117	0.1	1
2	Discussion of The relation between dilatancy, effective stress and dispersive pressure in granular avalanches by P. Bartelt and O. Buser (DOI: 10.1007/s11440-016-0463-7). <i>Acta Geotechnica</i> , 2016 , 11, 1465-1468	4.9	
1	Discussion of Shallow Water Hydro-Sediment-Morphodynamic Equations for Fluvial Processes by Zhixian Cao, Chunchen Xia, Gareth Pender, and Qingquan Liu. <i>Journal of Hydraulic Engineering</i> , 2018 , 144, 07018009	1.8	