Richard M Iverson

List of Publications by Citations

55 papers	8,319 citations	33 h-index	55 g-index
55 ext. papers	9,294 ext. citations	5.9 avg, IF	6.67 L-index

#	Paper	IF	Citations
55	The physics of debris flows. *Reviews of Geophysics*, **1997**, 35, 245-296	23.1	1778
54	Landslide triggering by rain infiltration. *Water Resources Research*, **2000**, 36, 1897-1910	5.4	1103
53	Flow of variably fluidized granular masses across three-dimensional terrain: 1. Coulomb mixture theory. *Journal of Geophysical Research*, **2001**, 106, 537-552		593
52	DEBRIS-FLOW MOBILIZATION FROM LANDSLIDES. *Annual Review of Earth and Planetary Sciences*, **1997**, 25, 85-138	15.3	575
51	Positive feedback and momentum growth during debris-flow entrainment of wet bed sediment. *Nature Geoscience*, **2011**, 4, 116-121	18.3	326
50	Objective delineation of lahar-inundation hazard zones. *Bulletin of the Geological Society of America* , **1998**, 110, 972-984	3.9	295
49	Flow of variably fluidized granular masses across three-dimensional terrain: 2. Numerical predictions and experimental tests. *Journal of Geophysical Research*, **2001**, 106, 553-566		285
48	The perfect debris flow? Aggregated results from 28 large-scale experiments. *Journal of Geophysical Research*, **2010**, 115,		249
47	Debris-flow deposition: Effects of pore-fluid pressure and friction concentrated at flow margins. *Bulletin of the Geological Society of America*, **1999**, 111, 1424-1434	3.9	242
46	New views of granular mass flows. *Geology*, **2001**, 29, 115	5	212
45	Geomorphic Transport Laws for Predicting Landscape form and Dynamics. *Geophysical Monograph Series*, **2013**, 103-132	1.1	162
44	A depth-averaged debris-flow model that includes the effects of evolving dilatancy. I. Physical basis. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2014**, 470, 20130819	2.4	162
43	Granular avalanches across irregular three-dimensional terrain: 1. Theory and computation. *Journal of Geophysical Research*, **2004**, 109,		162
42	Scaling and design of landslide and debris-flow experiments. *Geomorphology*, **2015**, 244, 9-20	4.3	157
41	Entrainment of bed material by Earth-surface mass flows: Review and reformulation of depth-integrated theory. *Reviews of Geophysics*, **2015**, 53, 27-58	23.1	153
40	Dynamics of seismogenic volcanic extrusion at Mount St Helens in 2004-05. *Nature*, **2006**, 444, 439-43	50.4	153
39	Regulation of landslide motion by dilatancy and pore pressure feedback. *Journal of Geophysical Research*, **2005**, 110,		150

38	Rainfall, ground-water flow, and seasonal movement at Minor Creek landslide, northwestern California: Physical interpretation of empirical relations. *Bulletin of the Geological Society of America* , **1987**, 99, 579	3.9	150
37	Elementary theory of bed-sediment entrainment by debris flows and avalanches. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		144
36	Can magma-injection and groundwater forces cause massive landslides on Hawaiian volcanoes?. *Journal of Volcanology and Geothermal Research*, **1995**, 66, 295-308	2.8	114
35	Groundwater Seepage Vectors and the Potential for Hillslope Failure and Debris Flow Mobilization. *Water Resources Research*, **1986**, 22, 1543-1548	5.4	110
34	Granular avalanches across irregular three-dimensional terrain: 2. Experimental tests. *Journal of Geophysical Research*, **2004**, 109,		105
33	Distributed shear of subglacial till due to Coulomb slip. *Journal of Glaciology*, **2001**, 47, 481-488	3.4	96
32	A depth-averaged debris-flow model that includes the effects of evolving dilatancy. II. Numerical predictions and experimental tests. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2014**, 470, 20130820	2.4	95
31	Gravity-driven groundwater flow and slope failure potential: 2. Effects of slope morphology, material properties, and hydraulic heterogeneity. *Water Resources Research*, **1992**, 28, 939-950	5.4	90
30	Gravity-driven groundwater flow and slope failure potential: 1. Elastic Effective-Stress Model. *Water Resources Research*, **1992**, 28, 925-938	5.4	88
29	Debris flow runup on vertical barriers and adverse slopes. *Journal of Geophysical Research F: Earth Surface*, **2016**, 121, 2333-2357	3.8	62
28	Debris flows: behaviour and hazard assessment. *Geology Today*, **2014**, 30, 15-20	0.4	54
27	A Constitutive Equation for Mass-Movement Behavior. *Journal of Geology*, **1985**, 93, 143-160	2	52
26	Debris-flow mechanics **2005**, 105-134		43
25	Lahars and Their Deposits **2015**, 649-664		40
24	Unsteady, Nonuniform Landslide Motion: 1. Theoretical Dynamics and the Steady Datum State. *Journal of Geology*, **1986**, 94, 1-15	2	34
23	Mobility statistics and automated hazard mapping for debris flows and rock avalanches. *USGS Scientific Investigations Report*,		33
22	Effects of soil aggregates on debris-flow mobilization: Results from ring-shear experiments. *Engineering Geology*, **2010**, 114, 84-92	6	32
21	Processes of accelerated pluvial erosion on desert hillslopes modified by vehicular traffic. *Earth Surfaces Processes*, **1980**, 5, 369-388		31

20	Controls on the breach geometry and flood hydrograph during overtopping of noncohesive earthen dams. *Water Resources Research*, **2015**, 51, 6701-6724	5.4	29
19	Steady and Intermittent Slipping in a Model of Landslide Motion Regulated by Pore-Pressure Feedback. *SIAM Journal on Applied Mathematics*, **2008**, 69, 769-786	1.8	23
18	Differential equations governing slip-induced pore-pressure fluctuations in a water-saturated granular medium. *Mathematical Geosciences*, **1993**, 25, 1027-1048		21
17	Unsteady, Nonuniform Landslide Motion: 2. Linearized Theory and the Kinematics of Transient Response. *Journal of Geology*, **1986**, 94, 349-364	2	21
16	Video documentation of experiments at the USGS debris-flow flume 1992–2017. *US Geological Survey Open-File Report*,		17
15	Limiting equilibrium and liquefaction potential in infinite submarine slopes. *Marine Geotechnology*, **1990**, 9, 299-312		12
14	Measuring Basal Force Fluctuations of Debris Flows Using Seismic Recordings and Empirical Green's Functions. *Journal of Geophysical Research F: Earth Surface*, **2020**, 125, e2020JF005590	3.8	11
13	Comment on "The reduction of friction in long-runout landslides as an emergent phenomenon" by Brandon C. Johnson et al.. *Journal of Geophysical Research F: Earth Surface*, **2016**, 121, 2238-2242	3.8	8
12	How Should Mathematical Models of Geomorphic Processes be Judged?. *Geophysical Monograph Series*, **2013**, 83-94	1.1	8
11	When Models Meet Managers: Examples from Geomorphology. *Geophysical Monograph Series*, **2013**, 27-40	1.1	7
10	Mount St. Helens: A 30-Year Legacy of Volcanism. *Eos*, **2010**, 91, 169-170	1.5	7
9	Accelerated Water Erosion in ORV-Use Areas **1983**, 81-96		7
8	Basal Stress Equations for Granular Debris Masses on Smooth or Discretized Slopes. *Journal of Geophysical Research F: Earth Surface*, **2019**, 124, 1464-1484	3.8	4
7	Discussion and Closure: Slope Instability from Ground-Water Seepage. *Journal of Hydraulic Engineering*, **1997**, 123, 929-931	1.8	4
6	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. *Water Resources Research*, **2004**, 40,	5.4	4
5	You Want Me to Predict What?. *Geophysical Monograph Series*, **2013**, 41-50	1.1	3
4	When hazard avoidance is not an option: lessons learned from monitoring the postdisaster Oso landslide, USA. *Landslides*, **2021**, 18, 2993-3009	6.6	2
3	Landslide Disparities, Flume Discoveries, and Oso Despair. *Perspectives of Earth and Space Scientists*, **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). *Acta Geotechnica*, **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. *Journal of Hydraulic Engineering*, **2018**, 144, 07018009	1.8