

# Robert Anderson

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

7,907  
citations

76196

40  
h-index

60497

81  
g-index

83  
all docs

83  
docs citations

83  
times ranked

5173  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bedrock incision, rock uplift and threshold hillslopes in the northwestern Himalayas. <i>Nature</i> , 1996, 379, 505-510.	13.7	986
2	River incision into bedrock: Mechanics and relative efficacy of plucking, abrasion, and cavitation. <i>Bulletin of the Geological Society of America</i> , 2000, 112, 490-503.	1.6	577
3	Simulation of Eolian Saltation. <i>Science</i> , 1988, 241, 820-823.	6.0	456
4	Numerical modeling of fluvial strath-terrace formation in response to oscillating climate. <i>Bulletin of the Geological Society of America</i> , 2002, 114, 1131-1142.	1.6	382
5	Explicit treatment of inheritance in dating depositional surfaces using in situ <sup>10</sup> Be and <sup>26</sup> Al. <i>Geology</i> , 1996, 24, 47.	2.0	292
6	Hillslope and channel evolution in a marine terraced landscape, Santa Cruz, California. <i>Journal of Geophysical Research</i> , 1994, 99, 14013-14029.	3.3	274
7	Estimates of the rate of regolith production using and from an alpine hillslope. <i>Geomorphology</i> , 1999, 27, 131-150.	1.1	247
8	Tectonics, fracturing of rock, and erosion. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	228
9	Response of glacier basal motion to transient water storage. <i>Nature Geoscience</i> , 2008, 1, 33-37.	5.4	223
10	Modeling of knickpoint retreat on the Roan Plateau, western Colorado. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	204
11	Modeling the tor-dotted crests, bedrock edges, and parabolic profiles of high alpine surfaces of the Wind River Range, Wyoming. <i>Geomorphology</i> , 2002, 46, 35-58.	1.1	203
12	Rock damage and regolith transport by frost: an example of climate modulation of the geomorphology of the critical zone. <i>Earth Surface Processes and Landforms</i> , 2013, 38, 299-316.	1.2	189
13	Dating fluvial terraces with and profiles: application to the Wind River, Wyoming. <i>Geomorphology</i> , 1999, 27, 41-60.	1.1	167
14	Features of glacial valley profiles simply explained. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	163
15	Fjord insertion into continental margins driven by topographic steering of ice. <i>Nature Geoscience</i> , 2008, 1, 365-369.	5.4	151
16	Bedrock fracture control of glacial erosion processes and rates. <i>Geology</i> , 2010, 38, 423-426.	2.0	150
17	Pace of landscape evolution in the Sierra Nevada, California, revealed by cosmogenic dating of cave sediments. <i>Geology</i> , 2004, 32, 193.	2.0	142
18	Beyond power: Bedrock river incision process and form. <i>Geophysical Monograph Series</i> , 1998, , 35-60.	0.1	141

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19	Relationships among probability distributions of stream discharges in floods, climate, bed load transport, and river incision. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	137
20	Numerical and analytical models of cosmogenic radionuclide dynamics in landslide-dominated drainage basins. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	137
21	Strong feedbacks between hydrology and sliding of a small alpine glacier. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	127
22	Numerical modeling of glacial erosion and headwall processes in alpine valleys. <i>Geomorphology</i> , 2009, 103, 189-204.	1.1	108
23	Glaciation of alpine valleys: The glacier - debris-covered glacier - rock glacier continuum. <i>Geomorphology</i> , 2018, 311, 127-142.	1.1	105
24	Grain scale simulations of loose sedimentary beds: the example of grain-bed impacts in aeolian saltation. <i>Sedimentology</i> , 1993, 40, 175-198.	1.6	104
25	Modeling debris-covered glaciers: response to steady debris deposition. <i>Cryosphere</i> , 2016, 10, 1105-1124.	1.5	100
26	Aspect control of water movement on hillslopes near the rain-snow transition of the Colorado Front Range. <i>Hydrological Processes</i> , 2014, 28, 74-85.	1.1	97
27	Self-formed bedrock channels. <i>Geophysical Research Letters</i> , 2006, 33, n/a-n/a.	1.5	95
28	A model of ablation-dominated medial moraines and the generation of debris-mantled glacier snouts. <i>Journal of Glaciology</i> , 2000, 46, 459-469.	1.1	83
29	Modeling topographic and climatic control of east-west asymmetry in Sierra Nevada glacier length during the Last Glacial Maximum. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	83
30	Growth and collapse of the distributed subglacial hydrologic system of Kennicott Glacier, Alaska, USA, and its effects on basal motion. <i>Journal of Glaciology</i> , 2011, 57, 985-1002.	1.1	75
31	Hillslope-derived blocks retard river incision. <i>Geophysical Research Letters</i> , 2016, 43, 5070-5078.	1.5	72
32	Gradual demise of a thin southern Laurentide ice sheet recorded by Mississippi drainage. <i>Nature</i> , 2013, 502, 668-671.	13.7	70
33	Exhumation by debris flows in the 2013 Colorado Front Range storm. <i>Geology</i> , 2015, 43, 391-394.	2.0	62
34	Debris thickness patterns on debris-covered glaciers. <i>Geomorphology</i> , 2018, 311, 1-12.	1.1	56
35	Integrated research on mountain glaciers: Current status, priorities and future prospects. <i>Geomorphology</i> , 2009, 103, 158-171.	1.1	55
36	Pleistocene drainage reorganization driven by the isostatic response to deep incision into the northeastern Tibetan Plateau. <i>Geology</i> , 2014, 42, 303-306.	2.0	49

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37	Integrated hydrologic and hydrochemical observations of Hidden Creek Lake jÄ¶kullhaups, Kennicott Glacier, Alaska. <i>Journal of Geophysical Research</i> , 2003, 108, n/a-n/a.	3.3	47
38	Landscape scale linkages in critical zone evolution. <i>Comptes Rendus - Geoscience</i> , 2012, 344, 586-596.	0.4	47
39	Far-flung moraines: Exploring the feedback of glacial erosion on the evolution of glacier length. <i>Geomorphology</i> , 2012, 179, 269-285.	1.1	45
40	Testing a numerical glacial hydrological model using spring speed-up events and outburst floods. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	44
41	Facing reality: Late Cenozoic evolution of smooth peaks, glacially ornamented valleys, and deep river gorges of Colorado's Front Range. , 2006, , .		41
42	Characterizing the transient geomorphic response to baseâ€level fall in the northeastern Tibetan Plateau. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 546-572.	1.0	36
43	Spatial and temporal evolution of rapid basal sliding on Bench Glacier, Alaska, USA. <i>Journal of Glaciology</i> , 2005, 51, 49-63.	1.1	35
44	Numerical modeling of cosmogenic deglaciation records, Front Range and San Juan mountains, Colorado. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	35
45	Climate driven coevolution of weathering profiles and hillslope topography generates dramatic differences in critical zone architecture. <i>Hydrological Processes</i> , 2019, 33, 4-19.	1.1	35
46	Solving a conundrum of a steady-state hilltop with variable soil depths and production rates, Bodmin Moor, UK. <i>Geomorphology</i> , 2011, 128, 73-84.	1.1	34
47	Block-controlled hillslope form and persistence of topography in rocky landscapes. <i>Geology</i> , 2017, 45, 311-314.	2.0	34
48	Evolution of lumpy glacial landscapes. <i>Geology</i> , 2014, 42, 679-682.	2.0	33
49	Evidence for climatic and hillslopeâ€aspect controls on vadose zone hydrology and implications for saprolite weathering. <i>Earth Surface Processes and Landforms</i> , 2015, 40, 1254-1269.	1.2	33
50	Hillslope lowering rates and mobile-regolith residence times from in situ and meteoric <sup>10</sup> Be analysis, Boulder Creek Critical Zone Observatory, Colorado. <i>Bulletin of the Geological Society of America</i> , 2015, 127, 862-878.	1.6	32
51	Glacial Erosion Driven by Variations in Meltwater Drainage. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 2863-2877.	1.0	31
52	Debris cover and the thinning of Kennicott Glacier, Alaska: in situ measurements, automated ice cliff delineation and distributed melt estimates. <i>Cryosphere</i> , 2021, 15, 265-282.	1.5	31
53	Scaling the Teflon Peaks: Rock type and the generation of extreme relief in the glaciated western Alaska Range. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	30
54	Canyon shape and erosion dynamics governed by channel-hillslope feedbacks. <i>Geology</i> , 2019, 47, 650-654.	2.0	30

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55	Sediment dynamics below retreating cliffs. <i>Earth Surface Processes and Landforms</i> , 2011, 36, 1023-1043.	1.2	29
56	Interpreting exposure ages from ice-cored moraines: a Neoglacial case study on Baffin Island, Arctic Canada. <i>Journal of Quaternary Science</i> , 2017, 32, 1049-1062.	1.1	28
57	The use of ablation-dominated medial moraines as samplers for <sup>10</sup> Be-derived erosion rates of glacier valley walls, Kichatna Mountains, AK. <i>Earth Surface Processes and Landforms</i> , 2011, 36, 495-512.	1.2	27
58	The annual glaciohydrology cycle in the ablation zone of the Greenland ice sheet: Part 2. Observed and modeled ice flow. <i>Journal of Glaciology</i> , 2012, 58, 51-64.	1.1	27
59	Exploring weathering and regolith transport controls on Critical Zone development with models and natural experiments. <i>Applied Geochemistry</i> , 2011, 26, S3-S5.	1.4	25
60	Particle trajectories on hillslopes: Implications for particle age and <sup>10</sup> Be structure. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 1626-1644.	1.0	25
61	Unsteady late Pleistocene incision of streams bounding the Colorado Front Range from measurements of meteoric and in situ <sup>10</sup> Be. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	22
62	Tree root mounds and their role in transporting soil on forested landscapes. <i>Earth Surface Processes and Landforms</i> , 2014, 39, 711-722.	1.2	21
63	Spatial Patterns of Summer Speedup on South Central Alaska Glaciers. <i>Geophysical Research Letters</i> , 2017, 44, 9379-9388.	1.5	21
64	Longevity and progressive abandonment of the Rocky Flats surface, Front Range, Colorado. <i>Geomorphology</i> , 2006, 78, 265-278.	1.1	20
65	Modeling the WorldView-derived seasonal velocity evolution of Kennicott Glacier, Alaska. <i>Journal of Glaciology</i> , 2016, 62, 763-777.	1.1	20
66	Impact of rock uplift on rates of late Cenozoic Rocky Mountain river incision. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	19
67	Assessing the effect of a major storm on 10Be concentrations and inferred basin-averaged denudation rates. <i>Quaternary Geochronology</i> , 2016, 34, 58-68.	0.6	19
68	Dating of river terraces along Lefthand Creek, western High Plains, Colorado, reveals punctuated incision. <i>Geomorphology</i> , 2017, 295, 176-190.	1.1	18
69	Quasi-Steady Evolution of Hillslopes in Layered Landscapes: An Analytic Approach. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 26-45.	1.0	16
70	Pinched topography initiates the critical zone. <i>Science</i> , 2015, 350, 506-507.	6.0	14
71	The Causes of Debris-Covered Glacier Thinning: Evidence for the Importance of Ice Dynamics From Kennicott Glacier, Alaska. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	14
72	Interpreting climate-modulated processes of terrace development along the Colorado Front Range using a landscape evolution model. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 2121-2138.	1.0	13

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73	Strong variation in weathering of layered rock maintains hillslope-scale strength under high precipitation. <i>Earth Surface Processes and Landforms</i> , 2018, 43, 1183-1194.	1.2	13
74	Statistical Classification of Self-Organized Snow Surfaces. <i>Geophysical Research Letters</i> , 2018, 45, 6532-6541.	1.5	12
75	The Mississippi River records glacial-isostatic deformation of North America. <i>Science Advances</i> , 2019, 5, eaav2366.	4.7	12
76	Orographic Controls on Subdaily Rainfall Statistics and Flood Frequency in the Colorado Front Range, USA. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085086.	1.5	10
77	Ice-marginal lake hydrology and the seasonal dynamical evolution of Kennicott Glacier, Alaska. <i>Journal of Glaciology</i> , 2020, 66, 699-713.	1.1	10
78	Glacier expansion on Baffin Island during early Holocene cold reversals. <i>Quaternary Science Reviews</i> , 2020, 241, 106419.	1.4	9
79	The evolution of snow bedforms in the Colorado Front Range and the processes that shape them. <i>Cryosphere</i> , 2019, 13, 1267-1281.	1.5	6
80	Toward Entrainment Thresholds in Fluvial Plucking. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2020JF005944.	1.0	6
81	Alpine rock glacier activity over Holocene to modern timescales (western French Alps). <i>Earth Surface Dynamics</i> , 2022, 10, 605-633.	1.0	5
82	Modeling Aspect-Controlled Evolution of Ground Thermal Regimes on Montane Hillslopes. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2021JF006126.	1.0	3