Kelin Whipple

List of Publications by Year
in descending order

83 papers	16,818 citations	28274 55 h-index	60623 81 g-index
85 all docs	85 docs citations	85 times ranked	6454 citing authors

#	Article	IF	Citations
1	Dynamics of the stream-power river incision model: Implications for height limits of mountain ranges, landscape response timescales, and research needs. Journal of Geophysical Research, 1999, 104, 17661-17674.	3.3	1,588
2	BEDROCK RIVERS AND THE GEOMORPHOLOGY OF ACTIVE OROGENS. Annual Review of Earth and Planetary Sciences, 2004, 32, 151-185.	11.0	884
3	Expression of active tectonics in erosional landscapes. Journal of Structural Geology, 2012, 44, 54-75.	2.3	761
4	Landscape response to tectonic forcing: Digital elevation model analysis of stream profiles in the Mendocino triple junction region, northern California. Bulletin of the Geological Society of America, 2000, 112, 1250-1263.	3.3	739
5	Surface uplift, tectonics, and erosion of eastern Tibet from large-scale drainage patterns. Tectonics, 2004, 23, n/a-n/a.	2.8	682
6	Quantifying differential rock-uplift rates via stream profile analysis. Geology, 2001, 29, 415.	4.4	631
7	River incision into bedrock: Mechanics and relative efficacy of plucking, abrasion, and cavitation. Bulletin of the Geological Society of America, 2000, 112, 490-503.	3.3	577
8	Implications of sediment-flux-dependent river incision models for landscape evolution. Journal of Geophysical Research, 2002, 107, ETG 3-1.	3.3	500
9	Late Cenozoic evolution of the eastern margin of the Tibetan Plateau: Inferences from40Ar/39Ar and (U-Th)/He thermochronology. Tectonics, 2002, 21, 1-1-1-20.	2.8	484
10	The influence of climate on the tectonic evolution of mountain belts. Nature Geoscience, 2009, 2, 97-104.	12.9	466
11	Knickpoint initiation and distribution within fluvial networks: 236 waterfalls in the Waipaoa River, North Island, New Zealand. Geomorphology, 2006, 82, 16-38.	2.6	465
12	Geomorphic limits to climate-induced increases in topographic relief. Nature, 1999, 401, 39-43.	27.8	445
13	Beyond threshold hillslopes: Channel adjustment to base-level fall in tectonically active mountain ranges. Geology, 2009, 37, 579-582.	4.4	444
14	Tectonics from topography: Procedures, promise, and pitfalls. , 2006, , .		410
15	Landscape form and millennial erosion rates in the San Gabriel Mountains, CA. Earth and Planetary Science Letters, 2010, 289, 134-144.	4.4	400
16	Distribution of active rock uplift along the eastern margin of the Tibetan Plateau: Inferences from bedrock channel longitudinal profiles. Journal of Geophysical Research, 2003, 108, .	3.3	395
17	Fluvial Landscape Response Time: How Plausible Is Steady-State Denudation?. Numerische Mathematik, 2001, 301, 313-325.	1.4	381
18	Hydroplaning of subaqueous debris flows. Bulletin of the Geological Society of America, 1998, 110, 387-394.	3.3	339

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19	Topographic outcomes predicted by stream erosion models: Sensitivity analysis and intermodel comparison. Journal of Geophysical Research, 2002, 107, ETG 1-1-ETG 1-16.	3.3	332
20	Has focused denudation sustained active thrusting at the Himalayan topographic front?. Geology, 2003, 31, 861.	4.4	332
21	Quaternary deformation, river steepening, and heavy precipitation at the front of the Higher Himalayan ranges. Earth and Planetary Science Letters, 2004, 220, 379-389.	4.4	270
22	Active out-of-sequence thrust faulting in the central Nepalese Himalaya. Nature, 2005, 434, 1008-1011.	27.8	269
23	Southward extrusion of Tibetan crust and its effect on Himalayan tectonics. Tectonics, 2001, 20, 799-809.	2.8	226
24	Erosion rates driven by channel network incision in the Bolivian Andes. Earth Surface Processes and Landforms, 2005, 30, 1007-1024.	2.5	224
25	The influence of erosion thresholds and runoff variability on the relationships among topography, climate, and erosion rate. Journal of Geophysical Research, 2011, 116, .	3.3	223
26	The influence of large landslides on river incision in a transient landscape: Eastern margin of the Tibetan Plateau (Sichuan, China). Bulletin of the Geological Society of America, 2007, 119, 1462-1476.	3.3	222
27	Glacial erosion and relief production in the Eastern Sierra Nevada, California. Geomorphology, 2002, 42, 1-24.	2.6	211
28	Channel response to tectonic forcing: field analysis of stream morphology and hydrology in the Mendocino triple junction region, northern California. Geomorphology, 2003, 53, 97-127.	2.6	200
29	The influence of debris-flow rheology on fan morphology, Owens Valley, California. Bulletin of the Geological Society of America, 1992, 104, 887-900.	3.3	165
30	Soil production limits and the transition to bedrock-dominated landscapes. Nature Geoscience, 2012, 5, 210-214.	12.9	156
31	Can springs cut canyons into rock?. Journal of Geophysical Research, 2006, 111, .	3.3	153
32	Timescales of landscape response to divide migration and drainage capture: Implications for the role of divide mobility in landscape evolution. Journal of Geophysical Research F: Earth Surface, 2017, 122, 248-273.	2.8	151
33	Neotectonics of the Min Shan, China: Implications for mechanisms driving Quaternary deformation along the eastern margin of the Tibetan Plateau. Bulletin of the Geological Society of America, 2000, 112, 375-393.	3.3	150
34	Criteria and tools for determining drainage divide stability. Earth and Planetary Science Letters, 2018, 493, 102-117.	4.4	144
35	Uplift of the western margin of the Andean plateau revealed from canyon incision history, southern Peru. Geology, 2007, 35, 523.	4.4	142
36	Evolution of vertical knickpoints (waterfalls) with resistant caprock: Insights from numerical modeling. Journal of Geophysical Research, 2010, 115, .	3.3	139

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37	Experimental Study of the Grainâ€Flow, Fluidâ€Mud Transition in Debris Flows. Journal of Geology, 2001, 109, 427-447.	1.4	138
38	Feedbacks between erosion and sediment transport in experimental bedrock channels. Earth Surface Processes and Landforms, 2007, 32, 1048-1062.	2.5	126
39	Chemical weathering response to tectonic forcing: A soils perspective from the San Gabriel Mountains, California. Earth and Planetary Science Letters, 2012, 323-324, 40-49.	4.4	126
40	Implications of the shear stress river incision model for the timescale of postorogenic decay of topography. Journal of Geophysical Research, 2003, 108, .	3.3	115
41	Neotectonics of the Thakkhola graben and implications for recent activity on the South Tibetan fault system in the central Nepal Himalaya. Bulletin of the Geological Society of America, 2001, 113, 222-240.	3.3	114
42	Predictions of steady state and transient landscape morphology using sediment-flux-dependent river incision models. Journal of Geophysical Research, 2007, 112, .	3.3	110
43	Short communication: The Topographic Analysis Kit (TAK) for TopoToolbox. Earth Surface Dynamics, 2019, 7, 87-95.	2.4	103
44	Hillslope response to tectonic forcing in threshold landscapes. Earth Surface Processes and Landforms, 2012, 37, 855-865.	2.5	102
45	Complexities of landscape evolution during incision through layered stratigraphy with contrasts in rock strength. Earth Surface Processes and Landforms, 2016, 41, 1736-1757.	2.5	102
46	Topography reveals seismic hazard. Nature Geoscience, 2008, 1, 485-487.	12.9	98
47	Drainage basins and channel incision on Mars. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1780-1783.	7.1	96
48	Preservation or piracy: Diagnosing low-relief, high-elevation surface formation mechanisms. Geology, 2017, 45, 91-94.	4.4	89
49	Tectonic control of fan size: the importance of spatially variable subsidence rates. Basin Research, 1996, 8, 351-366.	2.7	88
50	Active shortening within the Himalayan orogenic wedge implied by the 2015 Gorkha earthquake. Nature Geoscience, 2016, 9, 711-716.	12.9	84
51	Transition from a singly vergent to doubly vergent wedge in a young orogen: The Greater Caucasus. Tectonics, 2014, 33, 2077-2101.	2.8	83
52	Orogenic-wedge deformation and potential for great earthquakes in the central Andean backarc. Nature Geoscience, 2011, 4, 380-383.	12.9	77
53	Climate controls on erosion in tectonically active landscapes. Science Advances, 2020, 6, .	10.3	75
54	Openâ€Channel Flow of Bingham Fluids: Applications in Debrisâ€Flow Research. Journal of Geology, 1997, 105, 243-262.	1.4	69

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55	Diagnosing climatic and tectonic controls on topography: Eastern flank of the northern Bolivian Andes. Lithosphere, 2014, 6, 230-250.	1.4	67
56	The role of waterfalls and knickzones in controlling the style and pace of landscape adjustment in the western San Gabriel Mountains, California. Bulletin of the Geological Society of America, 2015, 127, 539-559.	3.3	67
57	Feedbacks among climate, erosion, and tectonics in a critical wedge orogen. Numerische Mathematik, 2008, 308, 815-842.	1.4	55
58	Precipitation and evapotranspiration controls on daily runoff variability in the contiguous United States and Puerto Rico. Journal of Geophysical Research F: Earth Surface, 2016, 121, 128-145.	2.8	53
59	Characterization of slow slip rate faults in humid areas: Cimandiri fault zone, Indonesia. Journal of Geophysical Research F: Earth Surface, 2016, 121, 2287-2308.	2.8	53
60	Assessing the relative efficiency of fluvial and glacial erosion through simulation of fluvial landscapes. Geomorphology, 2006, 75, 283-299.	2.6	50
61	Decoupling of modern shortening rates, climate, and topography in the Caucasus. Earth and Planetary Science Letters, 2016, 449, 282-294.	4.4	37
62	A submersible study in the western Blanco fracture Zone, N.E. Pacific: Structure and evolution during the last 1.6 Ma. Marine Geophysical Researches, 1995, 17, 399-430.	1.2	35
63	Constraints on the tectonic and landscape evolution of the Bhutan Himalaya from thermochronometry. Tectonics, 2015, 34, 1329-1347.	2.8	31
64	Existence of a continental-scale river system in eastern Tibet during the late Cretaceousâ€“early Palaeogene. Nature Communications, 2021, 12, 7231.	12.8	28
65	Evidence for Plioâ€Pleistocene northâ€south extension at the southern margin of the Tibetan Plateau, Nyalam region. Tectonics, 2013, 32, 317-333.	2.8	27
66	Can erosion drive tectonics?. Science, 2014, 346, 918-919.	12.6	26
67	The thermochronologic record of erosion and magmatism in the Canyonlands region of the Colorado Plateau. Numerische Mathematik, 2019, 319, 339-380.	1.4	21
68	Ice thickness and topographic relief in glaciated landscapes of the western USA. Geomorphology, 2008, 97, 35-51.	2.6	19
69	A Late Miocene acceleration of exhumation in the Himalayan crystalline core. Earth and Planetary Science Letters, 2008, 269, 1-10.	4.4	18
70	Distribution of active faulting along orogenic wedges: Minimum-work models and natural analogue. Journal of Structural Geology, 2014, 66, 237-247.	2.3	17
71	Evidence for Pleistocene Low-Angle Normal Faulting in the Annapurna-Dhaulagiri Region, Nepal. Journal of Geology, 2015, 123, 133-151.	1.4	16
72	Strength matters: Resisting erosion across upland landscapes. Earth Surface Processes and Landforms, 2019, 44, 1748-1754.	2.5	13

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73	Did Martian valley networks substantially modify the landscape?. Earth and Planetary Science Letters, 2020, 547, 116482.	4.4	12
74	Low variability runoff inhibits coupling of climate, tectonics, and topography in the Greater Caucasus. Earth and Planetary Science Letters, 2022, 584, 117525.	4.4	12
75	Resistant rock layers amplify cosmogenicallyâ€determined erosion rates. Earth Surface Processes and Landforms, 2020, 45, 312-330.	2.5	11
76	Influence of Spatial Rainfall Gradients on River Longitudinal Profiles and the Topographic Expression of Spatially and Temporally Variable Climates in Mountain Landscapes. Journal of Geophysical Research F: Earth Surface, 2021, 126, .	2.8	11
77	Landscape texture set to scale. Nature, 2009, 460, 468-469.	27.8	8
78	Bedrock Rivers. , 2022, , 865-903.		8
79	Rates and processes of bedrock incision by the Upper Ukak River since the 1912 Novarupta ash flow in the Valley of Ten Thousand Smokes, Alaska. Geology, 2000, 28, 835-838.	4.4	8
80	Active deformation and Plio-Pleistocene fluvial reorganization of the western Kura foldâ€“thrust belt, Georgia: implications for the evolution of the Greater Caucasus Mountains. Geological Magazine, 2021, 158, 583-597.	1.5	7
81	Late Quaternary Tectonics along the Peri-Adriatic Sector of the Apenninic Chain (Central-Southern) Tj ETQq1 1 0.784314 rgBT /Overlock Lithosphere, 2021, 2021, .	1.4	6
82	Amphitheatreâ€headed canyons of Southern Utah: Stratigraphic control of canyon morphology. Earth Surface Processes and Landforms, 2020, 45, 3607-3622.	2.5	5
83	Differential Movement across Byrd Glacier, Antarctica, as indicated by Apatite (Uâ€“Th)/He thermochronology and geomorphological analysis. Geological Society Special Publication, 2013, 381, 37-43.	1.3	2