Jens M Turowski

List of Publications by Year
in descending order

91 papers	4,412 citations	101543 36 h-index	123424 61 g-index
180 all docs	180 docs citations	180 times ranked	2710 citing authors

#	Article	IF	Citations
1	The partitioning of the total sediment load of a river into suspended load and bedload: a review of empirical data. Sedimentology, 2010, 57, 1126-1146.	3.1	236
2	The impact of exceptional events on erosion, bedload transport and channel stability in a stepâ€pool channel. Earth Surface Processes and Landforms, 2009, 34, 1661-1673.	2.5	202
3	Cover effect in bedrock abrasion: A new derivation and its implications for the modeling of bedrock channel morphology. Journal of Geophysical Research, 2007, 112, .	3.3	184
4	Bedload transport measurements at the Erlenbach stream with geophones and automated basket samplers. Earth Surface Processes and Landforms, 2012, 37, 1000-1011.	2.5	163
5	A demonstration of the importance of bedload transport for fluvial bedrock erosion and knickpoint propagation. Earth Surface Processes and Landforms, 2013, 38, 683-695.	2.5	156
6	Hydraulic geometry, river sediment and the definition of bedrock channels. Geomorphology, 2008, 99, 26-38.	2.6	145
7	Distribution of erosion across bedrock channels. Earth Surface Processes and Landforms, 2008, 33, 353-363.	2.5	134
8	Start and end of bedload transport in gravel-bed streams. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	125
9	Evaluation of bedload transport predictions using flow resistance equations to account for macroâ€roughness in steep mountain streams. Water Resources Research, 2011, 47, .	4.2	118
10	Bedload transport measurements with impact plate geophones: comparison of sensor calibration in different gravelâ€bed streams. Earth Surface Processes and Landforms, 2014, 39, 928-942.	2.5	105
11	Analysis of changes in the step-pool morphology and channel profile of a steep mountain stream following a large flood. Geomorphology, 2010, 124, 85-94.	2.6	103
12	Tools and cover effects in bedload transport observations in the Pitzbach, Austria. Earth Surface Processes and Landforms, 2009, 34, 26-37.	2.5	94
13	Long-term erosion of the Nepal Himalayas by bedrock landsliding: the role of monsoons, earthquakes and giant landslides. Earth Surface Dynamics, 2019, 7, 107-128.	2.4	85
14	Runoff-driven export of particulate organic carbon from soil in temperate forested uplands. Earth and Planetary Science Letters, 2013, 365, 198-208.	4.4	77
15	Experimental channel response to tectonic uplift. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	76
16	Sediment supply, grain protrusion, and bedload transport in mountain streams. Geophysical Research Letters, 2012, 39, .	4.0	75
17	Response of bedrock channel width to tectonic forcing: Insights from a numerical model, theoretical considerations, and comparison with field data. Journal of Geophysical Research, 2009, 114, .	3.3	73
18	Bed load sediment transport inferred from seismic signals near a river. Journal of Geophysical Research F: Earth Surface, 2016, 121, 725-747.	2.8	73

#	Article	IF	Citations
19	Macroroughness and variations in reachâ€averaged flow resistance in steep mountain streams. Water Resources Research, 2012, 48, .	4.2	64
20	Damage costs due to bedload transport processes in Switzerland. Natural Hazards and Earth System Sciences, 2014, 14, 279-294.	3.6	64
21	Scaling relationships between bed load volumes, transport distances, and stream power in steep mountain channels. Journal of Geophysical Research F: Earth Surface, 2014, 119, 533-549.	2.8	64
22	Spatial patterns of erosion in a bedrock gorge. Journal of Geophysical Research F: Earth Surface, 2017, 122, 191-214.	2.8	64
23	River gorge eradication by downstream sweep erosion. Nature Geoscience, 2014, 7, 682-686.	12.9	63
24	Applicability of bed load transport models for mixedâ€size sediments in steep streams considering macroâ€roughness. Water Resources Research, 2015, 51, 5260-5283.	4.2	63
25	Seismic monitoring of torrential and fluvial processes. Earth Surface Dynamics, 2016, 4, 285-307.	2.4	63
26	Measuring Bed Load Transport Rates by Grain-Size Fraction Using the Swiss Plate Geophone Signal at the Erlenbach. Journal of Hydraulic Engineering, 2016, 142, .	1.5	59
27	Testing seismic amplitude source location for fast debris-flow detection at Illgraben, Switzerland. Natural Hazards and Earth System Sciences, 2017, 17, 939-955.	3.6	55
28	Large floods, alluvial overprint, and bedrock erosion. Earth Surface Processes and Landforms, 2013, 38, 947-958.	2.5	51
29	Historyâ€Dependent Threshold for Motion Revealed by Continuous Bedload Transport Measurements in a Steep Mountain Stream. Geophysical Research Letters, 2019, 46, 2583-2591.	4.0	46
30	Selfâ€adjustment of stream bed roughness and flow velocity in a steep mountain channel. Water Resources Research, 2015, 51, 7838-7859.	4.2	45
31	Decadal carbon discharge by a mountain stream is dominated by coarse organic matter. Geology, 2016, 44, 27-30.	4.4	45
32	Seismic constraints on dynamic links between geomorphic processes and routing of sediment in a steep mountain catchment. Earth Surface Dynamics, 2014, 2, 21-33.	2.4	44
33	DebrisInterMixing-2.3: aÂfinite volume solver for three-dimensional debris-flow simulations with two calibration parameters â€“ Part 1: Model description. Geoscientific Model Development, 2016, 9, 2909-2923.	3.6	44
34	Seismic monitoring of small alpine rockfalls â€“ validity, precision and limitations. Earth Surface Dynamics, 2017, 5, 653-668.	2.4	42
35	Alluvial cover controlling the width, slope and sinuosity of bedrock channels. Earth Surface Dynamics, 2018, 6, 29-48.	2.4	39
36	The mass distribution of coarse particulate organic matter exported from an Alpine headwater stream. Earth Surface Dynamics, 2013, 1, 1-11.	2.4	38

#	Article	IF	Citations
37	Laboratory flume experiments with the Swiss plate geophone bed load monitoring system: 2. Application to field sites with direct bed load samples. Water Resources Research, 2016, 52, 7760-7778.	4.2	38
38	Probability distributions of bed load transport rates: A new derivation and comparison with field data. Water Resources Research, 2010, 46, .	4.2	37
39	Grain size effects on energy delivery to the streambed and links to bedrock erosion. Geophysical Research Letters, 2015, 42, 1775-1780.	4.0	37
40	Controls and feedbacks in the coupling of mountain channels and hillslopes. Geology, 2017, 45, 307-310.	4.4	36
41	Bedload transport controls bedrock erosion under sediment-starved conditions. Earth Surface Dynamics, 2015, 3, 291-309.	2.4	35
42	Laboratory flume experiments with the Swiss plate geophone bed load monitoring system: 1. Impulse counts and particle size identification. Water Resources Research, 2016, 52, 7744-7759.	4.2	35
43	Dynamics of the Askja caldera July 2014 landslide, Iceland, from seismic signal analysis: precursor, motion and aftermath. Earth Surface Dynamics, 2018, 6, 467-485.	2.4	34
44	Stochastic modeling of the cover effect and bedrock erosion. Water Resources Research, 2009, 45, .	4.2	33
45	Spatiotemporal patterns, triggers and anatomies of seismically detected rockfalls. Earth Surface Dynamics, 2017, 5, 757-779.	2.4	33
46	Field measurements of the energy delivered to the channel bed by moving bed load and links to bedrock erosion. Journal of Geophysical Research F: Earth Surface, 2013, 118, 2438-2450.	2.8	32
47	Monsoonal hillslope processes determine grain sizeâ€specific suspended sediment fluxes in a transâ€Himalayan river. Geophysical Research Letters, 2015, 42, 2302-2308.	4.0	32
48	The role of log jams and exceptional flood events in mobilizing coarse particulate organic matter in a steep headwater stream. Earth Surface Dynamics, 2015, 3, 311-320.	2.4	32
49	Controls on the lateral channelâ€migration rate of braided channel systems in coarse nonâ€cohesive sediment. Earth Surface Processes and Landforms, 2019, 44, 2823-2836.	2.5	31
50	Upstream-facing convex surfaces: Bedrock bedforms produced by fluvial bedload abrasion. Geomorphology, 2013, 180-181, 187-204.	2.6	30
51	Bed load transport in a very steep mountain stream (<scp>R</scp>iedbach, <scp>S</scp>witzerland): Measurement and prediction. Water Resources Research, 2016, 52, 9522-9541.	4.2	29
52	Recent volcanoâ€“ice interaction and outburst flooding in a Mars polar cap re-entrant. Icarus, 2008, 197, 24-38.	2.5	28
53	Bed load transport and boundary roughness changes as competing causes of hysteresis in the relationship between river discharge and seismic amplitude recorded near a steep mountain stream. Journal of Geophysical Research F: Earth Surface, 2017, 122, 1182-1200.	2.8	28
54	Constraining tectonic uplift and advection from the main drainage divide of a mountain belt. Nature Communications, 2021, 12, 544.	12.8	28

#	Article	IF	Citations
55	The role of infrequently mobile boulders in modulating landscape evolution and geomorphic hazards. Earth-Science Reviews, 2021, 220, 103717.	9.1	28
56	Rainfall intensityâ€“duration thresholds for bedload transport initiation in small Alpine watersheds. Natural Hazards and Earth System Sciences, 2012, 12, 3091-3108.	3.6	27
57	Testing models of step formation against observations of channel steps in a steep mountain stream. Earth Surface Processes and Landforms, 2019, 44, 1390-1406.	2.5	27
58	Field techniques for measuring bedrock erosion and denudation. Earth Surface Processes and Landforms, 2017, 42, 109-127.	2.5	26
59	Preservation of organic carbon during active fluvial transport and particle abrasion. Geology, 2019, 47, 958-962.	4.4	25
60	A probabilistic formulation of bed load transport to include spatial variability of flow and surface grain size distributions. Water Resources Research, 2016, 52, 3579-3598.	4.2	24
61	A probabilistic framework for the cover effect in bedrock erosion. Earth Surface Dynamics, 2017, 5, 311-330.	2.4	24
62	Mass balance, grade, and adjustment timescales in bedrock channels. Earth Surface Dynamics, 2020, 8, 103-122.	2.4	24
63	Measuring the Statistics of Bed-Load Transport Using Indirect Sensors. Journal of Hydraulic Engineering, 2011, 137, 116-121.	1.5	23
64	Climate change impacts on bedload transport in alpine drainage basins with hydropower exploitation. Earth Surface Processes and Landforms, 2015, 40, 1587-1599.	2.5	23
65	Field instrumentation for highâ€resolution parallel monitoring of bedrock erosion and bedload transport. Earth Surface Processes and Landforms, 2015, 40, 530-541.	2.5	22
66	Disturbance regimes at the interface of geomorphology and ecology. Earth Surface Processes and Landforms, 2012, 37, 1678-1682.	2.5	20
67	Range imaging: a new method for highâ€resolution topographic measurements in smallâ€and mediumâ€scale field sites. Earth Surface Processes and Landforms, 2013, 38, 810-825.	2.5	20
68	DebrisInterMixing-2.3: a finite volume solver for three-dimensional debris-flow simulations with two calibration parameters â€“ Part 2: Model validation with experiments. Geoscientific Model Development, 2017, 10, 3963-3978.	3.6	20
69	Joint Sensing of Bedload Flux and Water Depth by Seismic Data Inversion. Water Resources Research, 2019, 55, 9892-9904.	4.2	19
70	Assessing the impact of climate change on brown trout (Salmo trutta fario) recruitment. Hydrobiologia, 2015, 751, 1-21.	2.0	18
71	Sediment transport modelling in a distributed physically based hydrological catchment model. Hydrology and Earth System Sciences, 2011, 15, 2821-2837.	4.9	17
72	Deriving principal channel metrics from bank and long-profile geometry with the RÂpackage cmgo. Earth Surface Dynamics, 2017, 5, 557-570.	2.4	17

#	Article	IF	Citations
73	sedFlow â€“ a tool for simulating fractional bedload transport and longitudinal profile evolution in mountain streams. Earth Surface Dynamics, 2015, 3, 15-34.	2.4	16
74	Inferring the timing of abandonment of aggraded alluvial surfaces dated with cosmogenic nuclides. Earth Surface Dynamics, 2019, 7, 755-771.	2.4	14
75	Upscaling Sedimentâ€Fluxâ€Dependent Fluvial Bedrock Incision to Long Timescales. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF005880.	2.8	13
76	Concentrationâ€Discharge Relationships of Dissolved Rhenium in Alpine Catchments Reveal Its Use as a Tracer of Oxidative Weathering. Water Resources Research, 2021, 57, e2021WR029844.	4.2	13
77	Measurements of coarse particulate organic matter transport in steep mountain streams and estimates of decadal CPOM exports. Journal of Hydrology, 2016, 539, 162-176.	5.4	12
78	Width control on eventâ€scale deposition and evacuation of sediment in bedrockâ€confined channels. Earth Surface Processes and Landforms, 2020, 45, 3702-3713.	2.5	12
79	Seismic Monitoring of a Subarctic River: Seasonal Variations in Hydraulics, Sediment Transport, and Ice Dynamics. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005333.	2.8	12
80	The influence of sediment thickness on energy delivery to the bed by bedload impacts. Geodinamica Acta, 2016, 28, 199-208.	2.2	11
81	Calculation of bedload transport in Swiss mountain rivers using the model sedFlow: proof of concept. Earth Surface Dynamics, 2015, 3, 35-54.	2.4	10
82	Probability distributions for bed formâ€“dominated bed load transport: The Hamamori distribution revisited. Journal of Geophysical Research, 2011, 116, .	3.3	9
83	Morphodynamics of steep mountain channels. Earth Surface Processes and Landforms, 2015, 40, 1560-1562.	2.5	9
84	Graffiti for science â€“ erosion painting reveals spatially variable erosivity of sediment-laden flows. Earth Surface Dynamics, 2016, 4, 885-894.	2.4	9
85	Grainâ€Size Distribution and Propagation Effects on Seismic Signals Generated by Bedload Transport. Water Resources Research, 2021, 57, e2020WR028700.	4.2	9
86	Controls on the grain size distribution of landslides in Taiwan: the influence of drop height, scar depth and bedrock strength. Earth Surface Dynamics, 2021, 9, 995-1011.	2.4	9
87	IN SITU MEASUREMENT OF BEDROCK EROSION. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XXXIX-B5, 429-433.	0.2	5
88	Influence of Rarely Mobile Boulders on Channel Width and Slope: Theory and Field Application. Journal of Geophysical Research F: Earth Surface, 2022, 127, .	2.8	5
89	Site Dependence of Fluvial Incision Rate Scaling With Timescale. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2020JF005808.	2.8	3
90	The effect of roughness spacing and size on lateral deflection of bedload particles. Water Resources Research, 2021, 57, e2021WR029717.	4.2	3

#	Article	IF	Citations
91	From Process to Centuries: Upscaling Fieldâ€Calibrated Models of Fluvial Bedrock Erosion. Geophysical Research Letters, 2021, 48, e2021GL093415.	4.0	2