FrÃ©dÃ©ric Herman

List of Publications by Year
in descending order

53 papers	2,979 citations	186265 28 h-index	168389 53 g-index
55 all docs	55 docs citations	55 times ranked	3395 citing authors

#	Article	IF	Citations
1	Geological and climatic influences on mountain biodiversity. Nature Geoscience, 2018, 11, 718-725.	12.9	390
2	Worldwide acceleration of mountain erosion under a cooling climate. Nature, 2013, 504, 423-426.	27.8	382
3	Glacial hydrology and erosion patterns: A mechanism for carving glacial valleys. Earth and Planetary Science Letters, 2011, 310, 498-508.	4.4	150
4	Erosion by an Alpine glacier. Science, 2015, 350, 193-195.	12.6	138
5	Tectonics, climate, and mountain topography. Journal of Geophysical Research, 2012, 117, .	3.3	121
6	Uniform erosion rates and relief amplitude during glacial cycles in the Southern Alps of New Zealand, as revealed from OSL-thermochronology. Earth and Planetary Science Letters, 2010, 297, 183-189.	4.4	120
7	Northward migration of the eastern Himalayan syntaxis revealed by OSL thermochronometry. Science, 2016, 353, 800-804.	12.6	92
8	Mountain glacier velocity variation during a retreat/advance cycle quantified using sub-pixel analysis of ASTER images. Journal of Glaciology, 2011, 57, 197-207.	2.2	88
9	Bimodal Plioâ€“Quaternary glacial erosion of fjords and low-relief surfaces in Scandinavia. Nature Geoscience, 2012, 5, 635-639.	12.9	81
10	Rapid exhumation in the Western Alps driven by slab detachment and glacial erosion. Geology, 2015, 43, 379-382.	4.4	80
11	Evolution of the glacial landscape of the Southern Alps of New Zealand: Insights from a glacial erosion model. Journal of Geophysical Research, 2008, 113, .	3.3	77
12	Inversion of thermochronological ageâ€“elevation profiles to extract independent estimates of denudation and relief history â€” II: Application to the French Western Alps. Earth and Planetary Science Letters, 2010, 296, 9-22.	4.4	69
13	Plioâ€Pleistocene increase of erosion rates in mountain belts in response to climate change. Terra Nova, 2016, 28, 2-10.	2.1	68
14	Radiation-induced growth and isothermal decay of infrared-stimulated luminescence from feldspar. Radiation Measurements, 2015, 81, 224-231.	1.4	66
15	Mid-latitude glacial erosion hotspot related to equatorial shifts in southern Westerlies. Geology, 2015, 43, 987-990.	4.4	57
16	Tectonomorphic scenarios in the Southern Alps of New Zealand. Journal of Geophysical Research, 2007, 112, .	3.3	56
17	Late Neogene exhumation and relief development of the Aar and Aiguilles Rouges massifs (Swiss Alps) from lowâ€temperature thermochronology modeling and ⁴He/³He thermochronometry. Journal of Geophysical Research, 2012, 117, .	3.3	54
18	Hypsometric analysis to identify spatially variable glacial erosion. Journal of Geophysical Research, 2011, 116, .	3.3	53

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19	Late-Cenozoic relief evolution under evolving climate: A review. Tectonophysics, 2014, 614, 44-65.	2.2	51
20	The Exhumation history of the European Alps inferred from linear inversion of thermochronometric data. Numerische Mathematik, 2016, 316, 505-541.	1.4	51
21	A linear inversion method to infer exhumation rates in space and time from thermochronometric data. Earth Surface Dynamics, 2014, 2, 47-65.	2.4	50
22	Arsenic Speciation in Mekong Delta Sediments Depends on Their Depositional Environment. Environmental Science & Technology, 2018, 52, 3431-3439.	10.0	50
23	Spatial and temporal variations of glacial erosion in the RhÃ´ne valley (Swiss Alps): Insights from numerical modeling. Earth and Planetary Science Letters, 2013, 368, 119-131.	4.4	46
24	The impact of glaciers on mountain erosion. Nature Reviews Earth & Environment, 2021, 2, 422-435.	29.7	45
25	Effective closure temperature in leaky and/or saturating thermochronometers. Earth and Planetary Science Letters, 2013, 384, 209-218.	4.4	39
26	Late Cenozoic exhumation model of New Zealand: Impacts from tectonics and climate. Earth-Science Reviews, 2017, 166, 286-298.	9.1	37
27	Controls of initial topography on temporal and spatial patterns of glacial erosion. Geomorphology, 2014, 223, 96-116.	2.6	32
28	A high-resolution image time series of the Gorner Glacier â€“ Swiss Alps â€“ derived from repeated unmanned aerial vehicle surveys. Earth System Science Data, 2019, 11, 579-588.	9.9	32
29	The relationships between tectonics, climate and exhumation in the Central Andes (18â€“36Â°S): Evidence from low-temperature thermochronology. Earth-Science Reviews, 2020, 210, 103276.	9.1	31
30	Climatic patterns over the European Alps during the LGM derived from inversion of the paleo-ice extent. Earth and Planetary Science Letters, 2020, 538, 116185.	4.4	28
31	Parameterization of river incision models requires accounting for environmental heterogeneity: insights from the tropical Andes. Earth Surface Dynamics, 2020, 8, 447-470.	2.4	27
32	Constraints on the role of tectonic and climate on erosion revealed by two time series analysis of marine cores around New Zealand. Earth and Planetary Science Letters, 2015, 410, 174-185.	4.4	26
33	Postglacial erosion of bedrock surfaces and deglaciation timing: New insights from the Mont Blanc massif (western Alps). Geology, 2020, 48, 139-144.	4.4	25
34	The Response Time of Glacial Erosion. Journal of Geophysical Research F: Earth Surface, 2018, 123, 801-817.	2.8	24
35	Exhumation mechanisms of the Tauern Window (Eastern Alps) inferred from apatite and zircon fission track thermochronology. Tectonics, 2017, 36, 207-228.	2.8	23
36	Provenance analysis using Raman spectroscopy of carbonaceous material: A case study in the Southern Alps of New Zealand. Journal of Geophysical Research F: Earth Surface, 2015, 120, 2056-2079.	2.8	22

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37	Exploring IRSL50 fading variability in bedrock feldspars and implications for OSL thermochronometry. Quaternary Geochronology, 2016, 36, 55-66.	1.4	22
38	Time and mode of exhumation of the Cordillera Blanca batholith (Peruvian Andes). Journal of Geophysical Research: Solid Earth, 2016, 121, 6235-6249.	3.4	21
39	Dating and morpho-stratigraphy of uplifted marine terraces in the Makran subduction zone (Iran). Earth Surface Dynamics, 2019, 7, 321-344.	2.4	20
40	Luminescence Thermochronometry: Investigating the Link between Mountain Erosion, Tectonics and Climate. Elements, 2018, 14, 33-38.	0.5	19
41	Evaluating post-glacial bedrock erosion and surface exposure duration by coupling in situ optically stimulated luminescence and ¹⁰Be dating. Earth Surface Dynamics, 2019, 7, 633-662.	2.4	18
42	A glacial buzzsaw effect generated by efficient erosion of temperate glaciers in a steady state model. Earth and Planetary Science Letters, 2020, 543, 116350.	4.4	17
43	Glacial Steady State Topography Controlled by the Coupled Influence of Tectonics and Climate. Journal of Geophysical Research F: Earth Surface, 2018, 123, 1344-1362.	2.8	13
44	Erosion of the Southern Alps of New Zealand during the last deglaciation. Geology, 2018, 46, 975-978.	4.4	9
45	Metamorphic transformation rate over large spatial and temporal scales constrained by geophysical data and coupled modelling. Journal of Metamorphic Geology, 2021, 39, 1131-1143.	3.4	9
46	Holocene Sedimentary Record and Coastal Evolution in the Makran Subduction Zone (Iran). Quaternary, 2019, 2, 21.	2.0	8
47	Inversion of provenance data and sediment load into spatially varying erosion rates. Earth Surface Processes and Landforms, 2020, 45, 3879-3901.	2.5	8
48	Determining the evolution of an alpine glacier drainage system by solving inverse problems. Journal of Glaciology, 2021, 67, 421-434.	2.2	7
49	Bayesian Inference of Subglacial Channel Structures From Water Pressure and Tracerâ€Transit Time Data: A Numerical Study Based on a 2â€D Geostatistical Modeling Approach. Journal of Geophysical Research F: Earth Surface, 2019, 124, 1625-1644.	2.8	6
50	Orogenâ€Parallel Migration of Exhumation in the Eastern Aar Massif Revealed by Lowâ€T Thermochronometry. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020799.	3.4	6
51	Reconstructing spatially variable mass balances from past ice extents by inverse modeling. Journal of Glaciology, 2018, 64, 957-968.	2.2	5
52	Constraining provenance, thickness and erosion of nappes using lowâ€temperature thermochronology: the Northland Allochthon, New Zealand. Basin Research, 2017, 29, 81-95.	2.7	3
53	Solidification depth and crystallization age of the Shiaidani Granodiorite: Constraints to the average denudation rate of the Hida Range, central Japan. Island Arc, 2021, 30, e12414.	1.1	3