

# Rob Ferguson

## List of Publications by Year in descending order

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108  
papers

7,230  
citations

47006

47  
h-index

58581

82  
g-index

115  
all docs

115  
docs citations

115  
times ranked

3923  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fluvial processes and landforms. Geological Society Memoir, 2022, 58, 257-270.	1.7	5
2	Limits to scale invariance in alluvial rivers. Earth Surface Processes and Landforms, 2021, 46, 173-187.	2.5	6
3	Roughness Calibration to Improve Flow Predictions in Coarse-Grained Bed Streams. Water Resources Research, 2021, 57, e2021WR029979.	4.2	4
4	Flow resistance and hydraulic geometry in bedrock rivers with multiple roughness length scales. Earth Surface Processes and Landforms, 2019, 44, 2437-2449.	2.5	19
5	Erosion of organic carbon from the Andes and its effects on ecosystem carbon dioxide balance. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 449-469.	3.0	28
6	Flow resistance and hydraulic geometry in contrasting reaches of a bedrock channel. Water Resources Research, 2017, 53, 2278-2293.	4.2	20
7	Bed load tracer mobility in a mixed bedrock/alluvial channel. Journal of Geophysical Research F: Earth Surface, 2017, 122, 807-822.	2.8	41
8	Advance, Retreat, and Halt of Abrupt Gravel-to-Sand Transitions in Alluvial Rivers. Geophysical Research Letters, 2017, 44, 9751-9760.	4.0	49
9	The cause of advective slowdown of tracer pebbles in rivers: Implementation of Exner-Based Master Equation for coevolving streamwise and vertical dispersion. Journal of Geophysical Research F: Earth Surface, 2016, 121, 623-637.	2.8	48
10	Reconstructing a sediment pulse: Modeling the effect of placer mining on Fraser River, Canada. Journal of Geophysical Research F: Earth Surface, 2015, 120, 1436-1454.	2.8	74
11	Morphodynamics: Rivers beyond steady state. Water Resources Research, 2015, 51, 1883-1897.	4.2	153
12	Splitting rivers at their seams: bifurcations and avulsion. Earth Surface Processes and Landforms, 2013, 38, 47-61.	2.5	204
13	River channel slope, flow resistance, and gravel entrainment thresholds. Water Resources Research, 2012, 48, .	4.2	96
14	Evolution of an advancing gravel front: observations from Vedder Canal, British Columbia. Earth Surface Processes and Landforms, 2011, 36, 1172-1182.	2.5	46
15	Implications of climate change in the twenty-first century for simulated magnitude and frequency of bed-material transport in tributaries of the Saint-Lawrence River. Hydrological Processes, 2011, 25, 1558-1573.	2.6	19
16	A coupled sediment routing and lateral migration model for gravel-bed rivers. Hydrological Processes, 2011, 25, 1887-1898.	2.6	2
17	Numerical modelling of climate change impacts on Saint-Lawrence River tributaries. Earth Surface Processes and Landforms, 2010, 35, 1184-1198.	2.5	21
18	Time to abandon the Manning equation?. Earth Surface Processes and Landforms, 2010, 35, 1873-1876.	2.5	98

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19	Using sediment impact sensors to improve the morphological sediment budget approach for estimating bedload transport rates. <i>Geomorphology</i> , 2010, 119, 125-134.	2.6	34
20	The spatial and temporal patterns of aggradation in a temperate, upland, gravel-bed river. <i>Earth Surface Processes and Landforms</i> , 2009, 34, 1181-1197.	2.5	34
21	A critical perspective on 1D modeling of river processes: Gravel load and aggradation in lower Fraser River. <i>Water Resources Research</i> , 2009, 45, .	4.2	50
22	A modified morphodynamic model for investigating the response of rivers to short-term climate change. <i>Geomorphology</i> , 2008, 101, 674-682.	2.6	38
23	2 Gravel-bed rivers at the reach scale. <i>Developments in Earth Surface Processes</i> , 2007, , 33-53.	2.8	10
24	Emergence of coherent flow structures over a gravel surface: A numerical experiment. <i>Water Resources Research</i> , 2007, 43, .	4.2	49
25	Estimating shear stress from moving boat acoustic Doppler velocity measurements in a large gravel bed river. <i>Water Resources Research</i> , 2007, 43, .	4.2	69
26	Flow resistance equations for gravel- and boulder-bed streams. <i>Water Resources Research</i> , 2007, 43, .	4.2	326
27	Tributary control of physical heterogeneity and biological diversity at river confluences. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2006, 63, 2553-2566.	1.4	110
28	River system discontinuities due to lateral inputs: generic styles and controls. <i>Earth Surface Processes and Landforms</i> , 2006, 31, 1149-1166.	2.5	87
29	Modelling Reach-Scale Fluvial Flows. , 2005, , 215-269.		15
30	Numerical Modelling of Floodplain Flow. , 2005, , 271-304.		8
31	Towards Risk-Based Prediction in Real-World Applications of Complex Hydraulic Models. , 2005, , 461-486.		0
32	CFD for Environmental Design and Management. , 2005, , 487-509.		0
33	Introduction to Numerical Methods for Fluid Flow. , 2005, , 147-168.		4
34	A Framework for Model Verification and Validation of CFD Schemes in Natural Open Channel Flows. , 2005, , 169-192.		21
35	Parameterisation, Validation and Uncertainty Analysis of CFD Models of Fluvial and Flood Hydraulics in the Natural Environment. , 2005, , 193-213.		11
36	Modelling Water Quality Processes in Estuaries. , 2005, , 305-328.		8

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37	Introduction to Statistical Turbulence Modelling for Hydraulic Engineering Flows. , 2005, , 91-120.		9
38	Modelling Solute Transport Processes in Free Surface Flow CFD Schemes. , 2005, , 51-69.		1
39	Fundamental Equations for CFD in River Flow Simulations. , 2005, , 17-49.		3
40	Basic Equations for Sediment Transport in CFD for Fluvial Morphodynamics. , 2005, , 71-89.		38
41	Modelling of Sand Deposition in Archaeologically Significant Reaches of the Colorado River in Grand Canyon, USA. , 2005, , 357-394.		4
42	The theoretical foundations and potential for large-eddy simulation (LES) in fluvial geomorphic and sedimentological research. Earth-Science Reviews, 2005, 71, 271-304.	9.1	70
43	Computational Fluid Dynamics Modelling for Environmental Hydraulics. , 2005, , 1-15.		8
44	Roughness Parameterization in CFD Modelling of Gravel-Bed Rivers. , 2005, , 329-355.		9
45	Modelling Wetting and Drying Processes in Hydraulic Models. , 2005, , 121-146.		8
46	Modelling of Open Channel Flow through Vegetation. , 2005, , 395-428.		24
47	Ecohydraulics: A New Interdisciplinary Frontier for CFD. , 2005, , 429-460.		10
48	A Simple Universal Equation for Grain Settling Velocity. Journal of Sedimentary Research, 2004, 74, 933-937.	1.6	383
49	Numerical modelling of airflow over an idealised transverse dune. Environmental Modelling and Software, 2004, 19, 153-162.	4.5	80
50	Publication practices in physical and human geography: a comment on Nigel Thrift's "The future of geography". Geoforum, 2003, 34, 9-11.	2.5	22
51	Assessing the credibility of a series of computational fluid dynamic simulations of open channel flow. Hydrological Processes, 2003, 17, 1539-1560.	2.6	58
52	Flow in meander bends with recirculation at the inner bank. Water Resources Research, 2003, 39, .	4.2	202
53	The missing dimension: effects of lateral variation on 1-D calculations of fluvial bedload transport. Geomorphology, 2003, 56, 1-14.	2.6	133
54	Emergence of abrupt gravel to sand transitions along rivers through sorting processes. Geology, 2003, 31, 159.	4.4	83

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55	Mobility of river tracer pebbles over different timescales. <i>Water Resources Research</i> , 2002, 38, 3-1-3-8.	4.2	112
56	Long-term slowdown of river tracer pebbles: Generic models and implications for interpreting short-term tracer studies. <i>Water Resources Research</i> , 2002, 38, 17-1-17-11.	4.2	76
57	Velocity and flow resistance in step-pool streams. <i>Geomorphology</i> , 2002, 46, 59-71.	2.6	160
58	Fluvial aggradation in Vedder River: Testing a one-dimensional sedimentation model. <i>Water Resources Research</i> , 2001, 37, 3331-3347.	4.2	33
59	Verification of simulated snow cover in an Arctic basin using satellite-derived snow-cover maps. <i>Annals of Glaciology</i> , 2000, 31, 391-396.	1.4	3
60	Fluvial suspended sediment transport from cold and warm-based glaciers in Svalbard. <i>Earth Surface Processes and Landforms</i> , 1999, 24, 957-974.	2.5	82
61	Use of remote sensing to test and update simulated snow cover in hydrological models. <i>Hydrological Processes</i> , 1999, 13, 2067-2077.	2.6	18
62	Snowmelt runoff models. <i>Progress in Physical Geography</i> , 1999, 23, 205-227.	3.2	79
63	Numerical modelling of separated flow in river bends: model testing and experimental investigation of geometric controls on the extent of flow separation at the concave bank. <i>Hydrological Processes</i> , 1998, 12, 1323-1338.	2.6	101
64	The Scientific Nature of Geomorphology. <i>Applied Geography</i> , 1998, 18, 99.	3.7	17
65	Tracer-pebble movement along a concave river profile: Virtual velocity in relation to grain size and shear stress. <i>Water Resources Research</i> , 1998, 34, 2031-2038.	4.2	135
66	Numerical modelling of separated flow in river bends: model testing and experimental investigation of geometric controls on the extent of flow separation at the concave bank. <i>Hydrological Processes</i> , 1998, 12, 1323-1338.	2.6	2
67	Measuring and defining bimodal sediments: Problems and implications. <i>Water Resources Research</i> , 1997, 33, 1179-1185.	4.2	53
68	Controls of strength and rate of downstream fining above a river base level. <i>Water Resources Research</i> , 1997, 33, 2601-2608.	4.2	63
69	Bias and precision of percentiles of bulk grain size distributions. <i>Earth Surface Processes and Landforms</i> , 1997, 22, 1061-1077.	2.5	48
70	The gravel-sand transition: flume study of channel response to reduced slope. <i>Geomorphology</i> , 1996, 16, 147-159.	2.6	56
71	Field evidence for rapid downstream fining of river gravels through selective transport. <i>Geology</i> , 1996, 24, 179.	4.4	181
72	Turbulent flow structure in a gravel-bed river: Markov chain analysis of the fluctuating velocity profile. <i>Earth Surface Processes and Landforms</i> , 1995, 20, 721-733.	2.5	38

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73	Unequal Mobility of Gravel and Sand in Weakly Bimodal River Sediments. <i>Water Resources Research</i> , 1995, 31, 2087-2096.	4.2	135
74	Ten year remeasurement of chemical denudation on a magnesian limestone hillslope. <i>Earth Surface Processes and Landforms</i> , 1994, 19, 109-114.	2.5	14
75	Critical discharge for entrainment of poorly sorted gravel. <i>Earth Surface Processes and Landforms</i> , 1994, 19, 179-186.	2.5	76
76	Excel modelling of hydrological systems. <i>Earth Surface Processes and Landforms</i> , 1994, 19, 815-817.	2.5	0
77	Numerical simulation of downstream fining by selective transport in gravel bed rivers: Model development and illustration. <i>Water Resources Research</i> , 1994, 30, 2251-2260.	4.2	261
78	Computer simulation in physical geography(2nd edn). <i>Applied Geography</i> , 1994, 14, 285.	3.7	1
79	Understanding braiding processes in gravel-bed rivers: progress and unsolved problems. <i>Geological Society Special Publication</i> , 1993, 75, 73-87.	1.3	76
80	Measurements in a Braided River chute and lobe: 1. Flow pattern, sediment transport, and channel change. <i>Water Resources Research</i> , 1992, 28, 1877-1886.	4.2	114
81	Measurements in a Braided River chute and lobe: 2. Sorting of bed load during entrainment, transport, and deposition. <i>Water Resources Research</i> , 1992, 28, 1887-1896.	4.2	108
82	Secondary flow in anabranch confluences of a braided, gravel-bed stream. <i>Earth Surface Processes and Landforms</i> , 1992, 17, 299-311.	2.5	142
83	Slope-induced changes in channel character along a gravel-bed stream: The Allt Dubhaig, Scotland. <i>Earth Surface Processes and Landforms</i> , 1991, 16, 65-82.	2.5	106
84	Quantifying gravel deposition on river bars using flexible netting. <i>Journal of Sedimentary Research</i> , 1989, 59, 623-624.	1.6	6
85	Size-selective entrainment of bed load in gravel bed streams. <i>Water Resources Research</i> , 1989, 25, 627-634.	4.2	288
86	Influence of sand on hydraulics and gravel transport in a braided gravel bed river. <i>Water Resources Research</i> , 1989, 25, 635-643.	4.2	118
87	Slope failures in the Ochil Hills, Scotland, November 1984. <i>Earth Surface Processes and Landforms</i> , 1988, 13, 69-76.	2.5	19
88	Reply [to "Comment on "River loads underestimated by rating curves" by R. I. Ferguson"]. <i>Water Resources Research</i> , 1988, 24, 1220-1220.	4.2	0
89	Forestry effects on suspended sediment and bedload yields in the Balquhiddier catchments, Central Scotland. <i>Transactions of the Royal Society of Edinburgh: Earth Sciences</i> , 1987, 78, 379-384.	0.7	19
90	Snowmelt modelling in the Cairngorms, NE Scotland. <i>Transactions of the Royal Society of Edinburgh: Earth Sciences</i> , 1987, 78, 261-267.	0.7	8

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91	Accuracy and precision of methods for estimating river loads. <i>Earth Surface Processes and Landforms</i> , 1987, 12, 95-104.	2.5	236
92	Hydraulics and hydraulic geometry. <i>Progress in Physical Geography</i> , 1986, 10, 1-31.	3.2	231
93	River Loads Underestimated by Rating Curves. <i>Water Resources Research</i> , 1986, 22, 74-76.	4.2	622
94	Reply [to "Comment on "River loads underestimated by rating curves" by R. I. Ferguson]. <i>Water Resources Research</i> , 1986, 22, 2123-2124.	4.2	9
95	Interrelationships of Channel Processes, Changes and Sediments in a Proglacial Braided River. <i>Geografiska Annaler, Series A: Physical Geography</i> , 1986, 68, 361.	1.5	77
96	HIGH DENSITIES, WATER EQUIVALENTS, AND MELT RATES OF SNOW IN THE CAIRNGORM MOUNTAINS, SCOTLAND. <i>Weather</i> , 1985, 40, 272-277.	0.7	17
97	Runoff from glacierized mountains: A model for annual variation and its forecasting. <i>Water Resources Research</i> , 1985, 21, 702-708.	4.2	11
98	Discussion of "Channel Migration and Incision on The Beatton River" by Gerald C. Nanson and Edward J. Hickin (March, 1983). <i>Journal of Hydraulic Engineering</i> , 1984, 110, 1682-1683.	1.5	0
99	Magnitude and modelling of snowmelt runoff in the Cairngorm mountains, Scotland. <i>Hydrological Sciences Journal</i> , 1984, 29, 49-62.	2.6	42
100	Topologic Asymmetry of Drainage Networks: The L Index and Its Applications. <i>Journal of Geology</i> , 1980, 88, 457-465.	1.4	2
101	Stream network volume: An index of channel morphometry: Discussion and reply. <i>Bulletin of the Geological Society of America</i> , 1979, 90, 606.	3.3	2
102	Meander sinuosity and direction variance. <i>Bulletin of the Geological Society of America</i> , 1977, 88, 212.	3.3	23
103	On determining distances through stream networks. <i>Water Resources Research</i> , 1977, 13, 672-674.	4.2	7
104	Disturbed periodic model for river meanders. <i>Earth Surfaces Processes</i> , 1976, 1, 337-347.	0.7	42
105	Markov Models in Geography. <i>Journal of the Royal Statistical Society: Series D (the Statistician)</i> , 1974, 23, 179.	0.2	12
106	Regular meander path models. <i>Water Resources Research</i> , 1973, 9, 1079-1086.	4.2	26
107	Sinuosity of Supraglacial Streams. <i>Bulletin of the Geological Society of America</i> , 1973, 84, 251.	3.3	65
108	Testing Numerical Models in Geomorphology: How can we Ensure Critical Use of Model Predictions?. <i>Geophysical Monograph Series</i> , 0, , 241-256.	0.1	9