

Bruce W Melville

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

131
papers

3,734
citations

31
h-index

58
g-index

140
ext. papers

4,426
ext. citations

2.5
avg, IF

5.79
L-index

#	Paper	IF	Citations
131	Time Scale for Local Scour at Bridge Piers. <i>Journal of Hydraulic Engineering</i> , 1999 , 125, 59-65	1.8	442
130	Pier and Abutment Scour: Integrated Approach. <i>Journal of Hydraulic Engineering</i> , 1997 , 123, 125-136	1.8	365
129	FLOW CHARACTERISTICS IN LOCAL SCOUR AT BRIDGE PIERS. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1977 , 15, 373-380	1.9	169
128	Scale Effect in Pier-Scour Experiments. <i>Journal of Hydraulic Engineering</i> , 1998 , 124, 639-642	1.8	142
127	Comparison of SDSM and LARS-WG for simulation and downscaling of extreme precipitation events in a watershed. <i>Stochastic Environmental Research and Risk Assessment</i> , 2011 , 25, 475-484	3.5	133
126	Initiation of Bed Forms on a Flat Sand Bed. <i>Journal of Hydraulic Engineering</i> , 1996 , 122, 301-310	1.8	110
125	Riprap Protection at Bridge Piers. <i>Journal of Hydraulic Engineering</i> , 2001 , 127, 412-418	1.8	106
124	Clear-water scour development at bridge abutments. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2003 , 41, 521-531	1.9	101
123	Bed-Form Development. <i>Journal of Hydraulic Engineering</i> , 1994 , 120, 544-560	1.8	101
122	Effects of Foundation Geometry on Bridge Pier Scour. <i>Journal of Hydraulic Engineering</i> , 1996 , 122, 203-208	1.8	89
121	Comparative study of different wavelet based neural network models for rainfall runoff modeling. <i>Journal of Hydrology</i> , 2014 , 515, 47-58	6	88
120	Bridge Pier Scour with Debris Accumulation. <i>Journal of Hydraulic Engineering</i> , 1992 , 118, 1306-1310	1.8	88
119	Clear-Water Local Scour around Pile Groups in Shallow-Water Flow. <i>Journal of Hydraulic Engineering</i> , 2012 , 138, 177-185	1.8	85
118	Local scour and flow measurements at bridge abutments. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1994 , 32, 661-673	1.9	68
117	Statistical downscaling of watershed precipitation using Gene Expression Programming (GEP). <i>Environmental Modelling and Software</i> , 2011 , 26, 1639-1646	5.2	64
116	A comparison between wavelet based static and dynamic neural network approaches for runoff prediction. <i>Journal of Hydrology</i> , 2016 , 535, 211-225	6	59
115	Flow Patterns and Turbulence Structures in a Scour Hole Downstream of a Submerged Weir. <i>Journal of Hydraulic Engineering</i> , 2014 , 140, 68-76	1.8	59

114	Runoff forecasting using hybrid Wavelet Gene Expression Programming (WGEP) approach. <i>Journal of Hydrology</i> , 2015 , 527, 326-344	6	57
113	Experimental investigation of tsunami bore impact force and pressure on a square prism. <i>Coastal Engineering</i> , 2016 , 110, 1-16	4.8	57
112	Bayesian neural networks for prediction of equilibrium and time-dependent scour depth around bridge piers. <i>Advances in Engineering Software</i> , 2007 , 38, 102-111	3.6	55
111	Live-bed Scour at Bridge Piers. <i>Journal of Hydraulic Engineering</i> , 1984 , 110, 1234-1247	1.8	55
110	Use of Sacrificial Piles as Pier Scour Countermeasures. <i>Journal of Hydraulic Engineering</i> , 1999 , 125, 1221-1224	1.8	54
109	Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment. <i>Journal of Hydraulic Engineering</i> , 2010 , 136, 756-769	1.8	52
108	Flow-Field Complexity and Design Estimation of Pier-Scour Depth: Sixty Years since Laursen and Toch. <i>Journal of Hydraulic Engineering</i> , 2017 , 143, 03117006	1.8	49
107	Flow structures and hydrodynamic force during sediment entrainment. <i>Water Resources Research</i> , 2011 , 47,	5.4	48
106	Live-Bed Scour at Submerged Weirs. <i>Journal of Hydraulic Engineering</i> , 2015 , 141, 04014071	1.8	45
105	Sediment Control at Water Intakes. <i>Journal of Hydraulic Engineering</i> , 1996 , 122, 353-356	1.8	42
104	Local scour at submerged weirs in sand-bed channels. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2016 , 54, 172-184	1.9	35
103	Three-dimensional analysis of coherent turbulent flow structure around a single circular bridge pier. <i>Environmental Fluid Mechanics</i> , 2014 , 14, 821-847	2.2	33
102	Local scour at piled bridge piers including an examination of the superposition method. <i>Canadian Journal of Civil Engineering</i> , 2014 , 41, 461-471	1.3	32
101	Bridge Abutment Scour in Compound Channels. <i>Journal of Hydraulic Engineering</i> , 1995 , 121, 863-868	1.8	32
100	Local Scour at Downstream Sloped Submerged Weirs. <i>Journal of Hydraulic Engineering</i> , 2018 , 144, 04018084	1.8	27
99	Case Study: New Zealand Bridge Scour Experiences. <i>Journal of Hydraulic Engineering</i> , 2001 , 127, 535-546	1.8	26
98	Estimation of maximum scour depths at upstream of front and rear piers for two in-line circular columns. <i>Environmental Fluid Mechanics</i> , 2018 , 18, 537-550	2.2	24
97	A Comparative Study of Various Hybrid Wavelet Feedforward Neural Network Models for Runoff Forecasting. <i>Water Resources Management</i> , 2018 , 32, 83-103	3.7	24

96	Fluvial Entrainment of Protruding Fractured Rock. <i>Journal of Hydraulic Engineering</i> , 2003 , 129, 872-884	1.8	22
95	Measurements of tsunami-borne debris impact on structures using an embedded accelerometer. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2016 , 54, 435-449	1.9	22
94	Current-induced scour at monopile foundations subjected to lateral vibrations. <i>Coastal Engineering</i> , 2019 , 144, 15-21	4.8	22
93	Scour Caused by 2D Horizontal Jets. <i>Journal of Hydraulic Engineering</i> , 2014 , 140, 149-155	1.8	21
92	Countermeasure Toe Protection at Spill-Through Abutments. <i>Journal of Hydraulic Engineering</i> , 2006 , 132, 235-245	1.8	21
91	Scour Countermeasures for Wing-Wall Abutments. <i>Journal of Hydraulic Engineering</i> , 2006 , 132, 563-574	1.8	21
90	Clear-Water Local Scour at Skewed Complex Bridge Piers. <i>Journal of Hydraulic Engineering</i> , 2018 , 144, 04018019	1.8	20
89	Effects of Upstream Weir Slope on Local Scour at Submerged Weirs. <i>Journal of Hydraulic Engineering</i> , 2018 , 144, 04018002	1.8	19
88	Experimental study of uplift loads due to tsunami bore impact on a wharf model. <i>Coastal Engineering</i> , 2016 , 117, 126-137	4.8	19
87	Design of Storm-Water Retention Ponds with Floating Treatment Wetlands. <i>Journal of Environmental Engineering, ASCE</i> , 2013 , 139, 1343-1349	2	19
86	Analysis of hydrodynamic lift on a bed sediment particle. <i>Journal of Geophysical Research</i> , 2011 , 116,		19
85	Hydrodynamics, Sediment Transport and Morphological Features at the Confluence Between the Yangtze River and the Poyang Lake. <i>Water Resources Research</i> , 2021 , 57, e2020WR028284	5.4	19
84	Drag force on a sediment particle from point velocity measurements: A spectral approach. <i>Water Resources Research</i> , 2010 , 46,	5.4	18
83	Effects of a downstream submerged weir on local scour at bridge piers. <i>Journal of Hydro-Environment Research</i> , 2018 , 20, 101-109	2.3	16
82	Scour at wind turbine tripod foundation under steady flow. <i>Ocean Engineering</i> , 2017 , 141, 277-282	3.9	16
81	An Experimental Investigation of Tsunami Bore Impacts on a Coastal Bridge Model with Different Contraction Ratios. <i>Journal of Coastal Research</i> , 2018 , 342, 460-469	0.6	15
80	Temporal Evolution of Clear-Water Local Scour at Aligned and Skewed Complex Bridge Piers. <i>Journal of Hydraulic Engineering</i> , 2020 , 146, 04020026	1.8	14
79	Riprap Size Selection at Wing-Wall Abutments. <i>Journal of Hydraulic Engineering</i> , 2007 , 133, 1265-1269	1.8	14

78	Hybrid Wavelet Neuro-Fuzzy Approach for Rainfall-Runoff Modeling. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30, 04014125	5	13
77	A wavelet based approach for combining the outputs of different rainfall-runoff models. <i>Stochastic Environmental Research and Risk Assessment</i> , 2018 , 32, 155-168	3.5	13
76	Statistically downscaled probabilistic multi-model ensemble projections of precipitation change in a watershed. <i>Hydrological Processes</i> , 2013 , 27, 1021-1032	3.3	13
75	Knowledge Extraction From Artificial Neural Networks for Rainfall-Runoff Model Combination Systems. <i>Journal of Hydrologic Engineering - ASCE</i> , 2014 , 19, 1422-1429	1.8	13
74	The effect of different baffles on hydraulic performance of a sediment retention pond. <i>Ecological Engineering</i> , 2015 , 81, 228-232	3.9	12
73	Statistical Properties of Partial Duration Series: Case Study of North Island, New Zealand. <i>Journal of Hydrologic Engineering - ASCE</i> , 2014 , 19, 807-815	1.8	12
72	Retrofitting a stormwater retention pond using a deflector island. <i>Water Science and Technology</i> , 2011 , 63, 2867-72	2.2	12
71	Experimental study on local scour at complex bridge pier under combined waves and current. <i>Coastal Engineering</i> , 2020 , 160, 103730	4.8	11
70	Experimental investigation of tsunami-borne debris impact force on structures: Factors affecting impulse-momentum formula. <i>Ocean Engineering</i> , 2016 , 127, 158-169	3.9	11
69	Local Scour at Complex Bridge Piers in Close Proximity under Clear-Water and Live-Bed Flow Regime. <i>Water (Switzerland)</i> , 2019 , 11, 1530	3	11
68	Investigation of Flow Patterns in Storm Water Retention Ponds using CFD. <i>Journal of Environmental Engineering, ASCE</i> , 2013 , 139, 61-69	2	11
67	A Multi-Scale Analysis of Single-Unit Housing Water Demand Through Integration of Water Consumption, Land Use and Demographic Data. <i>Water Resources Management</i> , 2017 , 31, 2173-2186	3.7	10
66	Live-Bed Scour at Wide and Long-Skewed Bridge Piers in Comparatively Shallow Water. <i>Journal of Hydraulic Engineering</i> , 2019 , 145, 06019005	1.8	10
65	Scour Estimation Downstream of Submerged Weirs. <i>Journal of Hydraulic Engineering</i> , 2019 , 145, 06019016	1.8	9
64	Future implications of urban intensification on residential water demand. <i>Journal of Environmental Planning and Management</i> , 2017 , 60, 1809-1824	2.8	8
63	Role of Turbulence and Particle Exposure on Entrainment of Large Spherical Particles in Flows with Low Relative Submergence. <i>Journal of Hydraulic Engineering</i> , 2012 , 138, 1022-1030	1.8	8
62	Estimation of the effects of price on apartment water demand using cointegration and error correction techniques. <i>Applied Economics</i> , 2016 , 48, 461-470	1.6	7
61	Flow Measurement Using Flying ADV Probes. <i>Journal of Hydraulic Engineering</i> , 2007 , 133, 1345-1355	1.8	7

60	SWAT.nz: New-Zeland-based Band Waves and Turbulence Experimental programme. <i>Acta Geophysica</i> , 2008 , 56, 417-439	2.2	7
59	2007 ,		7
58	Temporal Evolution of Clear-Water Scour Depth at Submerged Weirs. <i>Journal of Hydraulic Engineering</i> , 2020 , 146, 06020001	1.8	7
57	Evaluation of hydraulic performance indices for retention ponds. <i>Water Science and Technology</i> , 2015 , 72, 10-21	2.2	6
56	Impacts of Bridge Piers on Scour at Downstream River Training Structures: Submerged Weir as an Example. <i>Water Resources Research</i> , 2020 , 56, e2019WR026720	5.4	6
55	Implementation Aspects and Offline Digital Signal Processing of a Smart Pebble for River Bed Sediment Transport Monitoring 2006 ,		6
54	Discussions and Closure: Pier and Abutment Scour: Integrated Approach. <i>Journal of Hydraulic Engineering</i> , 1998 , 124, 769-774	1.8	6
53	Experimental investigation of tsunami bore-induced forces and pressures on skewed box section bridges. <i>Ocean Engineering</i> , 2021 , 224, 108730	3.9	6
52	Clear-water scour at long skewed bridge piers 2017 , 40, 10-18		5
51	Stratification of NWP Forecasts for Medium-Range Ensemble Streamflow Forecasting. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015 , 20, 04014076	1.8	5
50	Investigations of Reduction Effect of Vertical Wall on Dam-Break-Simulated Tsunami Surge Exerted on Wharf Piles. <i>Journal of Earthquake and Tsunami</i> , 2018 , 12, 1840006	1.1	5
49	Mitigation Effect of Vertical Walls on a Wharf Model Subjected to Tsunami Bores. <i>Journal of Earthquake and Tsunami</i> , 2017 , 11, 1750004	1.1	5
48	Impact of Ensemble Size on Forecasting Occurrence of Rainfall Using TIGGE Precipitation Forecasts. <i>Journal of Hydrologic Engineering - ASCE</i> , 2014 , 19, 732-738	1.8	5
47	Statistical Properties of Partial Duration Series and Its Implication on Regional Frequency Analysis. <i>Journal of Hydrologic Engineering - ASCE</i> , 2014 , 19, 1471-1480	1.8	5
46	Dynamic morphology in a bridge-contracted compound channel during extreme floods: Effects of abutments, bed-forms and scour countermeasures. <i>Journal of Hydrology</i> , 2021 , 594, 125930	6	5
45	Tsunami loads on slab bridges. <i>Coastal Engineering</i> , 2021 , 165, 103853	4.8	5
44	A Multi-Scale Analysis of Low-Rise Apartment Water Demand through Integration of Water Consumption, Land Use, and Demographic Data. <i>Journal of the American Water Resources Association</i> , 2016 , 52, 1056-1067	2.1	5
43	Mitigation of tsunami bore impact on a vertical wall behind a barrier. <i>Coastal Engineering</i> , 2021 , 164, 103833	4.8	5

42	Instant tsunami bore pressure and force on a cylindrical structure. <i>Journal of Hydro-Environment Research</i> , 2018 , 19, 28-40	2.3	4
41	Hybrid Wavelet Neural Network Approach. <i>Studies in Computational Intelligence</i> , 2016 , 127-143	0.8	4
40	Experimental investigation of the effect of temperature differentials on hydraulic performance and flow pattern of a sediment retention pond. <i>Water Science and Technology</i> , 2018 , 77, 2896-2906	2.2	4
39	Flow-Induced Failure of Cable-Tied Blocks. <i>Journal of Hydraulic Engineering</i> , 2006 , 132, 324-327	1.8	4
38	Pickup rate of non-cohesive sediments in low-velocity flows. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1-11	1.9	4
37	Effects of Streamwise Abutment Length on Scour at Riprap Apron-Protected Setback Abutments in Compound Channels. <i>Journal of Hydraulic Engineering</i> , 2021 , 147, 04021003	1.8	4
36	Assessment of Climate Change Impact on Water Balance of Forested and Farmed Catchments. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015 , 20, 04015009	1.8	3
35	Evaluating the determinants of high-rise apartment water demand through integration of water consumption, land use and demographic data. <i>Water Policy</i> , 2018 , 20, 966-981	1.6	3
34	Impact of Ensemble Size on TIGGE Precipitation Forecasts: An End-User Perspective. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015 , 20, 04014046	1.8	3
33	Estimation of soil hydraulic properties and their uncertainty through the Beerkan infiltration experiment. <i>Hydrological Processes</i> , 2015 , 29, 3699-3713	3.3	3
32	Closure to Clear-Water Local Scour around Pile Groups in Shallow-Water Flow. By Ata Amini, Bruce W. Melville, Thamer M. Ali, and Abdul H. Ghazali. <i>Journal of Hydraulic Engineering</i> , 2013 , 139, 680-681	1.8	3
31	Low-Cost Autonomous 3-D Monitoring Systems for Hydraulic Engineering Environments and Applications With Limited Accuracy Requirements. <i>IEEE Sensors Journal</i> , 2010 , 10, 331-339	4	3
30	Bridge-Scour Prevention and Countermeasures 2008 , 543-577		3
29	Riprap Protection of Bridge Abutments under Clear Water Conditions 2000 , 1		3
28	Hydraulic investigation of the impact of retrofitting floating treatment wetlands in retention ponds. <i>Water Science and Technology</i> , 2019 , 80, 1476-1484	2.2	3
27	Projection of future extreme precipitation: a robust assessment of downscaled daily precipitation. <i>Natural Hazards</i> , 2021 , 107, 311-329	3	3
26	Effect of baffles on the hydraulic performance of sediment retention ponds. <i>Water Science and Technology</i> , 2017 , 75, 1991-1996	2.2	2
25	Stability of Composite Breakwaters under Tsunami Attack. <i>Journal of Waterway, Port, Coastal and Ocean Engineering</i> , 2020 , 146, 04020011	1.7	2

24	Scale Effect in Pier-Scour Experiments. <i>Journal of Hydraulic Engineering</i> , 1999 , 125, 894-895	1.8	2
23	Closure to Local Scour at Bridge Abutments by B. W. Melville (April, 1992, Vol. 118, No. 4). <i>Journal of Hydraulic Engineering</i> , 1993 , 119, 1071-1073	1.8	2
22	Closure to Bridge Pier Scour with Debris Accumulation by Bruce W. Melville and D. M. Dongol (September, 1992, Vol. 118, No. 9). <i>Journal of Hydraulic Engineering</i> , 1994 , 120, 523-524	1.8	2
21	Countermeasures for local scour at offshore wind turbine monopile foundations: A review. <i>Water Science and Engineering</i> , 2022 , 15, 15-15	4	2
20	Numerical Simulation of Turbidity Current in Approach Channels with a Closed End. <i>Journal of Waterway, Port, Coastal and Ocean Engineering</i> , 2020 , 146, 04020036	1.7	2
19	Flow Redistribution at Bridge Contractions in Compound Channel for Extreme Hydrological Events and Implications for Sediment Scour. <i>Journal of Hydraulic Engineering</i> , 2021 , 147, 04021005	1.8	2
18	Stream Temperature Modeling and Fiber Optic Temperature Sensing to Characterize Groundwater Discharge. <i>Ground Water</i> , 2020 , 58, 661-673	2.4	2
17	Assessment of the Myitnge River flow responses in Myanmar under changes in land use and climate. <i>Modeling Earth Systems and Environment</i> , 2021 , 7, 1393-1415	3.2	2
16	Experimental study on local scour at complex bridge piers under steady currents with bed-form migration. <i>Ocean Engineering</i> , 2021 , 234, 109329	3.9	2
15	Scour geometry at long skewed bridge piers under shallow water flows. <i>Water Management</i> , 2018 , 171, 241-252	1	1
14	Evaluating spatial and seasonal determinants of residential water demand across different housing types through data integration. <i>Water International</i> , 2018 , 43, 926-942	2.4	1
13	Local Scour at Complex Piers 2006 , 1		1
12	Closure to Time Scale for Local Scour at Bridge Piers by Bruce W. Melville and Yee-Meng Chiew. <i>Journal of Hydraulic Engineering</i> , 2000 , 126, 794-794	1.8	1
11	Discussion of Effects of Footing Location on Bridge Pier Scour by J. Sterling Jones, Roger T. Kilgore, and Mark P. Mistichelli (February, 1992, Vol. 118, No. 2). <i>Journal of Hydraulic Engineering</i> , 1993 , 119, 296-298	1.8	1
10	Experimental investigation of the effects of contraction on tsunami-induced forces and pressures on a box section bridge. <i>Journal of Hydro-Environment Research</i> , 2022 , 40, 116-130	2.3	1
9	Improving the Summer Power Generation of a Hydropower Reservoir Using the Modified Multi-Step Ahead Time-Varying Hedging Rule. <i>Water Resources Management</i> , 2022 , 36, 853	3.7	1
8	Waves Generated by Discrete and Sustained Gas Eruptions With Implications for Submarine Volcanic Tsunamis. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL094539	4.9	1
7	Experimental Investigation of Tsunami Bore-Induced Forces on Skewed Deck Girder Section Bridges. <i>Journal of Hydraulic Engineering</i> , 2021 , 147, 04021027	1.8	1

6	The effect of inlet width on the performance of sediment retention ponds in thermally induced flows. <i>Journal of Hydrology</i> , 2022 , 606, 127377	6	o
5	Characteristics of the flow field within a developing scour hole at a submerged weir. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1-12	1.9	o
4	A preliminary study on scour at submerged weirs in live bed conditions 2014 , 1401-1406		
3	Closure to Fluvial Entrainment of Protruding Fractured Rock By Stephen E. Coleman, Bruce W. Melville, and Lance Gore. <i>Journal of Hydraulic Engineering</i> , 2005 , 131, 143-144	1.8	
2	Discussion of Study of Time-Dependent Local Scour Around Bridge Piers By A. Melih Yanmaz and H. Dogan Altmbilek (October, 1991, Vol. 117, No. 10). <i>Journal of Hydraulic Engineering</i> , 1992 , 118, 1593-1595	1.8	
1	Book Review - Experimental Hydraulics: Methods, Instrumentation, Data Processing and Management. Marian Muste (Editor in Chief). IAHR Monographs, two volumes, CRC Press, 2017. 906 pp. ISBN: 9781138027534. \$190.00.. <i>Journal of Fluid Mechanics</i> , 2018 , 855, 1238-1241	3.7	