Benjamin Dewals

List of Publications by Year
in descending order

122	2,029	218677	289244
papers	citations	26 h-index	40 g-index

139	139	139	1463
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Experimental Assessment of the Influence of Fish Passage Geometry Parameters on Downstream Migrating Atlantic Salmon (Salmo salar) Smolts Behavior. Water (Switzerland), 2022, 14, 616.	2.7	1
2	Discharge Redistribution as a Key Process for Heuristic Optimization of Energy Production with Pumps as Turbines in a Water Distribution Network. Water Resources Management, 2022, 36, 1237-1250.	3.9	8
3	Hydraulic modelling of inland urban flooding: Recent advances. Journal of Hydrology, 2022, 609, 127763.	5.4	32
4	Unsteady shallow meandering flows in rectangular reservoirs: A modal analysis of URANS modelling. Journal of Hydro-Environment Research, 2022, 42, 12-20.	2.2	0
5	Laboratory modelling of urban flooding. Scientific Data, 2022, 9, 159.	5.3	5
6	INSYDE-BE: adaptation of the INSYDE model to the Walloon region (Belgium). Natural Hazards and Earth System Sciences, 2022, 22, 1743-1761.	3.6	2
7	Apparent cohesion effects on overtopping-induced fluvial dike breaching. Journal of Hydraulic Research/De Recherches Hydrauliques, 2021, 59, 75-87.	1.7	7
8	Occurrence and Characteristic Frequencies of Nappe Oscillations at Free-Overfall Structures. Journal of Hydraulic Engineering, 2021, 147, .	1.5	3
9	Behind the scenes of streamflow model performance. Hydrology and Earth System Sciences, 2021, 25, 1069-1095.	4.9	26
10	Environmental Inequalities in Flood Exposure: A Matter of Scale. Frontiers in Water, 2021, 3, .	2.3	9
11	Porosity Models for Large-Scale Urban Flood Modelling: A Review. Water (Switzerland), 2021, 13, 960.	2.7	12
12	Overtoppingâ€Induced Failure of Nonâ€“Cohesive Homogeneous Fluvial Dikes: Effect of Dike Geometry on Breach Discharge and Widening. Water Resources Research, 2021, 57, e2021WR029660.	4.2	11
13	Water Soluble Polymers as a Means to Increase Flow Capacity: Field Experiment of Drag Reduction by Polymer Additives in an Irrigation Canal. Journal of Hydraulic Engineering, 2021, 147, .	1.5	9
14	Experimental and Numerical Study of the Effect of Model Geometric Distortion on Laboratory Modeling of Urban Flooding. Water Resources Research, 2021, 57, e2021WR029666.	4.2	11
15	Trying to choose the less bad route: Individual migratory behaviour of Atlantic salmon smolts (Salmo) Tj ETQq1 1 0.784314 rgBT /Ove Engineering, 2021, 169, 106304.	3.6	6
16	Exchange between drainage systems and surface flows during urban flooding: Quasi-steady and dynamic modelling in unsteady flow conditions. Journal of Hydrology, 2021, 602, 126628.	5.4	16
17	Influence of urban forms on long-duration urban flooding: Laboratory experiments and computational analysis. Journal of Hydrology, 2021, 603, 127034.	5.4	24
18	Procedural generation of flood-sensitive urban layouts. Environment and Planning B: Urban Analytics and City Science, 2020, 47, 889-911.	2.0	16

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19	Influence of urban forms on surface flow in urban pluvial flooding. Journal of Hydrology, 2020, 582, 124493.	5.4	39
20	Nappe oscillations on free-overfall structures, data from laboratory experiments. Scientific Data, 2020, 7, 180.	5.3	6
21	An Optimized and Scalable Algorithm for the Fast Convergence of Steady 1-D Open-Channel Flows. Water (Switzerland), 2020, 12, 3218.	2.7	1
22	The need to integrate flood and drought disaster risk reduction strategies. Water Security, 2020, 11, 100070.	2.5	83
23	Underground Pumped-Storage Hydropower (UPSH) at the Martelange Mine (Belgium): Underground Reservoir Hydraulics. Energies, 2020, 13, 3512.	3.1	28
24	Discrepancies in Flood Modelling Approaches in Transboundary River Systems: Legacy of the Past or Well-grounded Choices?. Water Resources Management, 2020, 34, 3465-3478.	3.9	4
25	Continuous Monitoring of Fluvial Dike Breaching by a Laser Profilometry Technique. Water Resources Research, 2020, 56, e2019WR026941.	4.2	3
26	Age of Water Particles as a Diagnosis of Steady-State Flows in Shallow Rectangular Reservoirs. Water (Switzerland), 2020, 12, 2819.	2.7	3
27	Discussion of â€œModeling and Prototype Testing of Flows over Flip-Bucket Aeratorsâ€•by Penghua Teng and James Yang. Journal of Hydraulic Engineering, 2020, 146, .	1.5	1
28	Numerical Insights Into the Effects of Model Geometric Distortion in Laboratory Experiments of Urban Flooding. Water Resources Research, 2020, 56, e2019WR026774.	4.2	7
29	Nappe flows on a stepped chute with prototype-scale steps height: Observations of flow patterns, air-water flow properties, energy dissipation and dissolved oxygen. Journal of Hydro-Environment Research, 2019, 27, 1-19.	2.2	13
30	Technical note: Laboratory modelling of urban flooding: strengths and challenges of distorted scale models. Hydrology and Earth System Sciences, 2019, 23, 1567-1580.	4.9	11
31	Flow and detailed 3D morphodynamic data from laboratory experiments of fluvial dike breaching. Scientific Data, 2019, 6, 53.	5.3	9
32	Nappe Oscillations on Free-Overfall Structures: Size Scale Effects. Journal of Hydraulic Engineering, 2019, 145, 04019022.	1.5	6
33	Experimental modelling of urban flooding: A review. Journal of Hydrology, 2019, 568, 334-342.	5.4	129
34	Flow field in shallow reservoir with varying inlet and outlet position. Journal of Hydraulic Research/De Recherches Hydrauliques, 2018, 56, 689-696.	1.7	4
35	Comparison Between Robust and Stochastic Optimisation for Long-term Reservoir Management Under Uncertainty. Water Resources Management, 2018, 32, 1599-1614.	3.9	14
36	Hydraulic Determination of Dam Releases to Generate Warning Waves in a Mountain Stream: Performance of an Analytical Kinematic Wave Model. Journal of Hydraulic Engineering, 2018, 144, 05017006.	1.5	6

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37	Nappe Oscillations on Free-Overfall Structures: Experimental Analysis. Journal of Hydraulic Engineering, 2018, 144, .	1.5	14
38	Development trajectory of an integrated framework for the mitigation of future flood risk: results from the FloodLand project. Transportation Letters, 2018, 10, 243-256.	3.1	5
39	Maximum energy dissipation to explain velocity fields in shallow reservoirs. Journal of Hydraulic Research/De Recherches Hydrauliques, 2018, 56, 221-230.	1.7	4
40	Influence of urban pattern on inundation flow in floodplains of lowland rivers. Science of the Total Environment, 2018, 622-623, 446-458.	8.0	43
41	Improvement of anisotropic porosity models with a merging technique. E3S Web of Conferences, 2018, 40, 06023.	0.5	0
42	Numerical Simulation of lateral dike breaching due to overtopping. E3S Web of Conferences, 2018, 40, 03025.	0.5	1
43	Technical Note: An Operational Implementation of Recursive Digital Filter for Base Flow Separation. Water Resources Research, 2018, 54, 8528-8540.	4.2	12
44	Numerical study of building drag dissipation for- mulations in the integral porosity shallow water model. E3S Web of Conferences, 2018, 40, 06017.	0.5	0
45	Floodplain Backwater Effect on Overtopping Induced Fluvial Dike Failure. Water Resources Research, 2018, 54, 9060-9073.	4.2	14
46	Effects of spatial planning on future flood risks in urban environments. Journal of Environmental Management, 2018, 225, 193-204.	7.8	97
47	Formation, breaching and flood consequences of a landslide dam near Bujumbura, Burundi. Natural Hazards and Earth System Sciences, 2018, 18, 1867-1890.	3.6	17
48	15 Years of Composite Modelling to Enhance Hydraulic Structures Studies. Springer Water, 2018, , 751-766.	0.3	0
49	Overtopping induced failure of noncohesive, homogeneous fluvial dikes. Water Resources Research, 2017, 53, 3373-3386.	4.2	32
50	Shallow-water models with anisotropic porosity and merging for flood modelling on Cartesian grids. Journal of Hydrology, 2017, 554, 693-709.	5.4	41
51	Computing flooding of crossroads with obstacles using a 2D numerical model. Journal of Hydraulic Research/De Recherches Hydrauliques, 2017, 55, 737-741.	1.7	6
52	Discussion of â€œLaboratory Study on 3D Flow Structures Induced by Zero-Height Side Weir and Implications for 1D Modelingâ€•by Giovanni Michelazzo, Hocine Oumeraci, and Enio Paris. Journal of Hydraulic Engineering, 2017, 143, .	1.5	1
53	Looking beyond general metrics for model comparison â€“ lessons from an international model intercomparison study. Hydrology and Earth System Sciences, 2017, 21, 423-440.	4.9	34
54	Hydraulics of Piano Key Weirs: A review. , 2017, , 27-36.		9

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55	A Piano Key Weir to improve the discharge capacity of the Oule Dam spillway (France). , 2017, , 195-204.		0
56	Does the Budyko curve reflect a maximum-power state of hydrological systems? A backward analysis. Hydrology and Earth System Sciences, 2016, 20, 479-486.	4.9	11
57	Hydrodynamics of long-duration urban floods: experiments and numerical modelling. Natural Hazards and Earth System Sciences, 2016, 16, 1413-1429.	3.6	37
58	Discretization of the divergence formulation of the bed slope term in the shallow-water equations and consequences in terms of energy balance. Applied Mathematical Modelling, 2016, 40, 7532-7544.	4.2	7
59	Energy conservation properties of Ritter solution for idealized dam break flow. Journal of Hydraulic Research/De Recherches Hydrauliques, 2016, 54, 581-585.	1.7	2
60	Scale effects in physical piano key weirs models. Journal of Hydraulic Research/De Recherches Hydrauliques, 2016, 54, 692-698.	1.7	60
61	Impacts of urban expansion on future flood damage: A case study in the River Meuse basin, Belgium. , 2016, , 856-862.		1
62	Monitoring topography of laboratory fluvial dike models subjected to breaching based on a laser profilometry technique. , 2016, , 380-386.		5
63	Sensitivity of the breaching process in the case of overtopping induced fluvial dike failure. , 2016, , .		4
64	Hydrodynamic instabilities in shallow reservoirs: Implications for sediment management. , 2016, , 1066-1066.		0
65	Assessing the operation rules of a reservoir system based on a detailed modelling chain. Natural Hazards and Earth System Sciences, 2015, 15, 365-379.	3.6	19
66	Can Meandering Flows in Shallow Rectangular Reservoirs Be Modeled with the 2D Shallow Water Equations?. Journal of Hydraulic Engineering, 2015, 141, .	1.5	8
67	Impacts of climate change on future flood damage on the river Meuse, with a distributed uncertainty analysis. Natural Hazards, 2015, 77, 1533-1549.	3.4	19
68	Stochastic Modelling of Reservoir Sedimentation in a Semi-Arid Watershed. Water Resources Management, 2015, 29, 785-800.	3.9	9
69	Closure to â€œParapet Wall Effect on Piano Key Weir Efficiencyâ€•by O. Machiels, S. Erpicum, P. Archambeau, B. Dewals, and M. Pirotton. Journal of Irrigation and Drainage Engineering - ASCE, 2015, 141, 07014033.	1.0	0
70	Can the collapse of a fly ash heap develop into an air-fluidized flow? â€" Reanalysis of the Jupille accident (1961). Geomorphology, 2015, 228, 746-755.	2.6	5
71	ModÃ©lisation hydraulique dÃ©taillÃ©e d'inondations extrÃªmes sur un tronÃ§on transnational de la Meuse. Houille Blanche, 2015, 101, 75-81.	0.3	0
72	Prediction of Mean and Turbulent Kinetic Energy In Rectangular Shallow Reservoirs. Engineering Applications of Computational Fluid Mechanics, 2014, 8, 586-597.	3.1	6

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73	Experimental investigation of meandering jets in shallow reservoirs. Environmental Fluid Mechanics, 2014, 14, 699-710.	1.6	12
74	Meandering jets in shallow rectangular reservoirs: POD analysis and identification of coherent structures. Experiments in Fluids, 2014, 55, 1.	2.4	16
75	Experimental parametric study and design of Piano Key Weirs. Journal of Hydraulic Research/De Recherches Hydrauliques, 2014, 52, 326-335.	1.7	64
76	Two-dimensional depth-averaged finite volume model for unsteady turbulent flows. Journal of Hydraulic Research/De Recherches Hydrauliques, 2014, 52, 148-150.	1.7	5
77	Dam Break Flow Modelling with Uncertainty Analysis. , 2014, , 107-116.		2
78	Innovative modelling of 3D unsaturated flow in porous media by coupling independent models for vertical and lateral flows. Journal of Computational and Applied Mathematics, 2013, 246, 38-51.	2.0	15
79	Coupling between flow and sediment deposition in rectangular shallow reservoirs. Journal of Hydraulic Research/De Recherches Hydrauliques, 2013, 51, 535-547.	1.7	28
80	Dike-break induced flows: a simplified model. Environmental Fluid Mechanics, 2013, 13, 89-100.	1.6	6
81	Discussion of â€œSensitivity Analysis of Nonequilibrium Adaptation Parameters for Modeling Mining-Pit Migrationâ€•by Dong Chen, Kumud Acharya, and Mark Stone. Journal of Hydraulic Engineering, 2013, 139, 799-801.	1.5	1
82	Local Head-Loss Coefficient at the Rectangular Transition from a Free-Surface Channel to a Conduit. Journal of Hydraulic Engineering, 2013, 139, 1318-1323.	1.5	3
83	Parapet Wall Effect on Piano Key Weir Efficiency. Journal of Irrigation and Drainage Engineering - ASCE, 2013, 139, 506-511.	1.0	30
84	Contribution of land use changes to future flood damage along the river Meuse in the Walloon region. Natural Hazards and Earth System Sciences, 2013, 13, 2301-2318.	3.6	68
85	Impact of climate change on inundation hazard along the river Meuse. , 2013, , 19-27.		3
86	Three-phase bi-layer model for simulating mixed flows. Journal of Hydraulic Research/De Recherches Hydrauliques, 2012, 50, 312-319.	1.7	9
87	Semi-Explicit Modelling of Watersheds with Urban Drainage Systems. Engineering Applications of Computational Fluid Mechanics, 2012, 6, 46-57.	3.1	6
88	Experimental study of velocity fields in rectangular shallow reservoirs. Journal of Hydraulic Research/De Recherches Hydrauliques, 2012, 50, 435-436.	1.7	10
89	Flow patterns and sediment deposition in rectangular shallow reservoirs. Water and Environment Journal, 2012, 26, 504-510.	2.2	15
90	Composite modeling to enhance hydraulic structures studies. Houille Blanche, 2012, 98, 34-40.	0.3	2

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91	Experimental observation of flow characteristics over a Piano Key Weir. Journal of Hydraulic Research/De Recherches Hydrauliques, 2011, 49, 359-366.	1.7	74
92	Theoretical and numerical analysis of the influence of the bottom friction formulation in free surface flow modelling. Water S A, 2011, 37, .	0.4	7
93	Advanced Topics in Sediment Transport Modelling: Non-alluvial Beds and Hyperconcentrated Flows. , 2011, , .		8
94	Numerical Investigation of Flow Patterns in Rectangular Shallow Reservoirs. Engineering Applications of Computational Fluid Mechanics, 2011, 5, 247-258.	3.1	26
95	1D numerical modeling of the flow over a Piano KeyWeir. , 2011, , 151-158.		15
96	Failure of dams arranged in series or in complex. Natural Hazards, 2011, 56, 917-939.	3.4	31
97	A fast universal solver for 1D continuous and discontinuous steady flows in rivers and pipes. International Journal for Numerical Methods in Fluids, 2011, 66, 38-48.	1.6	27
98	CaractÃ©risation micro-echelle du risque dâ€™inondation : modÃ©lisation hydraulique dÃ©taillÃ©e et quantification des impacts socio-Ã©conomiques. Houille Blanche, 2011, 97, 28-34.	0.3	4
99	Efficient hydraulic numerical modeling with multiblock grids and linked models. Houille Blanche, 2011, 97, 56-62.	0.3	2
100	Incorporating climate change scenarios into new operating rules for large reservoirs. , 2011, , 469-477.		0
101	Micro-scale flood risk analysis based on detailed 2D hydraulic modelling and high resolution geographic data. Natural Hazards, 2010, 55, 181-209.	3.4	121
102	Modeling the Vertical Spincasting of Large Bimetallic Rolling Mill Rolls. Key Engineering Materials, 2010, 443, 15-20.	0.4	0
103	Classification of flow patterns in rectangular shallow reservoirs. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 197-204.	1.7	31
104	Detailed Inundation Modelling Using High Resolution DEMs. Engineering Applications of Computational Fluid Mechanics, 2010, 4, 196-208.	3.1	42
105	Experimental investigation of flow pattern and sediment deposition in rectangular shallow reservoirs. International Journal of Sediment Research, 2010, 25, 258-270.	3.5	32
106	Analyse expÃ©rimentale de lâ€™influence des largeurs dâ€™alvÃ©oles sur la dÃ©bitance des dÃ©versoirs en touches de piano. Houille Blanche, 2010, 96, 22-28.	0.3	7
107	ModÃ©lisation numÃ©rique 2D unifiÃ©e des Ã©coulements sur des Ã©vacuateurs de crue avec dÃ©versoir. Houille Blanche, 2010, 96, 102-108.	0.3	0
108	Experimental and numerical investigations of dike-break induced flows. Journal of Hydraulic Research/De Recherches Hydrauliques, 2009, 47, 349-359.	1.7	50

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109	2D numerical flow modeling in a macroâ€rough channel. International Journal for Numerical Methods in Fluids, 2009, 61, 1227-1246.	1.6	45
110	Automatic Geometrical Optimization by Way of Numerical Flow Models. , 2009, , 1663-1668.		1
111	A Systematic Procedure to Predict Flows Induced by Major Dysfunctions on Complexes or Cascades of Dams. , 2009, , 1868-1873.		1
112	Simulation numÃ©rique des Ã©coulements mixtes hautement transitoires dans les conduites d'Ã©vacuation des eaux. Houille Blanche, 2009, 95, 159-166.	0.3	6
113	ModÃ©lisation hydrologique Ã grande Ã©chelle des zones impermÃ©ables drainÃ©es. Houille Blanche, 2009, 95, 167-173.	0.3	0
114	Experimental investigation of flow and deposit patterns in rectangular shallow reservoirs. , 2009, , 169-172.		0
115	Experimental and numerical analysis of flow instabilities in rectangular shallow basins. Environmental Fluid Mechanics, 2008, 8, 31-54.	1.6	78
116	HÃ©tÃ©rogÃ©nÃ©itÃ© des Ã©chelles spatio-temporelles d'Ã©coulements hydrosÃ©dimentaires et modÃ©lisation numÃ©rique. Houille Blanche, 2008, 94, 109-114.	0.3	8
117	Detailed 2D flow simulations as an onset for evaluating socio-economic impacts of floods. , 2008, , 125-135.		3
118	Integration of accurate 2D inundation modelling, vector land use database and economic damage evaluation. , 2008, , 1643-1653.		6
119	Integrated assessment of flood protection measures in the context of climate change: hydraulic modelling and economic approach. WIT Transactions on Ecology and the Environment, 2008, , .	0.0	7
120	COMPUTATION OF THE MALPASSET DAM BREAK WITH A 2D CONSERVATIVE FLOW SOLVER ON A MULTIBLOCK STRUCTURED GRID. , 2004, , 277-284.		5
121	New trends in flood risk analysis: working with 2D flow models, laser DEM and a GIS environment. , 2004, , 1395-1401.		7
122	A set of efficient numerical tools for floodplain modeling. , 2004, , 549-558.		0