

# Jeff Neal

## List of Publications by Year in Descending Order

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**Version:** 2024-04-27

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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.

102  
papers

5,252  
citations

40  
h-index

71  
g-index

135  
ext. papers

6,363  
ext. citations

5.7  
avg, IF

5.88  
L-index

#	Paper	IF	Citations
102	Inequitable patterns of US flood risk in the Anthropocene. <i>Nature Climate Change</i> , <b>2022</b> , 12, 156-162	21.4	8
101	A 30 m global map of elevation with forests and buildings removed. <i>Environmental Research Letters</i> , <b>2022</b> , 17, 024016	6.2	6
100	Recent Innovations in Flood Hazard Modelling Over Large Data Sparse Regions. <i>Springer Climate</i> , <b>2022</b> , 121-127	0.3	
99	Evaluation des risques d'inondation par épisodes de retour multiples dans le bassin du fleuve Congo. <i>Geophysical Monograph Series</i> , <b>2022</b> , 537-559	1.1	
98	Towards a Framework of Catchment Classification for Hydrologic Predictions and Water Resources Management in the Ungauged Basin of the Congo River. <i>Geophysical Monograph Series</i> , <b>2022</b> , 469-498	1.1	0
97	Vers un cadre de classification des bassins versants pour les prédictions hydrologiques et la gestion des ressources en eau dans le bassin non jaugé du fleuve Congo : une approche a priori. <i>Geophysical Monograph Series</i> , <b>2022</b> , 485-515	1.1	
96	Multi-Return Periods, Flood Hazards, and Risk Assessment in the Congo River Basin. <i>Geophysical Monograph Series</i> , <b>2022</b> , 519-540	1.1	0
95	Design flood estimation for global river networks based on machine learning models. <i>Hydrology and Earth System Sciences</i> , <b>2021</b> , 25, 5981-5999	5.5	2
94	Bare-Earth DEM Generation in Urban Areas for Flood Inundation Simulation Using Global Digital Elevation Models. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR028516	5.4	6
93	Uncertainty in the extreme flood magnitude estimates of large-scale flood hazard models. <i>Environmental Research Letters</i> , <b>2021</b> , 16, 064013	6.2	1
92	Estimating River Channel Bathymetry in Large Scale Flood Inundation Models. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR028301	5.4	3
91	LISFLOOD-FP 8.0: the new discontinuous Galerkin shallow-water solver for multi-core CPUs and GPUs. <i>Geoscientific Model Development</i> , <b>2021</b> , 14, 3577-3602	6.3	6
90	Combined Modeling of US Fluvial, Pluvial, and Coastal Flood Hazard Under Current and Future Climates. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR028673	5.4	39
89	Model cascade from meteorological drivers to river flood hazard: flood-cascade v1.0. <i>Geoscientific Model Development</i> , <b>2021</b> , 14, 4865-4890	6.3	1
88	Integrating Earth Observation Data of Floods with Large-Scale Hydrodynamic Models. <i>Geophysical Monograph Series</i> , <b>2021</b> , 123-135	1.1	
87	Hydraulic Model Calibration Using CryoSat-2 Observations in the Zambezi Catchment. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR029261	5.4	1
86	Small-scale anthropogenic changes impact floodplain hydraulics: Simulating the effects of fish canals on the Logone floodplain. <i>Journal of Hydrology</i> , <b>2020</b> , 588, 125035	6	7

85	The Impact of Dams on Design Floods in the Conterminous US. <i>Water Resources Research</i> , <b>2020</b> , 56, e2019WR025380		
84	Levee Breaching: A New Extension to the LISFLOOD-FP Model. <i>Water (Switzerland)</i> , <b>2020</b> , 12, 942	3	6
83	Testing the impact of direct and indirect flood warnings on population behaviour using an agent-based model. <i>Natural Hazards and Earth System Sciences</i> , <b>2020</b> , 20, 2281-2305	3.9	9
82	Comparing earth observation and inundation models to map flood hazards. <i>Environmental Research Letters</i> , <b>2020</b> , 15, 124032	6.2	9
81	Digital Elevation Models for topographic characterisation and flood flow modelling along low-gradient, terminal dryland rivers: A comparison of spaceborne datasets for the Rio Colorado, Bolivia. <i>Journal of Hydrology</i> , <b>2020</b> , 591, 125617	6	5
80	Toward Global Stochastic River Flood Modeling. <i>Water Resources Research</i> , <b>2020</b> , 56, e2020WR027692	5.4	6
79	Emergency flood bulletins for Cyclones Idai and Kenneth: A critical evaluation of the use of global flood forecasts for international humanitarian preparedness and response. <i>International Journal of Disaster Risk Reduction</i> , <b>2020</b> , 50, 101811	4.5	13
78	A deep convolutional neural network model for rapid prediction of fluvial flood inundation. <i>Journal of Hydrology</i> , <b>2020</b> , 590, 125481	6	31
77	A toolbox to quickly prepare flood inundation models for LISFLOOD-FP simulations. <i>Environmental Modelling and Software</i> , <b>2020</b> , 123, 104561	5.2	12
76	A LISFLOOD-FP hydraulic model of the middle reach of the Congo. <i>Journal of Hydrology</i> , <b>2020</b> , 580, 124263	6	18
75	New estimates of flood exposure in developing countries using high-resolution population data. <i>Nature Communications</i> , <b>2019</b> , 10, 1814	17.4	65
74	A flood inundation forecast of Hurricane Harvey using a continental-scale 2D hydrodynamic model. <i>Journal of Hydrology X</i> , <b>2019</b> , 4, 100039	4.6	31
73	Accuracy assessment of the TanDEM-X 90 Digital Elevation Model for selected floodplain sites. <i>Remote Sensing of Environment</i> , <b>2019</b> , 232, 111319	13.2	49
72	Comparing 2D capabilities of HEC-RAS and LISFLOOD-FP on complex topography. <i>Hydrological Sciences Journal</i> , <b>2019</b> , 64, 1769-1782	3.5	36
71	A New Automated Method for Improved Flood Defense Representation in Large-Scale Hydraulic Models. <i>Water Resources Research</i> , <b>2019</b> , 55, 11007-11034	5.4	19
70	The Spatial Dependence of Flood Hazard and Risk in the United States. <i>Water Resources Research</i> , <b>2019</b> , 55, 1890-1911	5.4	37
69	An agent-based model for flood risk warning <b>2019</b> ,		1
68	Evolutionary leap in large-scale flood risk assessment needed. <i>Wiley Interdisciplinary Reviews: Water</i> , <b>2018</b> , 5, e1266	5.7	38

67	Effects of variability in probable maximum precipitation patterns on flood losses. <i>Hydrology and Earth System Sciences</i> , <b>2018</b> , 22, 2759-2773	5.5	21
66	Progress Toward Hyperresolution Models of Global Flood Hazard <b>2018</b> , 211-232		9
65	Perspectives on Digital Elevation Model (DEM) Simulation for Flood Modeling in the Absence of a High-Accuracy Open Access Global DEM. <i>Frontiers in Earth Science</i> , <b>2018</b> , 6,	3.5	51
64	Comparing TanDEM-X Data With Frequently Used DEMs for Flood Inundation Modeling. <i>Water Resources Research</i> , <b>2018</b> , 54, 10,205	5.4	25
63	Implications of Simulating Global Digital Elevation Models for Flood Inundation Studies. <i>Water Resources Research</i> , <b>2018</b> , 54, 7910-7928	5.4	28
62	Near-Real-Time Assimilation of SAR-Derived Flood Maps for Improving Flood Forecasts. <i>Water Resources Research</i> , <b>2018</b> , 54, 5516-5535	5.4	52
61	Optimisation of the two-dimensional hydraulic model LISFOOD-FP for CPU architecture. <i>Environmental Modelling and Software</i> , <b>2018</b> , 107, 148-157	5.2	31
60	Impact of the timing of a SAR image acquisition on the calibration of a flood inundation model. <i>Advances in Water Resources</i> , <b>2017</b> , 100, 126-138	4.7	22
59	Quantifying local rainfall dynamics and uncertain boundary conditions into a nested regional-local flood modeling system. <i>Water Resources Research</i> , <b>2017</b> , 53, 2770-2785	5.4	41
58	The effects of spatial resolution and dimensionality on modeling regional-scale hydraulics in a multichannel river. <i>Water Resources Research</i> , <b>2017</b> , 53, 1683-1701	5.4	24
57	A high-accuracy map of global terrain elevations. <i>Geophysical Research Letters</i> , <b>2017</b> , 44, 5844-5853	4.9	425
56	Modelling of flood hazard extent in data sparse areas: a case study of the Oti River basin, West Africa. <i>Journal of Hydrology: Regional Studies</i> , <b>2017</b> , 10, 122-132	3.6	59
55	GLOFRIM v1.0 A globally applicable computational framework for integrated hydrological/hydrodynamic modelling. <i>Geoscientific Model Development</i> , <b>2017</b> , 10, 3913-3929	6.3	25
54	Improving the TanDEM-X Digital Elevation Model for flood modelling using flood extents from Synthetic Aperture Radar images. <i>Remote Sensing of Environment</i> , <b>2016</b> , 173, 15-28	13.2	40
53	Calibration of channel depth and friction parameters in the LISFLOOD-FP hydraulic model using medium-resolution SAR data and identifiability techniques. <i>Hydrology and Earth System Sciences</i> , <b>2016</b> , 20, 4983-4997	5.5	60
52	Perspectives on Open Access High Resolution Digital Elevation Models to Produce Global Flood Hazard Layers. <i>Frontiers in Earth Science</i> , <b>2016</b> , 3,	3.5	31
51	An intercomparison of remote sensing river discharge estimation algorithms from measurements of river height, width, and slope. <i>Water Resources Research</i> , <b>2016</b> , 52, 4527-4549	5.4	131
50	The credibility challenge for global fluvial flood risk analysis. <i>Environmental Research Letters</i> , <b>2016</b> , 11, 094014	6.2	96

49	ICESat-derived inland water surface spot heights. <i>Water Resources Research</i> , <b>2016</b> , 52, 3276-3284	5.4	40
48	Testing the skill of numerical hydraulic modeling to simulate spatiotemporal flooding patterns in the Logone floodplain, Cameroon. <i>Journal of Hydrology</i> , <b>2016</b> , 539, 265-280	6	23
47	Rethinking flood hazard at the global scale. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 10,249-10,256	4.9	36
46	When does spatial resolution become spurious in probabilistic flood inundation predictions?. <i>Hydrological Processes</i> , <b>2016</b> , 30, 2014-2032	3.3	67
45	Efficient incorporation of channel cross-section geometry uncertainty into regional and global scale flood inundation models. <i>Journal of Hydrology</i> , <b>2015</b> , 529, 169-183	6	57
44	Hydraulic modeling of the 2011 New Madrid Floodway activation: a case study on floodway activation controls. <i>Natural Hazards</i> , <b>2015</b> , 77, 1863-1887	3	16
43	Satellite-supported flood forecasting in river networks: A real case study. <i>Journal of Hydrology</i> , <b>2015</b> , 523, 706-724	6	73
42	Measuring and Mapping Flood Processes <b>2015</b> , 35-64		5
41	Global and Low-Cost Topographic Data to Support Flood Studies <b>2015</b> , 105-123		
40	Floods and Storms Practical Exercises <b>2015</b> , 213-229		0
39	A high-resolution global flood hazard model. <i>Water Resources Research</i> , <b>2015</b> , 51, 7358-7381	5.4	256
38	Assessing the Impact of Seasonal Population Fluctuation on Regional Flood Risk Management. <i>ISPRS International Journal of Geo-Information</i> , <b>2015</b> , 4, 1118-1141	2.9	7
37	Mega-flood analysis through channel networks of the Athabasca Valles, Mars based on multi-resolution stereo DTMs and 2D hydrodynamic modeling. <i>Planetary and Space Science</i> , <b>2014</b> , 99, 55-69	2	5
36	Estimating reach-averaged discharge for the River Severn from measurements of river water surface elevation and slope. <i>Journal of Hydrology</i> , <b>2014</b> , 511, 92-104	6	110
35	Advances in pan-European flood hazard mapping. <i>Hydrological Processes</i> , <b>2014</b> , 28, 4067-4077	3.3	144
34	The Impact of Scale on Probabilistic Flood Inundation Maps Using a 2D Hydraulic Model with Uncertain Boundary Conditions <b>2014</b> ,		5
33	Technology: Fight floods on a global scale. <i>Nature</i> , <b>2014</b> , 507, 169	50.4	67
32	Observing Global Surface Water Flood Dynamics. <i>Surveys in Geophysics</i> , <b>2014</b> , 35, 839-852	7.6	39

31	A first large-scale flood inundation forecasting model. <i>Water Resources Research</i> , <b>2013</b> , 49, 6248-6257	5.4	121
30	An automated routing methodology to enable direct rainfall in high resolution shallow water models. <i>Hydrological Processes</i> , <b>2013</b> , 27, 467-476	3.3	23
29	Surface water connectivity dynamics of a large scale extreme flood. <i>Journal of Hydrology</i> , <b>2013</b> , 505, 138-149	6	48
28	Scheduling satellite-based SAR acquisition for sequential assimilation of water level observations into flood modelling. <i>Journal of Hydrology</i> , <b>2013</b> , 495, 252-266	6	86
27	Probabilistic flood risk mapping including spatial dependence. <i>Hydrological Processes</i> , <b>2013</b> , 27, 1349-1363	6.3	92
26	Reducing Inconsistencies in Point Observations of Maximum Flood Inundation Level. <i>Earth Interactions</i> , <b>2013</b> , 17, 1-27	1.5	10
25	Integrating the LISFLOOD-FP 2D hydrodynamic model with the CAESAR model: implications for modelling landscape evolution. <i>Earth Surface Processes and Landforms</i> , <b>2013</b> , 38, 1897-1906	3.7	132
24	A storm surge inundation model of the northern Bay of Bengal using publicly available data. <i>Quarterly Journal of the Royal Meteorological Society</i> , <b>2013</b> , 139, 358-369	6.4	87
23	Adaptive space-time sampling with wireless sensor nodes for flood forecasting. <i>Journal of Hydrology</i> , <b>2012</b> , 414-415, 136-147	6	20
22	How much physical complexity is needed to model flood inundation?. <i>Hydrological Processes</i> , <b>2012</b> , 26, 2264-2282	3.3	140
21	Probabilistic evaluation of flood hazard in urban areas using Monte Carlo simulation. <i>Hydrological Processes</i> , <b>2012</b> , 26, 3962-3972	3.3	38
20	Near Real-Time Flood Detection in Urban and Rural Areas Using High-Resolution Synthetic Aperture Radar Images. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2012</b> , 50, 3041-3052	8.1	135
19	Automatic near real-time selection of flood water levels from high resolution Synthetic Aperture Radar images for assimilation into hydraulic models: A case study. <i>Remote Sensing of Environment</i> , <b>2012</b> , 124, 705-716	13.2	73
18	Calibration of two-dimensional floodplain modeling in the central Atchafalaya Basin Floodway System using SAR interferometry. <i>Water Resources Research</i> , <b>2012</b> , 48,	5.4	29
17	A subgrid channel model for simulating river hydraulics and floodplain inundation over large and data sparse areas. <i>Water Resources Research</i> , <b>2012</b> , 48,	5.4	261
16	Comparative flood damage model assessment: towards a European approach. <i>Natural Hazards and Earth System Sciences</i> , <b>2012</b> , 12, 3733-3752	3.9	264
15	Benchmarking urban flood models of varying complexity and scale using high resolution terrestrial LiDAR data. <i>Physics and Chemistry of the Earth</i> , <b>2011</b> , 36, 281-291	3	129
14	Evaluating a new LISFLOOD-FP formulation with data from the summer 2007 floods in Tewkesbury, UK. <i>Journal of Flood Risk Management</i> , <b>2011</b> , 4, 88-95	3.1	88

13	Geometric and structural river channel complexity and the prediction of urban inundation. <i>Hydrological Processes</i> , <b>2011</b> , 25, 3173-3186	3.3	41
12	A near real-time algorithm for flood detection in urban and rural areas using high resolution Synthetic Aperture Radar images <b>2011</b> ,		2
11	The accuracy of sequential aerial photography and SAR data for observing urban flood dynamics, a case study of the UK summer 2007 floods. <i>Remote Sensing of Environment</i> , <b>2011</b> , 115, 2536-2546	13.2	103
10	Flood Detection in Urban Areas Using TerraSAR-X. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2010</b> , 48, 882-894	8.1	173
9	Visualization approaches for communicating real-time flood forecasting level and inundation information. <i>Journal of Flood Risk Management</i> , <b>2010</b> , 3, 140-150	3.1	55
8	A comparison of three parallelisation methods for 2D flood inundation models. <i>Environmental Modelling and Software</i> , <b>2010</b> , 25, 398-411	5.2	92
7	Distributed whole city water level measurements from the Carlisle 2005 urban flood event and comparison with hydraulic model simulations. <i>Journal of Hydrology</i> , <b>2009</b> , 368, 42-55	6	126
6	Evaluating the utility of the ensemble transform Kalman filter for adaptive sampling when updating a hydrodynamic model. <i>Journal of Hydrology</i> , <b>2009</b> , 375, 589-600	6	9
5	A data assimilation approach to discharge estimation from space. <i>Hydrological Processes</i> , <b>2009</b> , 23, 3641-3649	3.9	116
4	Parallelisation of storage cell flood models using OpenMP. <i>Environmental Modelling and Software</i> , <b>2009</b> , 24, 872-877	5.2	83
3	Flood inundation model updating using an ensemble Kalman filter and spatially distributed measurements. <i>Journal of Hydrology</i> , <b>2007</b> , 336, 401-415	6	70
2	Urban flood modelling 69-77		
1	US fluvial, pluvial and coastal flood hazard under current and future climates		2