Jonathan L Goodall

List of Publications by Year
in descending order

87 papers	2,648 citations	201385 27 h-index	197535 49 g-index
92 all docs	92 docs citations	92 times ranked	3465 citing authors

#	Article	IF	Citations
1	Integrated environmental modeling: A vision and roadmap for the future. Environmental Modelling and Software, 2013, 39, 3-23.	1.9	366
2	Multi-decadal synthesis of benthicâ€“pelagic coupling in the western arctic: Role of cross-shelf advective processes. Deep-Sea Research Part II: Topical Studies in Oceanography, 2005, 52, 3462-3477.	0.6	132
3	Toward the Geoscience Paper of the Future: Best practices for documenting and sharing research from data to software to provenance. Earth and Space Science, 2016, 3, 388-415.	1.1	127
4	Models as web services using the Open Geospatial Consortium (OGC) Web Processing Service (WPS) standard. Environmental Modelling and Software, 2013, 41, 72-83.	1.9	113
5	A first approach to web services for the National Water Information System. Environmental Modelling and Software, 2008, 23, 404-411.	1.9	109
6	Modeling water resource systems using a service-oriented computing paradigm. Environmental Modelling and Software, 2011, 26, 573-582.	1.9	105
7	Modeling urban coastal flood severity from crowd-sourced flood reports using Poisson regression and Random Forest. Journal of Hydrology, 2018, 559, 43-55.	2.3	105
8	Flood risk assessment and increased resilience for coastal urban watersheds under the combined impact of storm tide and heavy rainfall. Journal of Hydrology, 2019, 579, 124159.	2.3	90
9	Forecasting Groundwater Table in a Flood Prone Coastal City with Long Short-term Memory and Recurrent Neural Networks. Water (Switzerland), 2019, 11, 1098.	1.2	87
10	Position paper: Open web-distributed integrated geographic modelling and simulation to enable broader participation and applications. Earth-Science Reviews, 2020, 207, 103223.	4.0	87
11	HydroShare: Sharing Diverse Environmental Data Types and Models as Social Objects with Application to the Hydrology Domain. Journal of the American Water Resources Association, 2016, 52, 873-889.	1.0	73
12	Applications of network analysis for adaptive management of artificial drainage systems in landscapes vulnerable to sea level rise. Journal of Hydrology, 2008, 357, 207-217.	2.3	62
13	Integrated modeling within a Hydrologic Information System: An OpenMI based approach. Environmental Modelling and Software, 2013, 39, 263-273.	1.9	58
14	Training Machine Learning Surrogate Models From a Highâ€Fidelity Physicsâ€Based Model: Application for Realâ€Time Streetâ€Scale Flood Prediction in an Urban Coastal Community. Water Resources Research, 2020, 56, e2019WR027038.	1.7	58
15	A methodology for evaluating evapotranspiration estimates at the watershed-scale using GRACE. Journal of Hydrology, 2015, 523, 574-586.	2.3	56
16	Design and implementation of a general software library for using NSGA-II with SWAT for multi-objective model calibration. Environmental Modelling and Software, 2016, 84, 112-120.	1.9	44
17	Leveraging open source software and parallel computing for model predictive control of urban drainage systems using EPA-SWMM5. Environmental Modelling and Software, 2019, 120, 104484.	1.9	42
18	Design of a metadata framework for environmental models with an example hydrologic application in HydroShare. Environmental Modelling and Software, 2017, 93, 13-28.	1.9	40

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19	A generic approach for developing process-level hydrologic modeling components. Environmental Modelling and Software, 2010, 25, 819-825.	1.9	38
20	Coupling climate and hydrological models: Interoperability through Web Services. Environmental Modelling and Software, 2013, 46, 250-259.	1.9	38
21	Driving plug-and-play models with data from web services: A demonstration of interoperability between CSDMS and CUAHSI-HIS. Computers and Geosciences, 2013, 53, 154-161.	2.0	38
22	A cloud-based flood warning system for forecasting impacts to transportation infrastructure systems. Environmental Modelling and Software, 2018, 107, 231-244.	1.9	37
23	Exploring real-time control of stormwater systems for mitigating flood risk due to sea level rise. Journal of Hydrology, 2020, 583, 124571.	2.3	30
24	Calibration of SWAT models using the cloud. Environmental Modelling and Software, 2014, 62, 188-196.	1.9	29
25	Evaluating the potential for site-specific modification of LiDAR DEM derivatives to improve environmental planning-scale wetland identification using Random Forest classification. Journal of Hydrology, 2018, 559, 192-208.	2.3	29
26	Distributed Stormwater Controls for Flood Mitigation within Urbanized Watersheds: Case Study of Rocky Branch Watershed in Columbia, South Carolina. Journal of Hydrologic Engineering - ASCE, 2016, 21, .	0.8	28
27	Impact of Sea-Level Rise on Roadway Flooding in the Hampton Roads Region, Virginia. Journal of Infrastructure Systems, 2017, 23, .	1.0	28
28	Integrating scientific cyberinfrastructures to improve reproducibility in computational hydrology: Example for HydroShare and GeoTrust. Environmental Modelling and Software, 2018, 105, 217-229.	1.9	27
29	Flood mitigation in coastal urban catchments using real-time stormwater infrastructure control and reinforcement learning. Journal of Hydroinformatics, 2021, 23, 529-547.	1.1	26
30	Deep learning Using Physically-Informed Input Data for Wetland Identification. Environmental Modelling and Software, 2020, 126, 104665.	1.9	24
31	Toward open and reproducible environmental modeling by integrating online data repositories, computational environments, and model Application Programming Interfaces. Environmental Modelling and Software, 2021, 135, 104888.	1.9	24
32	Deep Reinforcement Learning with Uncertain Data for Real-Time Stormwater System Control and Flood Mitigation. Water (Switzerland), 2020, 12, 3222.	1.2	22
33	Opportunities for crowdsourcing in urban flood monitoring. Environmental Modelling and Software, 2021, 143, 105124.	1.9	21
34	Integrating Arc Hydro Features with a Schematic Network. Transactions in GIS, 2006, 10, 219-237.	1.0	20
35	Using a data grid to automate data preparation pipelines required for regional-scale hydrologic modeling. Environmental Modelling and Software, 2016, 78, 31-39.	1.9	20
36	Effects of LiDAR DEM Smoothing and Conditioning Techniques on a Topographyâ€Based Wetland Identification Model. Water Resources Research, 2019, 55, 4343-4363.	1.7	20

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37	A taxonomy for reproducible and replicable research in environmental modelling. Environmental Modelling and Software, 2020, 134, 104753.	1.9	19
38	Simulating watersheds using loosely integrated model components: Evaluation of computational scaling using OpenMI. Environmental Modelling and Software, 2013, 39, 304-313.	1.9	18
39	Precipitation Extremes and Flood Frequency in a Changing Climate in Southeastern Virginia. Journal of the American Water Resources Association, 2019, 55, 780-799.	1.0	18
40	Estimating Potential Climate Change Effects on the Upper Neuse Watershed Water Balance Using the SWAT Model. Journal of the American Water Resources Association, 2020, 56, 53-67.	1.0	17
41	Estimating impacts of recurring flooding on roadway networks: a Norfolk, Virginia case study. Natural Hazards, 2021, 107, 2363-2387.	1.6	17
42	An ontology for componentâ€based models of water resource systems. Water Resources Research, 2013, 49, 5077-5091.	1.7	16
43	Calibration of watershed models using cloud computing. , 2012, , .		14
44	Feedback loops and temporal misalignment in componentâ€based hydrologic modeling. Water Resources Research, 2011, 47, .	1.7	13
45	Comparing Costs of Onsite Best Management Practices to Nutrient Credits for Stormwater Management: A Case Study in Virginia. Journal of the American Water Resources Association, 2017, 53, 131-143.	1.0	13
46	Using Random Forest Classification and Nationally Available Geospatial Data to Screen for Wetlands over Large Geographic Regions. Water (Switzerland), 2019, 11, 1158.	1.2	12
47	Nonpoint Source Water Quality Trading outcomes: Landscape-scale patterns and integration with watershed management priorities. Journal of Environmental Management, 2021, 294, 112914.	3.8	12
48	Estimating Watershed-Scale Precipitation by Combining Gauge- and Radar-Derived Observations. Journal of Hydrologic Engineering - ASCE, 2013, 18, 983-994.	0.8	11
49	The Impact of Projected Climate Change Scenarios on Nitrogen Yield at a Regional Scale for the Contiguous United States. Journal of the American Water Resources Association, 2017, 53, 854-870.	1.0	11
50	A spatiotemporal data model for river basinâ€scale hydrologic systems. International Journal of Geographical Information Science, 2009, 23, 233-247.	2.2	10
51	Serverâ€side workflow execution using data grid technology for reproducible analyses of dataâ€intensive hydrologic systems. Earth and Space Science, 2016, 3, 163-175.	1.1	10
52	Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries. Journal of Hydrologic Engineering - ASCE, 2010, 15, 97-106.	0.8	9
53	Toward disentangling the effect of hydrologic and nitrogen source changes from 1992 to 2001 on incremental nitrogen yield in the contiguous United States. Water Resources Research, 2012, 48, .	1.7	9
54	A hierarchical network-based algorithm for multi-scale watershed delineation. Computers and Geosciences, 2014, 72, 156-166.	2.0	9

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55	Trust me, my neighbors say it's raining outside. , 2018, , .		9
56	Annual and interannual variations in terrestrial water storage during and following a period of drought in South Carolina, USA. Journal of Hydrology, 2011, 409, 472-482.	2.3	8
57	Smart Cities Solutions for More Flood Resilient Communities. , 2019, , .		8
58	Assessing the Trustworthiness of Crowdsourced Rainfall Networks: A Reputation System Approach. Water Resources Research, 2021, 57, e2021WR029721.	1.7	8
59	Reinforcement learning-based real-time control of coastal urban stormwater systems to mitigate flooding and improve water quality. Environmental Science: Water Research and Technology, 2022, 8, 2065-2086.	1.2	8
60	Evaluation of the OntoSoft Ontology for describing metadata for legacy hydrologic modeling software. Environmental Modelling and Software, 2017, 92, 317-329.	1.9	7
61	Enhancing Efficacy of Water Quality Trading with Automation: A Case Study in Virginiaâ€™s Nutrient Trading Program. Journal of the American Water Resources Association, 2021, 57, 374-390.	1.0	7
62	Assessing Trustworthiness of Crowdsourced Flood Incident Reports Using Waze Data: A Norfolk, Virginia Case Study. Transportation Research Record, 2021, 2675, 650-662.	1.0	7
63	Predicting combined tidal and pluvial flood inundation using a machine learning surrogate model. Journal of Hydrology: Regional Studies, 2022, 41, 101087.	1.0	7
64	Using a Service-Oriented Approach to Simulate Integrated Urban Infrastructure Systems. Journal of Computing in Civil Engineering, 2015, 29, .	2.5	6
65	Impact of Geospatial Data Enhancements for Regional-Scale 2D Hydrodynamic Flood Modeling: Case Study for the Coastal Plain of Virginia. Journal of Hydrologic Engineering - ASCE, 2021, 26, .	0.8	6
66	Anticipating and Adapting to the Future Impacts of Climate Change on the Health, Security and Welfare of Low Elevation Coastal Zone (LECZ) Communities in Southeastern USA. Journal of Marine Science and Engineering, 2021, 9, 1196.	1.2	6
67	Quantification of Compound Flooding over Roadway Network during Extreme Events for Planning Emergency Operations. Natural Hazards Review, 2022, 23, .	0.8	6
68	Effect of Rain Gauge Proximity on Rainfall Estimation for Problematic Urban Coastal Watersheds in Virginia Beach, Virginia. Journal of Hydrologic Engineering - ASCE, 2017, 22, .	0.8	5
69	Reproducible Hydrological Modeling with CyberGIS-Jupyter. , 2019, , .		5
70	Standardizing Access to Hydrologic Data Repositories through Web Services. , 2009, , .		4
71	Method for Rapidly Assessing the Overtopping Risk of Bridges Due to Flooding over a Large Geographic Region. Journal of the American Water Resources Association, 2017, 53, 1437-1452.	1.0	4
72	Exploring the complementary relationship between solar and hydro energy harvesting for self-powered water monitoring in low-light conditions. Environmental Modelling and Software, 2021, 140, 105032.	1.9	4

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73	Flood resilience through crowdsourced rainfall data collection: Growing engagement faces non-uniform spatial adoption. Journal of Hydrology, 2022, 609, 127724.	2.3	4
74	Documenting Computing Environments for Reproducible Experiments. Advances in Parallel Computing, 2020, , .	0.3	4
75	Dynamic Modeling of Inland Flooding and Storm Surge on Coastal Cities under Climate Change Scenarios: Transportation Infrastructure Impacts in Norfolk, Virginia USA as a Case Study. Geosciences (Switzerland), 2022, 12, 224.	1.0	4
76	A software library for quantifying regional-scale nitrogen transport within river basin systems. Environmental Modelling and Software, 2010, 25, 1713-1721.	1.9	3
77	Using Geospatial Analysis and Hydrologic Modeling to Estimate Climate Change Impacts on Nitrogen Export: Case Study for a Forest and Pasture Dominated Watershed in North Carolina. ISPRS International Journal of Geo-Information, 2018, 7, 280.	1.4	3
78	MobiAmbulance: Optimal Scheduling of Emergency Vehicles in Catastrophic Situations. , 2019, , .		3
79	Flood Monitoring and Mitigation Strategies for Flood-Prone Urban Areas. , 2020, , .		2
80	WDCloud: An end to end system for large-scale watershed delineation on cloud. , 2015, , .		1
81	Quantifying background nitrate removal mechanisms in an agricultural watershed with contrasting subcatchment baseflow concentrations. Journal of Environmental Quality, 2020, 49, 392-403.	1.0	1
82	Reinforcement Learning for Flooding Mitigation in Complex Stormwater Systems during Large Storms. , 2021, , .		1
83	Sensitivity of Remotely Sensed Vegetation to Hydrologic Predictors across the Colorado River Basin, 2001â€“2019. Journal of the American Water Resources Association, 0, , .	1.0	1
84	An Openâ€Source Python Library for Varying Model Parameters and Automating Concurrent Simulations of the National Water Model. Journal of the American Water Resources Association, 0, , .	1.0	1
85	New Software Architecture for Integrated Water Modeling: CUAHSI/OpenMI Workshop for Integrating Water Models; Wallingford, United Kingdom, 7-10 April 2008. Eos, 2008, 89, 420-420.	0.1	0
86	Feasibility of using existing web services for on-demand data access within distributed environmental decision support systems. Journal of Hydroinformatics, 2018, 20, 263-280.	1.1	0
87	A Graduate Curriculum in Cyber-Physical Systems. IEEE Design and Test, 2021, 38, 112-120.	1.1	0