

Venkatesh M Merwade

List of Publications by Citations

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84
papers

2,941
citations

28
h-index

53
g-index

94
ext. papers

3,449
ext. citations

4.3
avg, IF

5.89
L-index

#	Paper	IF	Citations
84	Effect of topographic data, geometric configuration and modeling approach on flood inundation mapping. <i>Journal of Hydrology</i> , 2009 , 377, 131-142	6	287
83	Streamflow trends in Indiana: Effects of long term persistence, precipitation and subsurface drains. <i>Journal of Hydrology</i> , 2009 , 374, 171-183	6	258
82	GIS techniques for creating river terrain models for hydrodynamic modeling and flood inundation mapping. <i>Environmental Modelling and Software</i> , 2008 , 23, 1300-1311	5.2	184
81	Uncertainty in Flood Inundation Mapping: Current Issues and Future Directions. <i>Journal of Hydrologic Engineering - ASCE</i> , 2008 , 13, 608-620	1.8	170
80	Quantifying the relative impact of climate and human activities on streamflow. <i>Journal of Hydrology</i> , 2014 , 515, 257-266	6	134
79	Evaluation of Temperature and Precipitation Trends and Long-Term Persistence in CMIP5 Twentieth-Century Climate Simulations. <i>Journal of Climate</i> , 2013 , 26, 4168-4185	4.4	126
78	Multi-objective calibration of a hydrologic model using spatially distributed remotely sensed/in-situ soil moisture. <i>Journal of Hydrology</i> , 2016 , 536, 192-207	6	108
77	Incorporating the effect of DEM resolution and accuracy for improved flood inundation mapping. <i>Journal of Hydrology</i> , 2015 , 530, 180-194	6	99
76	Anisotropic considerations while interpolating river channel bathymetry. <i>Journal of Hydrology</i> , 2006 , 331, 731-741	6	86
75	Implementation of surface soil moisture data assimilation with watershed scale distributed hydrological model. <i>Journal of Hydrology</i> , 2012 , 416-417, 98-117	6	80
74	Uncertainty Quantification in Flood Inundation Mapping Using Generalized Likelihood Uncertainty Estimate and Sensitivity Analysis. <i>Journal of Hydrologic Engineering - ASCE</i> , 2012 , 17, 507-520	1.8	68
73	Investigating the role of model structure and surface roughness in generating flood inundation extents using one- and two-dimensional hydraulic models. <i>Journal of Flood Risk Management</i> , 2019 , 12, e12347	3.1	67
72	A DEM-based approach for large-scale floodplain mapping in ungauged watersheds. <i>Journal of Hydrology</i> , 2017 , 550, 650-662	6	63
71	Effect of spatial trends on interpolation of river bathymetry. <i>Journal of Hydrology</i> , 2009 , 371, 169-181	6	61
70	Incorporating institutions and collective action into a sociohydrological model of flood resilience. <i>Water Resources Research</i> , 2017 , 53, 1336-1353	5.4	59
69	Land use/cover change impacts in CMIP5 climate simulations: A new methodology and 21st century challenges. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 6337-6353	4.4	57
68	Impact of Watershed Subdivision and Soil Data Resolution on SWAT Model Calibration and Parameter Uncertainty1. <i>Journal of the American Water Resources Association</i> , 2009 , 45, 1179-1196	2.1	56

67	Estimation of annual baseflow at ungauged sites in Indiana USA. <i>Journal of Hydrology</i> , 2013 , 476, 13-27	6	55
66	Multi-scale temporal stability analysis of surface and subsurface soil moisture within the Upper Cedar Creek Watershed, Indiana. <i>Catena</i> , 2012 , 95, 91-103	5.8	52
65	Parsimonious modeling of hydrologic responses in engineered watersheds: Structural heterogeneity versus functional homogeneity. <i>Water Resources Research</i> , 2010 , 46,	5.4	48
64	Geospatial Representation of River Channels. <i>Journal of Hydrologic Engineering - ASCE</i> , 2005 , 10, 243-251	1.8	48
63	Accounting for model structure, parameter and input forcing uncertainty in flood inundation modeling using Bayesian model averaging. <i>Journal of Hydrology</i> , 2018 , 565, 138-149	6	45
62	SWATShare A web platform for collaborative research and education through online sharing, simulation and visualization of SWAT models. <i>Environmental Modelling and Software</i> , 2016 , 75, 498-512	5.2	41
61	Spatiotemporal Evaluation of Simulated Evapotranspiration and Streamflow over Texas Using the WRF-Hydro-RAPID Modeling Framework. <i>Journal of the American Water Resources Association</i> , 2018 , 54, 40-54	2.1	36
60	Design of a metadata framework for environmental models with an example hydrologic application in HydroShare. <i>Environmental Modelling and Software</i> , 2017 , 93, 13-28	5.2	32
59	Hydrologic response to future land use change in the Upper Mississippi River Basin by the end of 21st century. <i>Hydrological Processes</i> , 2017 , 31, 3645-3661	3.3	29
58	Towards a large-scale locally relevant flood inundation modeling framework using SWAT and LISFLOOD-FP. <i>Journal of Hydrology</i> , 2020 , 581, 124406	6	29
57	Comparison of performance of tile drainage routines in SWAT 2009 and 2012 in an extensively tile-drained watershed in the Midwest. <i>Hydrology and Earth System Sciences</i> , 2018 , 22, 89-110	5.5	29
56	Rationale and Efficacy of Assimilating Remotely Sensed Potential Evapotranspiration for Reduced Uncertainty of Hydrologic Models. <i>Water Resources Research</i> , 2018 , 54, 4615-4637	5.4	28
55	Estimation of uncertainty propagation in flood inundation mapping using a 1-D hydraulic model. <i>Hydrological Processes</i> , 2015 , 29, 624-640	3.3	27
54	The effect of land cover change on duration and severity of high and low flows. <i>Hydrological Processes</i> , 2017 , 31, 133-149	3.3	24
53	Assessing the effect of different bathymetric models on hydraulic simulation of rivers in data sparse regions. <i>Journal of Hydrology</i> , 2019 , 575, 838-851	6	23
52	A Faster and Economical Approach to Floodplain Mapping Using Soil Information. <i>Journal of the American Water Resources Association</i> , 2015 , 51, 1286-1304	2.1	23
51	Evaluation of NARR and CLM3.5 outputs for surface water and energy budgets in the Mississippi River Basin. <i>Journal of Geophysical Research</i> , 2011 , 116,		23
50	Drought adaptation policy development and assessment in East Africa using hydrologic and system dynamics modeling. <i>Natural Hazards</i> , 2014 , 74, 789-813	3	22

49	Large scale spatially explicit modeling of blue and green water dynamics in a temperate mid-latitude basin. <i>Journal of Hydrology</i> , 2018 , 562, 84-102	6	21
48	Application of observation operators for field scale soil moisture averages and variances in agricultural landscapes. <i>Journal of Hydrology</i> , 2012 , 444-445, 34-50	6	20
47	Moving university hydrology education forward with community-based geoinformatics, data and modeling resources. <i>Hydrology and Earth System Sciences</i> , 2012 , 16, 2393-2404	5.5	20
46	Application of data assimilation with the Root Zone Water Quality Model for soil moisture profile estimation in the upper Cedar Creek, Indiana. <i>Hydrological Processes</i> , 2012 , 26, 1707-1719	3.3	17
45	Characterizing long-term land use/cover change in the United States from 1850 to 2000 using a nonlinear bi-analytical model. <i>Ambio</i> , 2013 , 42, 285-97	6.5	17
44	An Automated GIS Procedure for Delineating River and Lake Boundaries. <i>Transactions in GIS</i> , 2007 , 11, 213-231	2.1	17
43	Flood inundation modeling and mapping by integrating surface and subsurface hydrology with river hydrodynamics. <i>Journal of Hydrology</i> , 2019 , 575, 1155-1177	6	16
42	A Computationally Efficient and Physically Based Approach for Urban Flood Modeling Using a Flexible Spatiotemporal Structure. <i>Water Resources Research</i> , 2020 , 56, e2019WR025769	5.4	14
41	Development and application of a storage-release based distributed hydrologic model using GIS. <i>Journal of Hydrology</i> , 2011 , 403, 1-13	6	13
40	A geomorphic approach to 100-year floodplain mapping for the Conterminous United States. <i>Journal of Hydrology</i> , 2018 , 561, 43-58	6	12
39	The effect of spatially uniform and non-uniform precipitation bias correction methods on improving NEXRAD rainfall accuracy for distributed hydrologic modeling 2014 , 45, 23-42		11
38	Enhancing the T-shaped learning profile when teaching hydrology using data, modeling, and visualization activities. <i>Hydrology and Earth System Sciences</i> , 2016 , 20, 1289-1299	5.5	11
37	Probabilistic floodplain mapping using HAND-based statistical approach. <i>Geomorphology</i> , 2019 , 324, 48-61	4.3	11
36	Separation and prioritization of uncertainty sources in a raster based flood inundation model using hierarchical Bayesian model averaging. <i>Journal of Hydrology</i> , 2019 , 578, 124100	6	10
35	An Approach Using a 1D Hydraulic Model, Landsat Imaging and Generalized Likelihood Uncertainty Estimation for an Approximation of Flood Discharge. <i>Water (Switzerland)</i> , 2013 , 5, 1598-1621	3	10
34	Probabilistic Flood Inundation Forecasting Using Rating Curve Libraries. <i>Journal of the American Water Resources Association</i> , 2017 , 53, 300-315	2.1	9
33	Hydroclimatological impact of century-long drainage in midwestern United States: CCSM sensitivity experiments. <i>Journal of Geophysical Research</i> , 2010 , 115,		9
32	Combining clustering and classification for the regionalization of environmental model parameters: Application to floodplain mapping in data-scarce regions. <i>Environmental Modelling and Software</i> , 2020 , 125, 104613	5.2	9

31	Quantifying relative uncertainties in the detection and attribution of human-induced climate change on winter streamflow. <i>Journal of Hydrology</i> , 2016 , 542, 304-316	6	9
30	Water and Sediment Microbial Quality of Mountain and Agricultural Streams. <i>Journal of Environmental Quality</i> , 2018 , 47, 985-996	3.4	9
29	Investigating the environmental response to water harvesting structures: a field study in Tanzania. <i>Hydrology and Earth System Sciences</i> , 2020 , 24, 1891-1906	5.5	8
28	Role of Watershed Geomorphic Characteristics on Flooding in Indiana, United States. <i>Journal of Hydrologic Engineering - ASCE</i> , 2016 , 21, 05015021	1.8	8
27	Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds. <i>Journal of Hydrologic Engineering - ASCE</i> , 2010 , 15, 918-930	1.8	8
26	Vision of Cyberinfrastructure for End-to-End Environmental Explorations (C4E4). <i>Journal of Hydrologic Engineering - ASCE</i> , 2009 , 14, 53-64	1.8	7
25	Modern Digital Instruments and Techniques for Hydrodynamic and Morphologic Characterization of River Channels 2012 , 315-341		6
24	MyGeoHub [®] sustainable and evolving geospatial science gateway. <i>Future Generation Computer Systems</i> , 2019 , 94, 820-832	7.5	6
23	A GIS-based relational data model for multi-dimensional representation of river hydrodynamics and morphodynamics. <i>Environmental Modelling and Software</i> , 2015 , 65, 79-93	5.2	5
22	Sensitivity of Subjective Decisions in the GLUE Methodology for Quantifying the Uncertainty in the Flood Inundation Map for Seymour Reach in Indiana, USA. <i>Water (Switzerland)</i> , 2014 , 6, 2104-2126	3	5
21	Characterizing the Extent of Spatially Integrated Floodplain and Wetland Systems in the White River, Indiana, USA. <i>Journal of the American Water Resources Association</i> , 2017 , 53, 774-790	2.1	4
20	Improving soil moisture accounting and streamflow prediction in SWAT by incorporating a modified time-dependent Curve Number method. <i>Hydrological Processes</i> , 2015 , 30, n/a-n/a	3.3	4
19	An Integrated Approach for Flood Inundation Modeling on Large Scales. <i>World Scientific Series on Asia-Pacific Weather and Climate</i> , 2018 , 133-155		4
18	Regional flood frequency analysis and uncertainties: Maximum streamflow estimates in ungauged basins in the region of Lavras, MG, Brazil. <i>Catena</i> , 2021 , 197, 104970	5.8	4
17	Featured Series Introduction: SWAT Applications for Emerging Hydrologic and Water Quality Challenges. <i>Journal of the American Water Resources Association</i> , 2017 , 53, 67-68	2.1	3
16	A web tool for STORET/WQX water quality data retrieval and Best Management Practice scenario suggestion. <i>Journal of Environmental Management</i> , 2015 , 150, 21-27	7.9	3
15	Prioritizing levee repairs: a case study for the city of Indianapolis, Indiana. <i>Natural Hazards</i> , 2014 , 72, 997-1019	3	3
14	Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2010 , 136, 167-176	2.8	3

13	A spatially distributed Clark unit hydrograph based hybrid hydrologic model (Distributed-Clark). <i>Hydrological Sciences Journal</i> , 2018 , 63, 1519-1539	3.5	3
12	Deterministic Approach to Identify Ordinary High Water Marks Using Hydrologic and Hydraulic Attributes. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2017 , 143, 04016084	1.1	2
11	Integrated Modeling of Surface-Subsurface Processes to Understand River-Floodplain Hydrodynamics in the Upper Wabash River Basin 2017 ,		2
10	WaterHUB 2012 ,		2
9	Determination of Unit Hydrograph Parameters for Indiana Watersheds		2
8	Assessing the Impact of Land Cover, Soil, and Climate on the Storage Potential of Dryland Sand Dams. <i>Frontiers in Water</i> , 2021 , 3,	2.6	2
7	The Integrated Impact of Basin Characteristics on Changes in Hydrological Variables 2017 , 317-336		1
6	Featured Series Conclusion: SWAT Applications for Emerging Hydrologic and Water Quality Challenges. <i>Journal of the American Water Resources Association</i> , 2017 , 53, 1390-1392	2.1	1
5	Development of High Performance Computing Tools for Estimation of High-Resolution Surface Energy Balance Products Using sUAS Information.. <i>Proceedings of SPIE</i> , 2021 , 11747,	1.7	1
4	An Alternative Approach for Improving Prediction of Integrated Hydrologic-Hydraulic Models by Assessing the Impact of Intrinsic Spatial Scales. <i>Water Resources Research</i> , 2021 , 57, e2020WR027702	5.4	1
3	Evaluating the reliability of synthetic rating curves for continental scale flood mapping. <i>Journal of Hydrology</i> , 2022 , 606, 127470	6	0
2	Flexibility on storage-release based distributed hydrologic modeling with object-oriented approach. <i>Journal of Hydrology</i> , 2016 , 540, 17-25	6	
1	Closure to Role of Watershed Geomorphic Characteristics on Flooding in Indiana, United States by Kuk-Hyun Ahn and Venkatesh Merwade. <i>Journal of Hydrologic Engineering - ASCE</i> , 2016 , 21, 07016012 ^{1.8}		