Venkatesh M Merwade

List of Publications by Year in Descending Order

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	Evaluating the reliability of synthetic rating curves for continental scale flood mapping. *Journal of Hydrology*, **2022**, 606, 127470	6	0
83	Development of High Performance Computing Tools for Estimation of High-Resolution Surface Energy Balance Products Using sUAS Information.. *Proceedings of SPIE*, **2021**, 11747,	1.7	1
82	Assessing the Impact of Land Cover, Soil, and Climate on the Storage Potential of Dryland Sand Dams. *Frontiers in Water*, **2021**, 3,	2.6	2
81	Regional flood frequency analysis and uncertainties: Maximum streamflow estimates in ungauged basins in the region of Lavras, MG, Brazil. *Catena*, **2021**, 197, 104970	5.8	4
80	An Alternative Approach for Improving Prediction of Integrated Hydrologic-Hydraulic Models by Assessing the Impact of Intrinsic Spatial Scales. *Water Resources Research*, **2021**, 57, e2020WR027702	5.4	1
79	Investigating the environmental response to water harvesting structures: a field study in Tanzania. *Hydrology and Earth System Sciences*, **2020**, 24, 1891-1906	5.5	8
78	Combining clustering and classification for the regionalization of environmental model parameters: Application to floodplain mapping in data-scarce regions. *Environmental Modelling and Software*, **2020**, 125, 104613	5.2	9
77	A Computationally Efficient and Physically Based Approach for Urban Flood Modeling Using a Flexible Spatiotemporal Structure. *Water Resources Research*, **2020**, 56, e2019WR025769	5.4	14
76	Towards a large-scale locally relevant flood inundation modeling framework using SWAT and LISFLOOD-FP. *Journal of Hydrology*, **2020**, 581, 124406	6	29
75	Flood inundation modeling and mapping by integrating surface and subsurface hydrology with river hydrodynamics. *Journal of Hydrology*, **2019**, 575, 1155-1177	6	16
74	Assessing the effect of different bathymetric models on hydraulic simulation of rivers in data sparse regions. *Journal of Hydrology*, **2019**, 575, 838-851	6	23
73	Separation and prioritization of uncertainty sources in a raster based flood inundation model using hierarchical Bayesian model averaging. *Journal of Hydrology*, **2019**, 578, 124100	6	10
72	Probabilistic floodplain mapping using HAND-based statistical approach. *Geomorphology*, **2019**, 324, 48-61	4.3	11
71	MyGeoHub: A sustainable and evolving geospatial science gateway. *Future Generation Computer Systems*, **2019**, 94, 820-832	7.5	6
70	Investigating the role of model structure and surface roughness in generating flood inundation extents using one- and two-dimensional hydraulic models. *Journal of Flood Risk Management*, **2019**, 12, e12347	3.1	67
69	A geomorphic approach to 100-year floodplain mapping for the Conterminous United States. *Journal of Hydrology*, **2018**, 561, 43-58	6	12
68	Spatiotemporal Evaluation of Simulated Evapotranspiration and Streamflow over Texas Using the WRF-Hydro-RAPID Modeling Framework. *Journal of the American Water Resources Association*, **2018**, 54, 40-54	2.1	36

67	Large scale spatially explicit modeling of blue and green water dynamics in a temperate mid-latitude basin. *Journal of Hydrology*, **2018**, 562, 84-102	6	21
66	Accounting for model structure, parameter and input forcing uncertainty in flood inundation modeling using Bayesian model averaging. *Journal of Hydrology*, **2018**, 565, 138-149	6	45
65	Rationale and Efficacy of Assimilating Remotely Sensed Potential Evapotranspiration for Reduced Uncertainty of Hydrologic Models. *Water Resources Research*, **2018**, 54, 4615-4637	5.4	28
64	An Integrated Approach for Flood Inundation Modeling on Large Scales. *World Scientific Series on Asia-Pacific Weather and Climate*, **2018**, 133-155		4
63	Water and Sediment Microbial Quality of Mountain and Agricultural Streams. *Journal of Environmental Quality*, **2018**, 47, 985-996	3.4	9
62	A spatially distributed Clark unit hydrograph based hybrid hydrologic model (Distributed-Clark). *Hydrological Sciences Journal*, **2018**, 63, 1519-1539	3.5	3
61	Comparison of performance of tile drainage routines in SWAT 2009 and 2012 in an extensively tile-drained watershed in the Midwest. *Hydrology and Earth System Sciences*, **2018**, 22, 89-110	5.5	29
60	Incorporating institutions and collective action into a sociohydrological model of flood resilience. *Water Resources Research*, **2017**, 53, 1336-1353	5.4	59
59	A DEM-based approach for large-scale floodplain mapping in ungauged watersheds. *Journal of Hydrology*, **2017**, 550, 650-662	6	63
58	Featured Series Introduction: SWAT Applications for Emerging Hydrologic and Water Quality Challenges. *Journal of the American Water Resources Association*, **2017**, 53, 67-68	2.1	3
57	Deterministic Approach to Identify Ordinary High Water Marks Using Hydrologic and Hydraulic Attributes. *Journal of Irrigation and Drainage Engineering - ASCE*, **2017**, 143, 04016084	1.1	2
56	Design of a metadata framework for environmental models with an example hydrologic application in HydroShare. *Environmental Modelling and Software*, **2017**, 93, 13-28	5.2	32
55	Probabilistic Flood Inundation Forecasting Using Rating Curve Libraries. *Journal of the American Water Resources Association*, **2017**, 53, 300-315	2.1	9
54	The Integrated Impact of Basin Characteristics on Changes in Hydrological Variables **2017**, 317-336		1
53	Integrated Modeling of Surface-Subsurface Processes to Understand River-Floodplain Hydrodynamics in the Upper Wabash River Basin **2017**,		2
52	Hydrologic response to future land use change in the Upper Mississippi River Basin by the end of 21st century. *Hydrological Processes*, **2017**, 31, 3645-3661	3.3	29
51	Characterizing the Extent of Spatially Integrated Floodplain and Wetland Systems in the White River, Indiana, USA. *Journal of the American Water Resources Association*, **2017**, 53, 774-790	2.1	4
50	Featured Series Conclusion: SWAT Applications for Emerging Hydrologic and Water Quality Challenges. *Journal of the American Water Resources Association*, **2017**, 53, 1390-1392	2.1	1

49	The effect of land cover change on duration and severity of high and low flows. *Hydrological Processes*, **2017**, 31, 133-149	3.3	24
48	Flexibility on storage-release based distributed hydrologic modeling with object-oriented approach. *Journal of Hydrology*, **2016**, 540, 17-25	6	
47	SWATShare – A web platform for collaborative research and education through online sharing, simulation and visualization of SWAT models. *Environmental Modelling and Software*, **2016**, 75, 498-512	5.2	41
46	Role of Watershed Geomorphic Characteristics on Flooding in Indiana, United States. *Journal of Hydrologic Engineering - ASCE*, **2016**, 21, 05015021	1.8	8
45	Enhancing the T-shaped learning profile when teaching hydrology using data, modeling, and visualization activities. *Hydrology and Earth System Sciences*, **2016**, 20, 1289-1299	5.5	11
44	Closure to "Role of Watershed Geomorphic Characteristics on Flooding in Indiana, United States" by Kuk-Hyun Ahn and Venkatesh Merwade. *Journal of Hydrologic Engineering - ASCE*, **2016**, 21, 07016012	1.8	
43	Multi-objective calibration of a hydrologic model using spatially distributed remotely sensed/in-situ soil moisture. *Journal of Hydrology*, **2016**, 536, 192-207	6	108
42	Quantifying relative uncertainties in the detection and attribution of human-induced climate change on winter streamflow. *Journal of Hydrology*, **2016**, 542, 304-316	6	9
41	Incorporating the effect of DEM resolution and accuracy for improved flood inundation mapping. *Journal of Hydrology*, **2015**, 530, 180-194	6	99
40	A web tool for STORET/WQX water quality data retrieval and Best Management Practice scenario suggestion. *Journal of Environmental Management*, **2015**, 150, 21-27	7.9	3
39	Estimation of uncertainty propagation in flood inundation mapping using a 1-D hydraulic model. *Hydrological Processes*, **2015**, 29, 624-640	3.3	27
38	A Faster and Economical Approach to Floodplain Mapping Using Soil Information. *Journal of the American Water Resources Association*, **2015**, 51, 1286-1304	2.1	23
37	Improving soil moisture accounting and streamflow prediction in SWAT by incorporating a modified time-dependent Curve Number method. *Hydrological Processes*, **2015**, 30, n/a-n/a	3.3	4
36	A GIS-based relational data model for multi-dimensional representation of river hydrodynamics and morphodynamics. *Environmental Modelling and Software*, **2015**, 65, 79-93	5.2	5
35	Prioritizing levee repairs: a case study for the city of Indianapolis, Indiana. *Natural Hazards*, **2014**, 72, 997-1019	3	3
34	Quantifying the relative impact of climate and human activities on streamflow. *Journal of Hydrology* , **2014**, 515, 257-266	6	134
33	Drought adaptation policy development and assessment in East Africa using hydrologic and system dynamics modeling. *Natural Hazards*, **2014**, 74, 789-813	3	22
32	Sensitivity of Subjective Decisions in the GLUE Methodology for Quantifying the Uncertainty in the Flood Inundation Map for Seymour Reach in Indiana, USA. *Water (Switzerland)*, **2014**, 6, 2104-2126	3	5

31	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
30	Characterizing long-term land use/cover change in the United States from 1850 to 2000 using a nonlinear bi-analytical model. *Ambio*, **2013**, 42, 285-97	6.5	17
29	Evaluation of Temperature and Precipitation Trends and Long-Term Persistence in CMIP5 Twentieth-Century Climate Simulations. *Journal of Climate*, **2013**, 26, 4168-4185	4.4	126
28	Land use/cover change impacts in CMIP5 climate simulations: A new methodology and 21st century challenges. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 6337-6353	4.4	57
27	Estimation of annual baseflow at ungauged sites in Indiana USA. *Journal of Hydrology*, **2013**, 476, 13-27	6	55
26	An Approach Using a 1D Hydraulic Model, Landsat Imaging and Generalized Likelihood Uncertainty Estimation for an Approximation of Flood Discharge. *Water (Switzerland)*, **2013**, 5, 1598-1621	3	10
25	Implementation of surface soil moisture data assimilation with watershed scale distributed hydrological model. *Journal of Hydrology*, **2012**, 416-417, 98-117	6	80
24	Application of observation operators for field scale soil moisture averages and variances in agricultural landscapes. *Journal of Hydrology*, **2012**, 444-445, 34-50	6	20
23	Application of data assimilation with the Root Zone Water Quality Model for soil moisture profile estimation in the upper Cedar Creek, Indiana. *Hydrological Processes*, **2012**, 26, 1707-1719	3.3	17
22	WaterHUB **2012**,		2
21	Multi-scale temporal stability analysis of surface and subsurface soil moisture within the Upper Cedar Creek Watershed, Indiana. *Catena*, **2012**, 95, 91-103	5.8	52
20	Modern Digital Instruments and Techniques for Hydrodynamic and Morphologic Characterization of River Channels **2012**, 315-341		6
19	Moving university hydrology education forward with community-based geoinformatics, data and modeling resources. *Hydrology and Earth System Sciences*, **2012**, 16, 2393-2404	5.5	20
18	Uncertainty Quantification in Flood Inundation Mapping Using Generalized Likelihood Uncertainty Estimate and Sensitivity Analysis. *Journal of Hydrologic Engineering - ASCE*, **2012**, 17, 507-520	1.8	68
17	Evaluation of NARR and CLM3.5 outputs for surface water and energy budgets in the Mississippi River Basin. *Journal of Geophysical Research*, **2011**, 116,		23
16	Development and application of a storage release based distributed hydrologic model using GIS. *Journal of Hydrology*, **2011**, 403, 1-13	6	13
15	Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds. *Journal of Hydrologic Engineering - ASCE*, **2010**, 15, 918-930	1.8	8
14	Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida. *Journal of Water Resources Planning and Management - ASCE*, **2010**, 136, 167-176	2.8	3

13	Hydroclimatological impact of century-long drainage in midwestern United States: CCSM sensitivity experiments. *Journal of Geophysical Research*, **2010**, 115,		9
12	Parsimonious modeling of hydrologic responses in engineered watersheds: Structural heterogeneity versus functional homogeneity. *Water Resources Research*, **2010**, 46,	5.4	48
11	Vision of Cyberinfrastructure for End-to-End Environmental Explorations (C4E4). *Journal of Hydrologic Engineering - ASCE*, **2009**, 14, 53-64	1.8	7
10	Effect of spatial trends on interpolation of river bathymetry. *Journal of Hydrology*, **2009**, 371, 169-181	6	61
9	Streamflow trends in Indiana: Effects of long term persistence, precipitation and subsurface drains. *Journal of Hydrology*, **2009**, 374, 171-183	6	258
8	Effect of topographic data, geometric configuration and modeling approach on flood inundation mapping. *Journal of Hydrology*, **2009**, 377, 131-142	6	287
7	Impact of Watershed Subdivision and Soil Data Resolution on SWAT Model Calibration and Parameter Uncertainty1. *Journal of the American Water Resources Association*, **2009**, 45, 1179-1196	2.1	56
6	Uncertainty in Flood Inundation Mapping: Current Issues and Future Directions. *Journal of Hydrologic Engineering - ASCE*, **2008**, 13, 608-620	1.8	170
5	GIS techniques for creating river terrain models for hydrodynamic modeling and flood inundation mapping. *Environmental Modelling and Software*, **2008**, 23, 1300-1311	5.2	184
4	An Automated GIS Procedure for Delineating River and Lake Boundaries. *Transactions in GIS*, **2007**, 11, 213-231	2.1	17
3	Anisotropic considerations while interpolating river channel bathymetry. *Journal of Hydrology*, **2006** , 331, 731-741	6	86
2	Geospatial Representation of River Channels. *Journal of Hydrologic Engineering - ASCE*, **2005**, 10, 243-251	1.8	48
1	Determination of Unit Hydrograph Parameters for Indiana Watersheds		2