Ashok Kumar Mishra

List of Publications by Year
in descending order

126 papers	**11,363** citations	50276 **46** h-index	30922 **102** g-index
127 all docs	**127** docs citations	**127** times ranked	**8662** citing authors

#	Article	IF	Citations
1	A review of drought concepts. Journal of Hydrology, 2010, 391, 202-216.	5.4	3,361
2	Drought modeling â€" A review. Journal of Hydrology, 2011, 403, 157-175.	5.4	691
3	Climate change will affect global water availability through compounding changes in seasonal precipitation and evaporation. Nature Communications, 2020, 11, 3044.	12.8	467
4	Climate Change and Drought: a Perspective on Drought Indices. Current Climate Change Reports, 2018, 4, 145-163.	8.6	381
5	Drought forecasting using stochastic models. Stochastic Environmental Research and Risk Assessment, 2005, 19, 326-339.	4.0	356
6	Drought forecasting using feed-forward recursive neural network. Ecological Modelling, 2006, 198, 127-138.	2.5	282
7	Developments in hydrometric network design: A review. Reviews of Geophysics, 2009, 47, .	23.0	254
8	A review of remote sensing applications in agriculture for food security: Crop growth and yield, irrigation, and crop losses. Journal of Hydrology, 2020, 586, 124905.	5.4	227
9	Drought Forecasting Using a Hybrid Stochastic and Neural Network Model. Journal of Hydrologic Engineering - ASCE, 2007, 12, 626-638.	1.9	215
10	Drought characterization: a probabilistic approach. Stochastic Environmental Research and Risk Assessment, 2009, 23, 41-55.	4.0	173
11	Multivariate drought index: An information theory based approach for integrated drought assessment. Journal of Hydrology, 2015, 526, 164-182.	5.4	173
12	An entropy-based investigation into the variability of precipitation. Journal of Hydrology, 2009, 370, 139-154.	5.4	152
13	A review of remote sensing applications for water security: Quantity, quality, and extremes. Journal of Hydrology, 2020, 585, 124826.	5.4	148
14	Water security assessment using blue and green water footprint concepts. Journal of Hydrology, 2016, 542, 589-602.	5.4	143
15	Increase in Compound Drought and Heatwaves in a Warming World. Geophysical Research Letters, 2021, 48, .	4.0	134
16	Evaluation of satellite rainfall climatology using <scp>CMORPH</scp>, <scp>PERSIANNâ€CDR</scp>, <scp>PERSIANN</scp>, <scp>TRMM</scp>, <scp>MSWEP</scp> over Iran. International Journal of Climatology, 2017, 37, 4896-4914.	3.5	133
17	Drought monitoring with soil moisture active passive (SMAP) measurements. Journal of Hydrology, 2017, 552, 620-632.	5.4	132
18	Spatial and temporal drought analysis in the Kansabati river basin, India. International Journal of River Basin Management, 2005, 3, 31-41.	2.7	129

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19	Drought Analysis Using Copulas. Journal of Hydrologic Engineering - ASCE, 2013, 18, 797-808.	1.9	128
20	Long Lead Time Drought Forecasting Using a Wavelet and Fuzzy Logic Combination Model: A Case Study in Texas. Journal of Hydrometeorology, 2012, 13, 284-297.	1.9	111
21	Compound natural and human disasters: Managing drought and COVID-19 to sustain global agriculture and food sectors. Science of the Total Environment, 2021, 754, 142210.	8.0	101
22	Impact of Human Intervention and Climate Change on Natural Flow Regime. Water Resources Management, 2016, 30, 685-699.	3.9	100
23	Anatomy of a local-scale drought: Application of assimilated remote sensing products, crop model, and statistical methods to an agricultural drought study. Journal of Hydrology, 2015, 526, 15-29.	5.4	98
24	Hydrometric network evaluation for Canadian watersheds. Journal of Hydrology, 2010, 380, 420-437.	5.4	95
25	A bivariate mixed distribution with a heavy–tailed component and its application to single–site daily rainfall simulation. Water Resources Research, 2013, 49, 767-789.	4.2	94
26	Drought characterization over India under projected climate scenario. International Journal of Climatology, 2019, 39, 1889-1911.	3.5	94
27	Long-term spatio-temporal drought variability in Turkey. Journal of Hydrology, 2017, 552, 779-792.	5.4	93
28	Quantifying Climate and Catchment Control on Hydrological Drought in the Continental United States. Water Resources Research, 2020, 56, e2018WR024620.	4.2	90
29	Entropy theory–based criterion for hydrometric network evaluation and design: Maximum information minimum redundancy. Water Resources Research, 2012, 48, .	4.2	89
30	Low frequency drought variability associated with climate indices. Journal of Hydrology, 2009, 364, 152-162.	5.4	82
31	Potential of Intelligent Transportation Systems in Mitigating Adverse Weather Impacts on Road Mobility: A Review. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1107-1119.	8.0	81
32	Changes in extreme precipitation in Texas. Journal of Geophysical Research, 2010, 115, .	3.3	80
33	A copula-based precipitation forecasting model: Investigating the interdecadal modulation of ENSO's impacts on monthly precipitation. Water Resources Research, 2014, 50, 580-600.	4.2	78
34	Review of complex networks application in hydroclimatic extremes with an implementation to characterize spatio-temporal drought propagation in continental USA. Journal of Hydrology, 2017, 555, 600-620.	5.4	74
35	Spatial variability of climate change impacts on yield of rice and wheat in the Indian Ganga Basin. Science of the Total Environment, 2013, 468-469, S132-S138.	8.0	71
36	Impact of land uses, drought, flood, wildfire, and cascading events on water quality and microbial communities: A review and analysis. Journal of Hydrology, 2021, 596, 125707.	5.4	70

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37	Integrated drought causality, hazard, and vulnerability assessment for future socioeconomic scenarios: An information theory perspective. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6346-6378.	3.3	66
38	Nonstationary frequency analysis of the recent extreme precipitation events in the United States. Journal of Hydrology, 2019, 575, 999-1010.	5.4	62
39	Multi-layer high-resolution soil moisture estimation using machine learning over the United States. Remote Sensing of Environment, 2021, 266, 112706.	11.0	62
40	Simulation of the entire range of daily precipitation using a hybrid probability distribution. Water Resources Research, 2012, 48, .	4.2	60
41	Potential influence of climate and anthropogenic variables on water security using blue and green water scarcity, Falkenmark index, and freshwater provision indicator. Journal of Environmental Management, 2018, 228, 346-362.	7.8	60
42	Hydrological Drought in the Anthropocene: Impacts of Local Water Extraction and Reservoir Regulation in the U.S.. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,313.	3.3	58
43	Compound Drought and Heatwaves at a Global Scale: The Role of Natural Climate Variabilityâ€Associated Synoptic Patterns and Landâ€Surface Energy Budget Anomalies. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031943.	3.3	58
44	Multi-scale evaluation of six high-resolution satellite monthly rainfall estimates over a humid region in China with dense rain gauges. International Journal of Remote Sensing, 2014, 35, 1272-1294.	2.9	56
45	Evaluation of remotely sensed precipitation estimates using PERSIANN-CDR and MSWEP for spatio-temporal drought assessment over Iran. Journal of Hydrology, 2019, 579, 124189.	5.4	51
46	A Multivariate Flash Drought Indicator for Identifying Global Hotspots and Associated Climate Controls. Geophysical Research Letters, 2022, 49, .	4.0	49
47	Uncertainties of gridded precipitation observations in characterizing spatioâ€temporal drought and wetness over Vietnam. International Journal of Climatology, 2018, 38, 2067-2081.	3.5	47
48	Water scarcity-risk assessment in data-scarce river basins under decadal climate change using a hydrological modelling approach. Journal of Hydrology, 2020, 590, 125260.	5.4	44
49	Stream water quality prediction using boosted regression tree and random forest models. Stochastic Environmental Research and Risk Assessment, 2022, 36, 2661-2680.	4.0	44
50	Regionalization of Drought Characteristics Using an Entropy Approach. Journal of Hydrologic Engineering - ASCE, 2013, 18, 870-887.	1.9	43
51	Comparison of BIAS correction techniques for GPCC rainfall data in semi-arid climate. Stochastic Environmental Research and Risk Assessment, 2016, 30, 1659-1675.	4.0	40
52	Estimating Palmer Drought Severity Index using a wavelet fuzzy logic model based on meteorological variables. International Journal of Climatology, 2011, 31, 2021-2032.	3.5	39
53	Water, Environment, Energy, and Population Growth: Implications for Water Sustainability under Climate Change. Journal of Hydrologic Engineering - ASCE, 2014, 19, 667-673.	1.9	39
54	Assessing future changes in seasonal climatic extremes in the Ganges river basin using an ensemble of regional climate models. Climatic Change, 2014, 123, 273-286.	3.6	39

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55	Evaluating uncertainties in multi-layer soil moisture estimation with support vector machines and ensemble Kalman filtering. Journal of Hydrology, 2016, 538, 243-255.	5.4	39
56	Multiscale hydrological drought analysis: Role of climate, catchment and morphological variables and associated thresholds. Journal of Hydrology, 2020, 582, 124533.	5.4	37
57	Performance of SMAP, AMSR-E and LAI for weekly agricultural drought forecasting over continental United States. Journal of Hydrology, 2017, 553, 88-104.	5.4	36
58	An Overview of Flood Concepts, Challenges, and Future Directions. Journal of Hydrologic Engineering - ASCE, 2022, 27, .	1.9	36
59	Changes in temporal variability of precipitation over land due to anthropogenic forcings. Environmental Research Letters, 2017, 12, 024009.	5.2	33
60	Investigating drought in Apulia region, Italy using SPI and RDI. Theoretical and Applied Climatology, 2019, 137, 383-397.	2.8	32
61	Wet and dry spell analysis using copulas. International Journal of Climatology, 2016, 36, 476-491.	3.5	31
62	Performance of AMSR_E soil moisture data assimilation in CLM4.5 model for monitoring hydrologic fluxes at global scale. Journal of Hydrology, 2017, 547, 67-79.	5.4	31
63	Water Security Assessment for the Contiguous United States Using Water Footprint Concepts. Geophysical Research Letters, 2020, 47, e2020GL087061.	4.0	31
64	Variability in Canadian Seasonal Streamflow Information and Its Implication for Hydrometric Network Design. Journal of Hydrologic Engineering - ASCE, 2014, 19, .	1.9	29
65	Trend and persistence of precipitation under climate change scenarios for Kansabati basin, India. Hydrological Processes, 2009, 23, 2345-2357.	2.6	28
66	Hydrologic Drought Atlas for Texas. Journal of Hydrologic Engineering - ASCE, 2015, 20, .	1.9	28
67	Support vector machine and data assimilation framework for Groundwater Level Forecasting using GRACE satellite data. Journal of Hydrology, 2021, 603, 126929.	5.4	28
68	Relative effect of anthropogenic warming and natural climate variability to changes in Compound drought and heatwaves. Journal of Hydrology, 2022, 605, 127396.	5.4	28
69	Scaling characteristics of precipitation data in conjunction with wavelet analysis. Journal of Hydrology, 2010, 395, 279-288.	5.4	27
70	Three-parameter-based streamflow elasticity model: application to MOPEX basins in the USA at annual and seasonal scales. Hydrology and Earth System Sciences, 2016, 20, 2545-2556.	4.9	26
71	Quantifying climate, streamflow, and watershed control on water quality across Southeastern US watersheds. Science of the Total Environment, 2020, 739, 139945.	8.0	26
72	Spatiotemporal Characteristics and Propagation of Summer Extreme Precipitation Events Over United States: A Complex Network Analysis. Geophysical Research Letters, 2020, 47, e2020GL088185.	4.0	26

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73	Seasonal streamflow extremes in Texas river basins: Uncertainty, trends, and teleconnections. Journal of Geophysical Research, 2011, 116, .	3.3	25
74	Evaluation of multiple stochastic rainfall generators in diverse climatic regions. Stochastic Environmental Research and Risk Assessment, 2018, 32, 1337-1353.	4.0	25
75	A Holistic View of Water Management Impacts on Future Droughts: A Global Multimodel Analysis. Journal of Geophysical Research D: Atmospheres, 2018, 123, 5947-5972.	3.3	25
76	Sensitivity of global major crop yields to climate variables: A non-parametric elasticity analysis. Science of the Total Environment, 2020, 748, 141431.	8.0	25
77	Drought processes, modeling, and mitigation. Journal of Hydrology, 2015, 526, 1-2.	5.4	24
78	Sensitivity of drought resilience-vulnerability- exposure to hydrologic ratios in contiguous United States. Journal of Hydrology, 2018, 564, 294-306.	5.4	24
79	Wet and dry spell analysis of Global Climate Model-generated precipitation using power laws and wavelet transforms. Stochastic Environmental Research and Risk Assessment, 2011, 25, 517-535.	4.0	22
80	Urban and peri-urban precipitation and air temperature trends in mega cities of the world using multiple trend analysis methods. Theoretical and Applied Climatology, 2018, 132, 403-418.	2.8	21
81	Association between Uncertainties in Meteorological Variables and Water-Resources Planning for the State of Texas. Journal of Hydrologic Engineering - ASCE, 2011, 16, 984-999.	1.9	20
82	Sub-basin scale characterization of climate change vulnerability, impacts and adaptation in an Indian River basin. Regional Environmental Change, 2013, 13, 1087-1098.	2.9	20
83	A novel bias correction framework of TMPA 3B42 daily precipitation data using similarity matrix/homogeneous conditions. Science of the Total Environment, 2019, 694, 133680.	8.0	20
84	Complex Networks Reveal Heatwave Patterns and Propagations Over the USA. Geophysical Research Letters, 2021, 48, e2020GL090411.	4.0	20
85	Extraction of information content from stochastic disaggregation and bias corrected downscaled precipitation variables for crop simulation. Stochastic Environmental Research and Risk Assessment, 2013, 27, 449-457.	4.0	19
86	Development of Climate Data Bias Corrector (CDBC) Tool and Its Application over the Agro-Ecological Zones of India. Water (Switzerland), 2019, 11, 1102.	2.7	18
87	Explaining water security indicators using hydrologic and agricultural systems models. Journal of Hydrology, 2022, 607, 127463.	5.4	18
88	Impact of global warming and climate change on social development. Journal of Comparative Social Welfare, 2010, 26, 239-260.	0.3	17
89	Monthly river flow simulation with a joint conditional density estimation network. Water Resources Research, 2013, 49, 3229-3242.	4.2	17
90	Anthropogenic Warming and Population Growth May Double US Heat Stress by the Late 21st Century. Earth's Future, 2021, 9, e2020EF001886.	6.3	16

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91	Water Deficit Duration and Severity Analysis Based on Runoff Derived from Noah Land Surface Model. Journal of Hydrologic Engineering - ASCE, 2013, 18, 817-833.	1.9	15
92	Teleconnection between low flows and large-scale climate indices in Texas River basins. Stochastic Environmental Research and Risk Assessment, 2018, 32, 2337-2350.	4.0	15
93	Information Entropy Suggests Stronger Nonlinear Associations between Hydro-Meteorological Variables and ENSO. Entropy, 2018, 20, 38.	2.2	15
94	Compound impact of drought and COVID-19 on agriculture yield in the USA. Science of the Total Environment, 2022, 807, 150801.	8.0	15
95	Seasonal and spatial variations in the scaling and correlation structure of streamflow data. Hydrological Processes, 2013, 27, 1681-1690.	2.6	14
96	Determinants of household use of wetland resources in West Bengal, India. Wetlands Ecology and Management, 2015, 23, 803-816.	1.5	14
97	Evaluation of soil moisture–precipitation feedback at different time scales over Asia. International Journal of Climatology, 2017, 37, 3619-3629.	3.5	14
98	Trend analysis and change point detection of annual and seasonal horizontal visibility trends in Saudi Arabia. Theoretical and Applied Climatology, 2021, 144, 127-146.	2.8	14
99	Understanding changes in water availability in the Rio Grande/Río Bravo del Norte basin under the influence of large‐scale circulation indices using the Noah land surface model. Journal of Geophysical Research, 2012, 117, .	3.3	13
100	Integrated Assessment of no-Regret Climate Change Adaptation Options for Reservoir Catchment and Command Areas. Water Resources Management, 2016, 30, 1001-1018.	3.9	13
101	Evaluation of high-resolution satellite products for streamflow and water quality assessment in a Southeastern US watershed. Journal of Hydrology: Regional Studies, 2020, 27, 100660.	2.4	12
102	Meteorological and Hydrological Drought Analysis and Its Impact on Water Quality and Stream Integrity. Sustainability, 2021, 13, 8175.	3.2	12
103	Cascading effect of meteorological forcing on extreme precipitation events: Role of atmospheric rivers in southeastern US. Journal of Hydrology, 2021, 601, 126641.	5.4	12
104	Climate Change and Its Impact on Water Resources. , 2014, , 525-569.		12
105	Spatial and temporal variability of Standardized Precipitation Index over Indochina Peninsula. Cuadernos De Investigacion Geografica, 2016, 42, 221-232.	1.1	12
106	Evaluation of hydroclimatic variables for maize yield estimation using crop model and remotely sensed data assimilation. Stochastic Environmental Research and Risk Assessment, 2019, 33, 1283-1295.	4.0	11
107	Quantifying Spatial Drought Propagation Potential in North America Using Complex Network Theory. Water Resources Research, 2022, 58, .	4.2	11
108	Global Flash Drought Analysis: Uncertainties From Indicators and Datasets. Earth's Future, 2022, 10, .	6.3	11

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109	A brief review of assessment approaches that support evaluation of climate change adaptation options in the water sector. Water Policy, 2014, 16, 959-972.	1.5	10
110	Evaluation of Satellite and Gauge-Based Precipitation Products through Hydrologic Simulation in Tigris River Basin under Data-Scarce Environment. Journal of Hydrologic Engineering - ASCE, 2019, 24, 05018033.	1.9	10
111	Dynamics of virtual water networks: Role of national socio-economic indicators across the world. Journal of Hydrology, 2020, 589, 125171.	5.4	10
112	Evaluation of land-use, climate change, and low-impact development practices on urban flooding. Hydrological Sciences Journal, 2021, 66, 1729-1742.	2.6	10
113	Simulating Hydrological Drought Properties at Different Spatial Units in the United States Based on Waveletâ€"Bayesian Regression Approach. Earth Interactions, 2012, 16, 1-23.	1.5	9
114	Combining climatological and participatory approaches for assessing changes in extreme climatic indices at regional scale. Climatic Change, 2013, 119, 603-615.	3.6	8
115	Evaluation of hydrological effect of stakeholder prioritized climate change adaptation options based on multi-model regional climate projections. Climatic Change, 2014, 123, 225-239.	3.6	8
116	Probabilistic drought forecasting using copula and satellite rainfall based <scp>PERSIANNâ€"CDR</scp> and <scp>MSWEP datasets</scp>. International Journal of Climatology, 2022, 42, 6441-6458.	3.5	8
117	Quantifying yield gap for rice cropping systems in Lower Gangetic Plains. Paddy and Water Environment, 2018, 16, 601-615.	1.8	7
118	Scaling Characteristics of Precipitation Data over Texas. Journal of Hydrologic Engineering - ASCE, 2011, 16, 1009-1016.	1.9	5
119	Hydrus-1D for Simulating Potassium Transport in Flooded Paddy Soils. Communications in Soil Science and Plant Analysis, 2021, 52, 2803-2820.	1.4	5
120	Runoff sensitivity over Asia: Role of climate variables and initial soil conditions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 2218-2238.	3.3	4
121	Estimation of nitrogen status and yield of rice crop using unmanned aerial vehicle equipped with multispectral camera. Journal of Applied Remote Sensing, 2021, 15, .	1.3	4
122	Assessing the Impacts of Climate Variability on the Water Resources in the Rio Grande/RÃo Bravo Basin. , 2010, , .		1
123	Performance of multisite stochastic precipitation models for a tropical monsoon region. Stochastic Environmental Research and Risk Assessment, 2020, 34, 2159-2177.	4.0	1
124	Property Rights and Institutional Arrangements of a Man-Made Wetland in Dryland Area of West Bengal, India. Wetlands, 2020, 40, 2553-2560.	1.5	1
125	Trend and change point detection in mean annual and seasonal maximum temperatures over Saudi Arabia. Arabian Journal of Geosciences, 2021, 14, 1.	1.3	1
126	Rainfall and droughts. , 2022, , 451-474.		1