

Vimal Mishra

List of Publications by Year in descending order

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Version: 2024-02-01

118
papers

7,748
citations

36271

51
h-index

58549

82
g-index

163
all docs

163
docs citations

163
times ranked

6579
citing authors

#	ARTICLE	IF	CITATIONS
1	A Long-Term Hydrologically Based Dataset of Land Surface Fluxes and States for the Conterminous United States: Update and Extensions. <i>Journal of Climate</i> , 2013, 26, 9384-9392.	1.2	499
2	Relative contribution of monsoon precipitation and pumping to changes in groundwater storage in India. <i>Nature Geoscience</i> , 2017, 10, 109-117.	5.4	334
3	Increase in extreme precipitation events under anthropogenic warming in India. <i>Weather and Climate Extremes</i> , 2018, 20, 45-53.	1.6	271
4	A prominent pattern of year-to-year variability in Indian Summer Monsoon Rainfall. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 7213-7217.	3.3	231
5	Changes in observed climate extremes in global urban areas. <i>Environmental Research Letters</i> , 2015, 10, 024005.	2.2	213
6	Trends and variability of droughts over the Indian monsoon region. <i>Weather and Climate Extremes</i> , 2016, 12, 43-68.	1.6	194
7	Retrospective droughts in the crop growing season: Implications to corn and soybean yield in the Midwestern United States. <i>Agricultural and Forest Meteorology</i> , 2010, 150, 1030-1045.	1.9	179
8	Bias-corrected climate projections for South Asia from Coupled Model Intercomparison Project-6. <i>Scientific Data</i> , 2020, 7, 338.	2.4	165
9	High-resolution near real-time drought monitoring in South Asia. <i>Scientific Data</i> , 2017, 4, 170145.	2.4	141
10	Relationship between hourly extreme precipitation and local air temperature in the United States. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	137
11	Assessment of Drought due to Historic Climate Variability and Projected Future Climate Change in the Midwestern United States. <i>Journal of Hydrometeorology</i> , 2010, 11, 46-68.	0.7	136
12	Reliability of regional and global climate models to simulate precipitation extremes over India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 9301-9323.	1.2	136
13	Does ERA-5 Outperform Other Reanalysis Products for Hydrologic Applications in India?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 9423-9441.	1.2	136
14	Global distribution, trends, and drivers of flash drought occurrence. <i>Nature Communications</i> , 2021, 12, 6330.	5.8	130
15	Remotely sensed high resolution irrigated area mapping in India for 2000 to 2015. <i>Scientific Data</i> , 2016, 3, 160118.	2.4	124
16	Intercomparison of regional-scale hydrological models and climate change impacts projected for 12 large river basins worldwide—a synthesis. <i>Environmental Research Letters</i> , 2017, 12, 105002.	2.2	109
17	Drought and Famine in India, 1870–2016. <i>Geophysical Research Letters</i> , 2019, 46, 2075-2083.	1.5	109
18	Heat wave exposure in India in current, 1.5°C, and 2.0°C worlds. <i>Environmental Research Letters</i> , 2017, 12, 124012.	2.2	107

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19	Dominant control of agriculture and irrigation on urban heat island in India. <i>Scientific Reports</i> , 2017, 7, 14054.	1.6	106
20	Moist heat stress extremes in India enhanced by irrigation. <i>Nature Geoscience</i> , 2020, 13, 722-728.	5.4	106
21	On the frequency of the 2015 monsoon season drought in the Indo-Gangetic Plain. <i>Geophysical Research Letters</i> , 2016, 43, 12,102.	1.5	105
22	Soil Moisture Droughts under the Retrospective and Projected Climate in India*. <i>Journal of Hydrometeorology</i> , 2014, 15, 2267-2292.	0.7	104
23	Global Observational Evidence of Strong Linkage Between Dew Point Temperature and Precipitation Extremes. <i>Geophysical Research Letters</i> , 2018, 45, 12,320.	1.5	100
24	A regional scale assessment of land use/land cover and climatic changes on water and energy cycle in the upper Midwest United States. <i>International Journal of Climatology</i> , 2010, 30, 2025-2044.	1.5	99
25	Contrasting response of rainfall extremes to increase in surface air and dewpoint temperatures at urban locations in India. <i>Scientific Reports</i> , 2017, 7, 1228.	1.6	99
26	Are climatic or land cover changes the dominant cause of runoff trends in the Upper Mississippi River Basin?. <i>Geophysical Research Letters</i> , 2013, 40, 1104-1110.	1.5	97
27	Hydrologic sensitivity of Indian sub-continental river basins to climate change. <i>Global and Planetary Change</i> , 2016, 139, 78-96.	1.6	97
28	An ensemble analysis of climate change impacts on streamflow seasonality across 11 large river basins. <i>Climatic Change</i> , 2017, 141, 401-417.	1.7	94
29	Hydroclimatological Perspective of the Kerala Flood of 2018. <i>Journal of the Geological Society of India</i> , 2018, 92, 645-650.	0.5	94
30	Causes and implications of groundwater depletion in India: A review. <i>Journal of Hydrology</i> , 2021, 596, 126103.	2.3	92
31	Increased flood risk in Indian sub-continent under the warming climate. <i>Weather and Climate Extremes</i> , 2019, 25, 100212.	1.6	90
32	Integrated Drought Index (IDI) for Drought Monitoring and Assessment in India. <i>Water Resources Research</i> , 2020, 56, e2019WR026284.	1.7	89
33	Hydrologic Changes in Indian Subcontinental River Basins (1901-2012). <i>Journal of Hydrometeorology</i> , 2016, 17, 2667-2687.	0.7	83
34	Development of an Experimental Near-Real-Time Drought Monitor for India*. <i>Journal of Hydrometeorology</i> , 2015, 16, 327-345.	0.7	80
35	Anthropogenic warming and intraseasonal summer monsoon variability amplify the risk of future flash droughts in India. <i>Npj Climate and Atmospheric Science</i> , 2021, 4, .	2.6	80
36	Climatic uncertainty in Himalayan water towers. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 2689-2705.	1.2	79

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37	Evaluation of the Reanalysis Products for the Monsoon Season Droughts in India. <i>Journal of Hydrometeorology</i> , 2014, 15, 1575-1591.	0.7	76
38	Strong Linkage Between Precipitation Intensity and Monsoon Season Groundwater Recharge in India. <i>Geophysical Research Letters</i> , 2018, 45, 5536-5544.	1.5	73
39	On the Projected Decline in Droughts Over South Asia in CMIP6 Multimodel Ensemble. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033587.	1.2	70
40	Groundwater Depletion and Associated CO ₂ Emissions in India. <i>Earth's Future</i> , 2018, 6, 1672-1681.	2.4	66
41	Evaluating wind extremes in CMIP5 climate models. <i>Climate Dynamics</i> , 2015, 45, 441-453.	1.7	65
42	Propagation of Meteorological to Hydrological Droughts in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033455.	1.2	65
43	Reconstruction of droughts in India using multiple land-surface models (1951–2015). <i>Hydrology and Earth System Sciences</i> , 2018, 22, 2269-2284.	1.9	63
44	Testing the use of standardised indices and GRACE satellite data to estimate the European 2015 groundwater drought in near-real time. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 1947-1971.	1.9	62
45	Prediction of vegetation anomalies to improve food security and water management in India. <i>Geophysical Research Letters</i> , 2015, 42, 5290-5298.	1.5	61
46	Increase in Subdaily Precipitation Extremes in India Under 1.5 and 2.0°C Warming Worlds. <i>Geophysical Research Letters</i> , 2018, 45, 6972-6982.	1.5	59
47	Long-term (1870–2018) drought reconstruction in context of surface water security in India. <i>Journal of Hydrology</i> , 2020, 580, 124228.	2.3	59
48	Future exacerbation of hot and dry summer monsoon extremes in India. <i>Npj Climate and Atmospheric Science</i> , 2020, 3, .	2.6	59
49	The INTENSE project: using observations and models to understand the past, present and future of sub-daily rainfall extremes. <i>Advances in Science and Research</i> , 0, 15, 117-126.	1.0	59
50	A sixfold rise in concurrent day and night-time heatwaves in India under 2°C warming. <i>Scientific Reports</i> , 2018, 8, 16922.	1.6	58
51	Uncertainty and Bias in Satellite-Based Precipitation Estimates over Indian Subcontinental Basins: Implications for Real-Time Streamflow Simulation and Flood Prediction*. <i>Journal of Hydrometeorology</i> , 2016, 17, 615-636.	0.7	56
52	Strong Influence of Irrigation on Water Budget and Land Surface Temperature in Indian Subcontinental River Basins. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 1449-1462.	1.2	56
53	Dominance of summer monsoon flash droughts in India. <i>Environmental Research Letters</i> , 2020, 15, 104061.	2.2	56
54	Observed and projected urban extreme rainfall events in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 12,621.	1.2	55

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55	Enhanced risk of concurrent regional droughts with increased ENSO variability and warming. <i>Nature Climate Change</i> , 2022, 12, 163-170.	8.1	55
56	Projected Increase in Hydropower Production in India under Climate Change. <i>Scientific Reports</i> , 2018, 8, 12450.	1.6	53
57	Quantifying the local cooling effects of urban green spaces: Evidence from Bengaluru, India. <i>Landscape and Urban Planning</i> , 2021, 209, 104043.	3.4	51
58	Urban precipitation extremes: How reliable are regional climate models?. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	50
59	A synthesis of hourly and daily precipitation extremes in different climatic regions. <i>Weather and Climate Extremes</i> , 2019, 26, 100219.	1.6	50
60	Unprecedented drought in South India and recent water scarcity. <i>Environmental Research Letters</i> , 2021, 16, 054007.	2.2	50
61	Lake Ice phenology of small lakes: Impacts of climate variability in the Great Lakes region. <i>Global and Planetary Change</i> , 2011, 76, 166-185.	1.6	49
62	Climatic trends in major U.S. urban areas, 1950-2009. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	47
63	Role of Extreme Precipitation and Initial Hydrologic Conditions on Floods in Godavari River Basin, India. <i>Water Resources Research</i> , 2019, 55, 9191-9210.	1.7	45
64	Contributions of Dynamic and Thermodynamic Scaling in Subdaily Precipitation Extremes in India. <i>Geophysical Research Letters</i> , 2018, 45, 2352-2361.	1.5	44
65	Increased Drought Risk in South Asia under Warming Climate: Implications of Uncertainty in Potential Evapotranspiration Estimates. <i>Journal of Hydrometeorology</i> , 2020, 21, 2979-2996.	0.7	44
66	Understanding each other's models: an introduction and a standard representation of 16 global water models to support intercomparison, improvement, and communication. <i>Geoscientific Model Development</i> , 2021, 14, 3843-3878.	1.3	41
67	On the need of ensemble flood forecast in India. <i>Water Security</i> , 2021, 12, 100086.	1.2	39
68	A substantial rise in the area and population affected by dryness in South Asia under 1.5 Å°C, 2.0 Å°C and 2.5 Å°C warmer worlds. <i>Environmental Research Letters</i> , 2019, 14, 114021.	2.2	38
69	Parameterization of Lakes and Wetlands for Energy and Water Balance Studies in the Great Lakes Region*. <i>Journal of Hydrometeorology</i> , 2010, 11, 1057-1082.	0.7	36
70	Observational Evidence of Irrigation Influence on Vegetation Health and Land Surface Temperature in India. <i>Geophysical Research Letters</i> , 2019, 46, 13441-13451.	1.5	35
71	Drought Onset and Termination in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032871.	1.2	35
72	Short to sub-seasonal hydrologic forecast to manage water and agricultural resources in India. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 707-720.	1.9	34

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73	Droughts and Floods. , 2020, , 117-141.		34
74	Contrasting influence of human activities on agricultural and hydrological droughts in India. Science of the Total Environment, 2021, 774, 144959.	3.9	33
75	Decline in surface urban heat island intensity in India during heatwaves. Environmental Research Communications, 2019, 1, 031001.	0.9	32
76	Anthropogenic and Climate Contributions on the Changes in Terrestrial Water Storage in India. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032470.	1.2	32
77	Impacts of Historic Climate Variability on Seasonal Soil Frost in the Midwestern United States. Journal of Hydrometeorology, 2010, 11, 229-252.	0.7	30
78	On the occurrence of the worst drought in South Asia in the observed and future climate. Environmental Research Letters, 2021, 16, 024050.	2.2	30
79	Changing thermal dynamics of lakes in the Great Lakes region: Role of ice cover feedbacks. Global and Planetary Change, 2011, 75, 155-172.	1.6	29
80	Multimodel assessment of sensitivity and uncertainty of evapotranspiration and a proxy for available water resources under climate change. Climatic Change, 2017, 141, 451-465.	1.7	26
81	Impacts of hydrological model calibration on projected hydrological changes under climate change—a multi-model assessment in three large river basins. Climatic Change, 2020, 163, 1143-1164.	1.7	25
82	Increase in Population Exposure Due to Dry and Wet Extremes in India Under a Warming Climate. Earth's Future, 2020, 8, e2020EF001731.	2.4	22
83	Uncertainty resulting from multiple data usage in statistical downscaling. Geophysical Research Letters, 2014, 41, 4013-4019.	1.5	20
84	Utility of Global Ensemble Forecast System (GEFS) Reforecast for Medium-Range Drought Prediction in India. Journal of Hydrometeorology, 2016, 17, 1781-1800.	0.7	20
85	Substantial decline in atmospheric aridity due to irrigation in India. Environmental Research Letters, 2020, 15, 124060.	2.2	20
86	Natural and anthropogenic drivers of the lost groundwater from the Ganga River basin. Environmental Research Letters, 2021, 16, 114009.	2.2	20
87	Increasing footprint of climate warming on flash droughts occurrence in Europe. Environmental Research Letters, 2022, 17, 064017.	2.2	20
88	Multiday Precipitation Is a Prominent Driver of Floods in Indian River Basins. Water Resources Research, 2022, 58, .	1.7	20
89	Roles of Irrigation and Reservoir Operations in Modulating Terrestrial Water and Energy Budgets in the Indian Subcontinental River Basins. Journal of Geophysical Research D: Atmospheres, 2019, 124, 12915-12936.	1.2	19
90	Retrieval of Substrate Bearing Strength from Hyperspectral Imagery during the Virginia Coast Reserve (VCRâ€™07) Multi-Sensor Campaign. Marine Geodesy, 2010, 33, 101-116.	0.9	18

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91	Reflections and projections on a decade of climate science. <i>Nature Climate Change</i> , 2021, 11, 279-285.	8.1	18
92	On the Changes in Groundwater Storage Variability in Western India Using GRACE and Well Observations. <i>Remote Sensing in Earth Systems Sciences</i> , 2019, 2, 260-272.	1.1	17
93	A seven-fold rise in the probability of exceeding the observed hottest summer in India in a 2 °C warmer world. <i>Environmental Research Letters</i> , 2020, 15, 044028.	2.2	16
94	Multimodel assessment of water budget in Indian sub-continental river basins. <i>Journal of Hydrology</i> , 2021, 603, 126977.	2.3	16
95	Prediction of Reservoir Storage Anomalies in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 3822-3838.	1.2	15
96	Influence of cold season climate variability on lakes and wetlands in the Great Lakes region. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	13
97	Does comprehensive evaluation of hydrological models influence projected changes of mean and high flows in the Godavari River basin?. <i>Climatic Change</i> , 2020, 163, 1187-1205.	1.7	13
98	Strong Influence of Changes in Terrestrial Water Storage on Flood Potential in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, .	1.2	13
99	Modulation of Compound Extremes of Low Soil Moisture and High Vapor Pressure Deficit by Irrigation in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD034529.	1.2	13
100	Extremes in water availability and suicide: Evidence from a nationally representative sample of rural Indian adults. <i>Environmental Research</i> , 2020, 190, 109969.	3.7	11
101	Relative Contribution of Precipitation and Air Temperature on Dry Season Drying in India, 1951–2018. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032998.	1.2	10
102	Runoff sensitivity of Indian sub-continental river basins. <i>Science of the Total Environment</i> , 2021, 766, 142642.	3.9	10
103	A Bayesian Hierarchical Network Model for Daily Streamflow Ensemble Forecasting. <i>Water Resources Research</i> , 2021, 57, e2021WR029920.	1.7	8
104	Improved Water Savings and Reduction in Moist Heat Stress Caused by Efficient Irrigation. <i>Earth's Future</i> , 2022, 10, .	2.4	8
105	A Strong Linkage between Seasonal Crop Growth and Groundwater Storage Variability in India. <i>Journal of Hydrometeorology</i> , 2021, 22, 125-138.	0.7	7
106	Storm types in India: linking rainfall duration, spatial extent and intensity. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200137.	1.6	7
107	Drought detection and declaration in India. <i>Water Security</i> , 2021, 14, 100104.	1.2	7
108	Combined signatures of atmospheric drivers, soil moisture, and moisture source on floods in Narmada River basin, India. <i>Climate Dynamics</i> , 2022, 59, 2831-2851.	1.7	7

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109	A Satellite-Based Assessment of the Relative Contribution of Hydroclimatic Variables on Vegetation Growth in Global Agricultural and Nonagricultural Regions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033228.	1.2	6
110	On the causes of tropical cyclone driven floods in India. <i>Weather and Climate Extremes</i> , 2022, 36, 100432.	1.6	6
111	Remote Sensing Retrieval of Substrate Bearing Strength from Hyperspectral Imagery at the Virginia Coast Reserve (VCR'07) Multi-Sensor Campaign. , 2008, , .		5
112	Famines and likelihood of consecutive megadroughts in India. <i>Npj Climate and Atmospheric Science</i> , 2021, 4, .	2.6	5
113	Sub-Seasonal Prediction of Drought and Streamflow Anomalies for Water Management in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	1.2	5
114	Challenges in drought monitoring and assessment in India. <i>Water Security</i> , 2022, 16, 100120.	1.2	5
115	Hydrological Modeling in India. <i>Proceedings of the Indian National Science Academy</i> , 2020, 86, .	0.5	4
116	A Bayesian Hierarchical Framework for Postprocessing Daily Streamflow Simulations across a River Network. <i>Journal of Hydrometeorology</i> , 2022, 23, 947-963.	0.7	2
117	Discussion of "Multivariate Modeling of Projected Drought Frequency and Hazard over India" by Vivek Gupta, Manoj Kumar Jain, and Vijay P. Singh. <i>Journal of Hydrologic Engineering - ASCE</i> , 2021, 26, 07020024.	0.8	1
118	Thank You to Our 2021 Reviewers. <i>Earth's Future</i> , 2022, 10, .	2.4	0