

Vimal Mishra

List of Publications by Citations

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114
papers

4,641
citations

40
h-index

65
g-index

163
ext. papers

6,024
ext. citations

5.7
avg, IF

6.74
L-index

#	Paper	IF	Citations
114	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	4.4	411
113	Relative contribution of monsoon precipitation and pumping to changes in groundwater storage in India. <i>Nature Geoscience</i> , 2017 , 10, 109-117	18.3	227
112	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, 7213-7	11.5	159
111	Increase in extreme precipitation events under anthropogenic warming in India. <i>Weather and Climate Extremes</i> , 2018 , 20, 45-53	6	147
110	Changes in observed climate extremes in global urban areas. <i>Environmental Research Letters</i> , 2015 , 10, 024005	6.2	145
109	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	5.8	138
108	Trends and variability of droughts over the Indian monsoon region. <i>Weather and Climate Extremes</i> , 2016 , 12, 43-68	6	132
107	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	3.7	117
106	High-resolution near real-time drought monitoring in South Asia. <i>Scientific Data</i> , 2017 , 4, 170145	8.2	99
105	Relationship between hourly extreme precipitation and local air temperature in the United States. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	99
104	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	4.4	98
103	Remotely sensed high resolution irrigated area mapping in India for 2000 to 2015. <i>Scientific Data</i> , 2016 , 3, 160118	8.2	86
102	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	3.5	82
101	Soil Moisture Droughts under the Retrospective and Projected Climate in India*. <i>Journal of Hydrometeorology</i> , 2014 , 15, 2267-2292	3.7	78
100	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	4.9	76
99	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	4.9	74
98	Intercomparison of regional-scale hydrological models and climate change impacts projected for 12 large river basins worldwide: synthesis. <i>Environmental Research Letters</i> , 2017 , 12, 105002	6.2	71

97	Climatic uncertainty in Himalayan water towers. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 2689-2705	4.4	67
96	Development of an Experimental Near-Real-Time Drought Monitor for India*. <i>Journal of Hydrometeorology</i> , 2015 , 16, 327-345	3.7	67
95	An ensemble analysis of climate change impacts on streamflow seasonality across 11 large river basins. <i>Climatic Change</i> , 2017 , 141, 401-417	4.5	65
94	Hydrologic sensitivity of Indian sub-continental river basins to climate change. <i>Global and Planetary Change</i> , 2016 , 139, 78-96	4.2	65
93	Heat wave exposure in India in current, 1.5 °C, and 2.0 °C worlds. <i>Environmental Research Letters</i> , 2017 , 12, 124012	6.2	62
92	Drought and Famine in India, 1870-2016. <i>Geophysical Research Letters</i> , 2019 , 46, 2075-2083	4.9	62
91	Hydrologic Changes in Indian Subcontinental River Basins (1901-2012). <i>Journal of Hydrometeorology</i> , 2016 , 17, 2667-2687	3.7	62
90	Global Observational Evidence of Strong Linkage Between Dew Point Temperature and Precipitation Extremes. <i>Geophysical Research Letters</i> , 2018 , 45, 12,320-12,330	4.9	61
89	On the frequency of the 2015 monsoon season drought in the Indo-Gangetic Plain. <i>Geophysical Research Letters</i> , 2016 , 43, 12,102-12,112	4.9	59
88	Evaluation of the Reanalysis Products for the Monsoon Season Droughts in India. <i>Journal of Hydrometeorology</i> , 2014 , 15, 1575-1591	3.7	58
87	Dominant control of agriculture and irrigation on urban heat island in India. <i>Scientific Reports</i> , 2017 , 7, 14054	4.9	57
86	Does ERA-5 Outperform Other Reanalysis Products for Hydrologic Applications in India?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 9423-9441	4.4	56
85	Hydroclimatological Perspective of the Kerala Flood of 2018. <i>Journal of the Geological Society of India</i> , 2018 , 92, 645-650	1.3	56
84	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	5.5	49
83	Evaluating wind extremes in CMIP5 climate models. <i>Climate Dynamics</i> , 2015 , 45, 441-453	4.2	49
82	Reconstruction of droughts in India using multiple land-surface models (1951-2015). <i>Hydrology and Earth System Sciences</i> , 2018 , 22, 2269-2284	5.5	49
81	Integrated Drought Index (IDI) for Drought Monitoring and Assessment in India. <i>Water Resources Research</i> , 2020 , 56, e2019WR026284	5.4	48
80	Increased flood risk in Indian sub-continent under the warming climate. <i>Weather and Climate Extremes</i> , 2019 , 25, 100212	6	45

79	Urban precipitation extremes: How reliable are regional climate models?. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	45
78	Prediction of vegetation anomalies to improve food security and water management in India. <i>Geophysical Research Letters</i> , 2015 , 42, 5290-5298	4.9	44
77	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> , 15, 117-126		44
76	The Kerala flood of 2018: combined impact of extreme rainfall and reservoir storage		44
75	Climatic trends in major U.S. urban areas, 1950-2009. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	43
74	Strong Linkage Between Precipitation Intensity and Monsoon Season Groundwater Recharge in India. <i>Geophysical Research Letters</i> , 2018 , 45, 5536-5544	4.9	40
73	Observed and projected urban extreme rainfall events in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 12,621-12,641	4.4	39
72	Moist heat stress extremes in India enhanced by irrigation. <i>Nature Geoscience</i> , 2020 , 13, 722-728	18.3	39
71	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	4.2	37
70	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	3.7	36
69	Long-term (1870-2018) drought reconstruction in context of surface water security in India. <i>Journal of Hydrology</i> , 2020 , 580, 124228	6	36
68	Bias-corrected climate projections for South Asia from Coupled Model Intercomparison Project-6. <i>Scientific Data</i> , 2020 , 7, 338	8.2	33
67	Projected Increase in Hydropower Production in India under Climate Change. <i>Scientific Reports</i> , 2018 , 8, 12450	4.9	33
66	Groundwater Depletion and Associated CO2 Emissions in India. <i>Earth's Future</i> , 2018 , 6, 1672-1681	7.9	32
65	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	4.4	31
64	A sixfold rise in concurrent day and night-time heatwaves in India under 2 °C warming. <i>Scientific Reports</i> , 2018 , 8, 16922	4.9	31
63	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	3.7	30
62	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	4.9	28

61	A synthesis of hourly and daily precipitation extremes in different climatic regions. <i>Weather and Climate Extremes</i> , 2019 , 26, 100219	6	27
60	Impacts of Historic Climate Variability on Seasonal Soil Frost in the Midwestern United States. <i>Journal of Hydrometeorology</i> , 2010 , 11, 229-252	3.7	27
59	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,	8	26
58	Future exacerbation of hot and dry summer monsoon extremes in India. <i>Npj Climate and Atmospheric Science</i> , 2020 , 3,	8	25
57	Changing thermal dynamics of lakes in the Great Lakes region: Role of ice cover feedbacks. <i>Global and Planetary Change</i> , 2011 , 75, 155-172	4.2	25
56	Causes and implications of groundwater depletion in India: A review. <i>Journal of Hydrology</i> , 2021 , 596, 126103	6	24
55	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	5.5	23
54	Multimodel assessment of sensitivity and uncertainty of evapotranspiration and a proxy for available water resources under climate change. <i>Climatic Change</i> , 2017 , 141, 451-465	4.5	22
53	Contributions of Dynamic and Thermodynamic Scaling in Subdaily Precipitation Extremes in India. <i>Geophysical Research Letters</i> , 2018 , 45, 2352-2361	4.9	22
52	On the Projected Decline in Droughts Over South Asia in CMIP6 Multimodel Ensemble. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD033587	4.4	22
51	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	3.7	20
50	Role of Extreme Precipitation and Initial Hydrologic Conditions on Floods in Godavari River Basin, India. <i>Water Resources Research</i> , 2019 , 55, 9191-9210	5.4	20
49	Global distribution, trends, and drivers of flash drought occurrence. <i>Nature Communications</i> , 2021 , 12, 6330	17.4	20
48	Dominance of summer monsoon flash droughts in India. <i>Environmental Research Letters</i> , 2020 , 15, 104066.2	6.2	20
47	Propagation of Meteorological to Hydrological Droughts in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD033455	4.4	20
46	A substantial rise in the area and population affected by dryness in South Asia under 1.5 °C, 2.0 °C and 2.5 °C warmer worlds. <i>Environmental Research Letters</i> , 2019 , 14, 114021	6.2	19
45	Anthropogenic and Climate Contributions on the Changes in Terrestrial Water Storage in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032470	4.4	19
44	Uncertainty resulting from multiple data usage in statistical downscaling. <i>Geophysical Research Letters</i> , 2014 , 41, 4013-4019	4.9	18

43	Drought Onset and Termination in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD033871	4.1	15
42	Decline in surface urban heat island intensity in India during heatwaves. <i>Environmental Research Communications</i> , 2019 , 1, 031001	3.1	15
41	Observational Evidence of Irrigation Influence on Vegetation Health and Land Surface Temperature in India. <i>Geophysical Research Letters</i> , 2019 , 46, 13441-13451	4.9	14
40	Retrieval of Substrate Bearing Strength from Hyperspectral Imagery during the Virginia Coast Reserve (VCR07) Multi-Sensor Campaign. <i>Marine Geodesy</i> , 2010 , 33, 101-116	1.2	14
39	Utility of Global Ensemble Forecast System (GEFS) Reforecast for Medium-Range Drought Prediction in India. <i>Journal of Hydrometeorology</i> , 2016 , 17, 1781-1800	3.7	14
38	Quantifying the local cooling effects of urban green spaces: Evidence from Bengaluru, India. <i>Landscape and Urban Planning</i> , 2021 , 209, 104043	7.7	13
37	On the occurrence of the worst drought in South Asia in the observed and future climate. <i>Environmental Research Letters</i> , 2021 , 16, 024050	6.2	13
36	Unprecedented drought in South India and recent water scarcity. <i>Environmental Research Letters</i> , 2021 , 16, 054007	6.2	12
35	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	6.3	12
34	Droughts and Floods 2020 , 117-141		11
33	Enhanced risk of concurrent regional droughts with increased ENSO variability and warming. <i>Nature Climate Change</i> , 2022 , 12, 163-170	21.4	10
32	Prediction of Reservoir Storage Anomalies in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 3822-3838	4.4	9
31	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	6.2	9
30	Influence of cold season climate variability on lakes and wetlands in the Great Lakes region. <i>Journal of Geophysical Research</i> , 2011 , 116,		9
29	On the need of ensemble flood forecast in India. <i>Water Security</i> , 2021 , 12, 100086	3.8	9
28	Contrasting influence of human activities on agricultural and hydrological droughts in India. <i>Science of the Total Environment</i> , 2021 , 774, 144959	10.2	9
27	Roles of Irrigation and Reservoir Operations in Modulating Terrestrial Water and Energy Budgets in the Indian Subcontinental River Basins. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 12915-12938	4.4	9
26	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	3.1	9

25	Supplementary material to "The Kerala flood of 2018: combined impact of extreme rainfall and reservoir storage"		8
24	Substantial decline in atmospheric aridity due to irrigation in India. <i>Environmental Research Letters</i> , 2020 , 15, 124060	6.2	8
23	Increase in Population Exposure Due to Dry and Wet Extremes in India Under a Warming Climate. <i>Earth's Future</i> , 2020 , 8, e2020EF001731	7.9	7
22	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	4.4	6
21	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	4.5	5
20	Remote Sensing Retrieval of Substrate Bearing Strength from Hyperspectral Imagery at the Virginia Coast Reserve (VCR'07) Multi-Sensor Campaign 2008 ,		4
19	Impacts of hydrological model calibration on projected hydrological changes under climate change—multi-model assessment in three large river basins. <i>Climatic Change</i> , 2020 , 163, 1143-1164	4.5	4
18	Strong Influence of Changes in Terrestrial Water Storage on Flood Potential in India. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126,	4.4	4
17	Drought detection and declaration in India. <i>Water Security</i> , 2021 , 14, 100104	3.8	3
16	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	3	3
15	Reflections and projections on a decade of climate science. <i>Nature Climate Change</i> , 2021 , 11, 279-285	21.4	3
14	A Strong Linkage between Seasonal Crop Growth and Groundwater Storage Variability in India. <i>Journal of Hydrometeorology</i> , 2021 , 22, 125-138	3.7	3
13	Multimodel assessment of water budget in Indian sub-continental river basins. <i>Journal of Hydrology</i> , 2021 , 603, 126977	6	3
12	Natural and anthropogenic drivers of the lost groundwater from the Ganga river basin. <i>Environmental Research Letters</i> ,	6.2	2
11	Supplementary material to "Reconstruction of droughts in India using multiple land surface models (1951-2015)"		2
10	Extremes in water availability and suicide: Evidence from a nationally representative sample of rural Indian adults. <i>Environmental Research</i> , 2020 , 190, 109969	7.9	2
9	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	4.4	2
8	Runoff sensitivity of Indian sub-continental river basins. <i>Science of the Total Environment</i> , 2021 , 766, 142642	10.2	2

7	Understanding each other's models: a standard representation of global water models to support improvement, intercomparison, and communication		2
6	Combined signatures of atmospheric drivers, soil moisture, and moisture source on floods in Narmada River basin, India. <i>Climate Dynamics</i> ,1	4.2	2
5	Challenges in drought monitoring and assessment in India. <i>Water Security</i> , 2022 , 16, 100120	3.8	2
4	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	1.8	1
3	A Bayesian Hierarchical Network Model for Daily Streamflow Ensemble Forecasting. <i>Water Resources Research</i> , 2021 , 57, e2021WR029920	5.4	1
2	On the causes of tropical cyclone driven floods in India. <i>Weather and Climate Extremes</i> , 2022 , 36, 1004326		1
1	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	4.4	0