Venkat Lakshmi

List of Publications by Year
in descending order

148 papers	7,150 citations	71102 41 h-index	64796 79 g-index
164 all docs	164 docs citations	164 times ranked	5885 citing authors

#	Article	IF	Citations
1	Soil moisture retrieval from AMSR-E. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 215-229.	6.3	1,259
2	IAHS Decade on Predictions in Ungauged Basins (PUB), 2003â€“2012: Shaping an exciting future for the hydrological sciences. Hydrological Sciences Journal, 2003, 48, 857-880.	2.6	982
3	Soil Moisture Remote Sensing: Stateâ€ofâ€theâ€Science. Vadose Zone Journal, 2017, 16, 1-9.	2.2	200
4	Observations of soil moisture using a passive and active low-frequency microwave airborne sensor during SGP99. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2659-2673.	6.3	191
5	A Monte Carlo Study of rainfall sampling effect on a distributed catchment model. Water Resources Research, 1991, 27, 119-128.	4.2	161
6	Global-scale assessment and combination of SMAP with ASCAT (active) and AMSR2 (passive) soil moisture products. Remote Sensing of Environment, 2018, 204, 260-275.	11.0	147
7	High-resolution change estimation of soil moisture using L-band radiometer and Radar observations made during the SMEX02 experiments. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 1545-1554.	6.3	139
8	Use of Cyclone Global Navigation Satellite System (CyGNSS) Observations for Estimation of Soil Moisture. Geophysical Research Letters, 2018, 45, 8272-8282.	4.0	138
9	Soil moisture estimates from TRMM Microwave Imager observations over the Southern United States. Remote Sensing of Environment, 2003, 85, 507-515.	11.0	131
10	Soil moisture at watershed scale: Remote sensing techniques. Journal of Hydrology, 2014, 516, 258-272.	5.4	120
11	Large scale measurements of soil moisture for validation of remotely sensed data: Georgia soil moisture experiment of 2003. Journal of Hydrology, 2006, 323, 120-137.	5.4	99
12	Retrieval of soil moisture from passive and active L/S band sensor (PALS) observations during the Soil Moisture Experiment in 2002 (SMEX02). Remote Sensing of Environment, 2004, 92, 483-496.	11.0	89
13	GCIP water and energy budget synthesis (WEBS). Journal of Geophysical Research, 2003, 108, .	3.3	86
14	Soil moisture-temperature relationships: results from two field experiments. Hydrological Processes, 2003, 17, 3041-3057.	2.6	84
15	Effects of vegetation and soil moisture on the simulated land surface processes from the coupled WRF/Noah model. Journal of Geophysical Research, 2009, 114, .	3.3	80
16	Adequacy of Satellite-derived Precipitation Estimate for Hydrological Modeling in Vietnam Basins. Journal of Hydrology, 2020, 586, 124820.	5.4	80
17	Passive Microwave Soil Moisture Downscaling Using Vegetation Index and Skin Surface Temperature. Vadose Zone Journal, 2013, 12, 1-19.	2.2	79
18	Intercomparison of trend analysis of Multisatellite Monthly Precipitation Products and Gauge Measurements for River Basins of India. Journal of Hydrology, 2018, 565, 779-790.	5.4	76

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19	Remote Sensing of Soil Moisture. ISRN Soil Science, 2013, 2013, 1-33.	0.8	75
20	A comparative study of available water in the major river basins of the world. Journal of Hydrology, 2018, 567, 510-532.	5.4	73
21	The Effects of Satellite-Derived Vegetation Cover Variability on Simulated Landâ€“Atmosphere Interactions in the NAMS. Journal of Climate, 2005, 18, 21-40.	3.2	70
22	Variation of Hydrometeorological Conditions along a Topographic Transect in Northwestern Mexico during the North American Monsoon. Journal of Climate, 2007, 20, 1792-1809.	3.2	69
23	Global scale error assessments of soil moisture estimates from microwave-based active and passive satellites and land surface models over forest and mixed irrigated/dryland agriculture regions. Remote Sensing of Environment, 2020, 251, 112052.	11.0	63
24	Microwave remote sensing of soil moisture: evaluation of the TRMM microwave imager (TMI) satellite for the Little River Watershed Tifton, Georgia. Journal of Hydrology, 2005, 307, 242-253.	5.4	62
25	The role of satellite remote sensing in the Prediction of Ungauged Basins. Hydrological Processes, 2004, 18, 1029-1034.	2.6	59
26	Bias Correction of Long-Term Satellite Monthly Precipitation Product (TRMM 3B43) over the Conterminous United States. Journal of Hydrometeorology, 2017, 18, 2491-2509.	1.9	59
27	Satellite observations and modeling to understand the Lower Mekong River Basin streamflow variability. Journal of Hydrology, 2018, 564, 559-573.	5.4	59
28	Improved Hydrological Decision Support System for the Lower Mekong River Basin Using Satellite-Based Earth Observations. Remote Sensing, 2018, 10, 885.	4.0	59
29	Scaling Water and Energy Fluxes in Climate Systems: Three Land-Atmospheric Modeling Experiments. Journal of Climate, 1993, 6, 839-857.	3.2	58
30	Downscaling of SMAP Soil Moisture Using Land Surface Temperature and Vegetation Data. Vadose Zone Journal, 2018, 17, 1-15.	2.2	57
31	Evaluation of Special Sensor Microwave/Imager Satellite Data for Regional Soil Moisture Estimation over the Red River Basin. Journal of Applied Meteorology and Climatology, 1997, 36, 1309-1328.	1.7	56
32	A simple surface temperature assimilation scheme for use in land surface models. Water Resources Research, 2000, 36, 3687-3700.	4.2	56
33	Soil moisture as an indicator of weather extremes. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	56
34	A methodology for evaluating evapotranspiration estimates at the watershed-scale using GRACE. Journal of Hydrology, 2015, 523, 574-586.	5.4	56
35	Soil moisture retrieval using the passive/active l- and s-band radar/radiometer. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 2792-2801.	6.3	55
36	Aircraft based soil moisture retrievals under mixed vegetation and topographic conditions. Remote Sensing of Environment, 2008, 112, 375-390.	11.0	55

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37	Land surface air temperature mapping using TOVS and AVHRR. International Journal of Remote Sensing, 2001, 22, 643-662.	2.9	53
38	A global assessment of the timing of extreme rainfall from TRMM and GPM for improving hydrologic design. Environmental Research Letters, 2016, 11, 054003.	5.2	50
39	Comparison of Normalized Difference Vegetation Index Derived from Landsat, MODIS, and AVHRR for the Mesopotamian Marshes Between 2002 and 2018. Remote Sensing, 2019, 11, 1245.	4.0	48
40	Analysis of process controls in land surface hydrological cycle over the continental United States. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	47
41	Characterizing subpixel variability of low resolution radiometer derived soil moisture using high resolution radar data. Water Resources Research, 2008, 44, .	4.2	47
42	Doubling of annual forest carbon loss over the tropics during the early twenty-first century. Nature Sustainability, 2022, 5, 444-451.	23.7	47
43	Mapping Land Use Land Cover Change in the Lower Mekong Basin From 1997 to 2010. Frontiers in Environmental Science, 2020, 8, .	3.3	45
44	Predictions in ungauged basins as a catalyst for multidisciplinary hydrology. Eos, 2004, 85, 451.	0.1	43
45	Validation of AMSR-E soil moisture using L-band airborne radiometer data from National Airborne Field Experiment 2006. Remote Sensing of Environment, 2011, 115, 2096-2103.	11.0	43
46	Drought monitoring using high spatial resolution soil moisture data over Australia in 2015â€“2019. Journal of Hydrology, 2021, 594, 125960.	5.4	43
47	Validation of the ASAR Global Monitoring Mode Soil Moisture Product Using the NAFE'05 Data Set. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 2498-2508.	6.3	40
48	The influence of the land surface on hydrometeorology and ecology: new advances from modeling and satellite remote sensing. Hydrology Research, 2011, 42, 95-112.	2.7	40
49	Groundwater Withdrawal Prediction Using Integrated Multitemporal Remote Sensing Data Sets and Machine Learning. Water Resources Research, 2020, 56, e2020WR028059.	4.2	40
50	AMSR2 Soil Moisture Downscaling Using Temperature and Vegetation Data. Remote Sensing, 2018, 10, 1575.	4.0	38
51	Comparison of TOVS-derived land surface variables with ground observations. Journal of Geophysical Research, 2000, 105, 2179-2190.	3.3	34
52	Evaluation and validation of a high spatial resolution satellite soil moisture product over the Continental United States. Journal of Hydrology, 2020, 588, 125043.	5.4	32
53	A soil-canopy-atmosphere model for use in satellite microwave remote sensing. Journal of Geophysical Research, 1997, 102, 6911-6927.	3.3	30
54	Relationship between Vegetation Biophysical Properties and Surface Temperature Using Multisensor Satellite Data. Journal of Climate, 2007, 20, 5593-5606.	3.2	30

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55	Ground and satellite based observation datasets for the Lower Mekong River Basin. Data in Brief, 2018, 21, 2020-2027.	1.0	30
56	Evaluation of Satellite-Based Rainfall Estimates in the Lower Mekong River Basin (Southeast Asia). Remote Sensing, 2019, 11, 2709.	4.0	30
57	Using Satellite Remote Sensing to Study the Impact of Climate and Anthropogenic Changes in the Mesopotamian Marshlands, Iraq. Remote Sensing, 2018, 10, 1524.	4.0	29
58	Web-based decision support system tools: The Soil and Water Assessment Tool Online visualization and analyses (SWATOnline) and NASA earth observation data downloading and reformatting tool (NASAaccess). Environmental Modelling and Software, 2019, 120, 104499.	4.5	29
59	Passive/active microwave soil moisture change disaggregation using SMAPVEX12 data. Journal of Hydrology, 2019, 574, 1085-1098.	5.4	29
60	Links between Snow Cover, Surface Skin Temperature, and Rainfall Variability in the North American Monsoon System. Journal of Climate, 2003, 16, 1821-1829.	3.2	28
61	An Assessment of QuikSCAT Ku-Band Scatterometer Data for Soil Moisture Sensitivity. IEEE Geoscience and Remote Sensing Letters, 2009, 6, 640-643.	3.1	28
62	Beyond <scp>GRACE</scp>: Using Satellite Data for Groundwater Investigations. Ground Water, 2016, 54, 615-618.	1.3	28
63	Evaluating Biasâ€Corrected AMSRâ€E Soil Moisture using in situ Observations and Model Estimates. Vadose Zone Journal, 2013, 12, 1-13.	2.2	27
64	An in-situ data based model to downscale radiometric satellite soil moisture products in the Upper Hunter Region of NSW, Australia. Journal of Hydrology, 2019, 572, 820-838.	5.4	26
65	A global 1â€km downscaled SMAP soil moisture product based on thermal inertia theory. Vadose Zone Journal, 2022, 21, .	2.2	26
66	Comparison and Bias Correction of TMPA Precipitation Products over the Lower Part of Redâ€“Thai Binh River Basin of Vietnam. Remote Sensing, 2018, 10, 1582.	4.0	25
67	Downscaling of SMAP Soil Moisture in the Lower Mekong River Basin. Water (Switzerland), 2020, 12, 56.	2.7	25
68	Identifying relative strengths of SMAP, SMOS-IC, and ASCAT to capture temporal variability. Remote Sensing of Environment, 2021, 252, 112126.	11.0	25
69	Large Uncertainty on Forest Area Change in the Early 21st Century among Widely Used Global Land Cover Datasets. Remote Sensing, 2020, 12, 3502.	4.0	24
70	The Reliability of Global Remote Sensing Evapotranspiration Products over Amazon. Remote Sensing, 2020, 12, 2211.	4.0	23
71	An Assessment of the Filling Process of the Grand Ethiopian Renaissance Dam and Its Impact on the Downstream Countries. Remote Sensing, 2021, 13, 711.	4.0	23
72	Comparing and Combining Remotely Sensed Land Surface Temperature Products for Improved Hydrological Applications. Remote Sensing, 2016, 8, 162.	4.0	22

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73	Global Dynamics of Stored Precipitation Water in the Topsoil Layer From Satellite and Reanalysis Data. Water Resources Research, 2019, 55, 3328-3346.	4.2	21
74	Daily rainfall statistics of TRMM and CMORPH: A case for trans-boundary Gandak River basin. Journal of Earth System Science, 2016, 125, 919-934.	1.3	20
75	A new framework for monitoring flood inundation using readily available satellite data. Geophysical Research Letters, 2016, 43, 2599-2605.	4.0	20
76	Using a data grid to automate data preparation pipelines required for regional-scale hydrologic modeling. Environmental Modelling and Software, 2016, 78, 31-39.	4.5	20
77	Very High Spatial Resolution Downscaled SMAP Radiometer Soil Moisture in the CONUS Using VIIRS/MODIS Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 4946-4965.	4.9	20
78	Normalization and comparison of surface temperatures across a range of scales. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2636-2646.	6.3	19
79	Atlantic Ocean Sea Surface Temperatures and Southeast United States streamflow variability: Associations with the recent multi-decadal decline. Journal of Hydrology, 2019, 576, 422-429.	5.4	19
80	Determination of land surface skin temperatures and surface air temperature and humidity from TOVS HIRS2/MSU data. Advances in Space Research, 1998, 22, 629-636.	2.6	18
81	Earth Observation and Cloud Computing in Support of Two Sustainable Development Goals for the River Nile Watershed Countries. Remote Sensing, 2020, 12, 1391.	4.0	18
82	First attempt of global-scale assimilation of subdaily scale soil moisture estimates from CYGNSS and SMAP into a land surface model. Environmental Research Letters, 2021, 16, 074041.	5.2	18
83	Developing Land Use Land Cover Maps for the Lower Mekong Basin to Aid Hydrologic Modeling and Basin Planning. Remote Sensing, 2018, 10, 1910.	4.0	17
84	Vegetation greening trends in different land use types: natural variability versus human-induced impacts in Greece. Environmental Earth Sciences, 2019, 78, 1.	2.7	17
85	Assessment of drought conditions over Vietnam using standardized precipitation evapotranspiration index, MERRA-2 re-analysis, and dynamic land cover. Journal of Hydrology: Regional Studies, 2020, 32, 100767.	2.4	17
86	Land cover and vegetation carbon stock changes in Greece: A 29-year assessment based on CORINE and Landsat land cover data. Science of the Total Environment, 2021, 786, 147408.	8.0	17
87	Longwave emission from a plant/soil surface as a function of the view direction: Dependence on the canopy architecture. International Journal of Remote Sensing, 1999, 20, 2195-2201.	2.9	16
88	Remote Sensing for Vadose Zone Hydrologyâ€"A Synthesis from the Vantage Point. Vadose Zone Journal, 2013, 12, 1-6.	2.2	16
89	Sensitivity, spatial heterogeneity, and scaling of C-band microwave brightness temperatures for land hydrology studies. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2626-2635.	6.3	15
90	Monitoring Dust Storms in Iraq Using Satellite Data. Sensors, 2019, 19, 3687.	3.8	15

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91	Evaluating hotspots for stormwater harvesting through participatory sensing. Journal of Environmental Management, 2019, 242, 351-361.	7.8	15
92	Field evaluation of portable soil water content sensors in a sandy loam. Vadose Zone Journal, 2020, 19, e20033.	2.2	15
93	Use of the scanning multichannel microwave radiometer (SMMR) to retrieve soil moisture and surface temperature over the central United States. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 1482-1494.	6.3	14
94	A Spatial Downscaling Methodology for GRACE Total Water Storage Anomalies Using GPM IMERG Precipitation Estimates. Remote Sensing, 2021, 13, 5149.	4.0	14
95	Diurnal cycles of evaporation using a two-layer hydrological model. Journal of Hydrology, 1998, 204, 37-51.	5.4	13
96	Special sensor microwave imager data in field experiments: FIFE-1987. International Journal of Remote Sensing, 1998, 19, 481-505.	2.9	13
97	Validation of land surface models using satellite-derived surface temperature. Journal of Geophysical Research, 2001, 106, 20085-20099.	3.3	13
98	Utilization of satellite data in land surface hydrology: sensitivity and assimilation. Hydrological Processes, 2001, 15, 877-892.	2.6	13
99	Evaluating Renewable Groundwater Stress with GRACE Data in Greece. Ground Water, 2018, 56, 501-514.	1.3	12
100	Estimating Groundwater Abstractions at the Aquifer Scale Using GRACE Observations. Geosciences (Switzerland), 2018, 8, 419.	2.2	12
101	Assessing Disaggregated SMAP Soil Moisture Products in the United States. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 2577-2592.	4.9	12
102	Investigation of effect of heterogeneities in vegetation and rainfall on simulated SSM/I brightness temperatures. International Journal of Remote Sensing, 1997, 18, 2763-2784.	2.9	10
103	Analysis of the 1993 midwestern flood using satellite and ground data. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 1736-1743.	6.3	10
104	Very high resolution, altitude-corrected, TMPA-based monthly satellite precipitation product over the CONUS. Scientific Data, 2020, 7, 74.	5.3	10
105	Assessment and validation of total water storage in the Chesapeake Bay watershed using GRACE. Journal of Hydrology: Regional Studies, 2019, 24, 100607.	2.4	9
106	Streamflow Forecasting Using Singular Value Decomposition and Support Vector Machine for the Upper Rio Grande River Basin. Journal of the American Water Resources Association, 2019, 55, 680-699.	2.4	9
107	Assimilation of SMAP Products for Improving Streamflow Simulations over Tropical Climate Regionâ€"Is Spatial Information More Important Than Temporal Information?. Remote Sensing, 2022, 14, 1607.	4.0	9
108	Assessment and Combination of SMAP and Sentinel-1A/B-Derived Soil Moisture Estimates With Land Surface Model Outputs in the Mid-Atlantic Coastal Plain, USA. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 991-1011.	6.3	8

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109	Estimation of land-cover linkage to trends in hydrological variables of river basins in the Indian sub-continent using satellite observation and model outputs. Journal of Hydrology, 2021, 603, 126997.	5.4	8
110	Validation of AMSR-E Soil Moisture Products Using Watershed Networks. , 2006, , .		7
111	A comparison of SNOTEL and AMSR-E snow water equivalent data sets in western US watersheds. International Journal of Remote Sensing, 2011, 32, 6611-6629.	2.9	7
112	Intermittent Channel Systems of a Lowâ€Relief, Lowâ€Gradient Floodplain: Comparison of Automatic Extraction Methods. Water Resources Research, 2020, 56, e2020WR027603.	4.2	7
113	Assessment of drought conditions over Iraqi transboundary rivers using FLDAS and satellite datasets. Journal of Hydrology: Regional Studies, 2022, 41, 101075.	2.4	7
114	Simulation of carbon dioxide mineralization and its effect on fault leakage rates in the South Georgia rift basin, southeastern U.S.. Heliyon, 2022, 8, e09635.	3.2	7
115	Land use, climate, and water change in the Vietnamese Mekong Delta (VMD) using earth observation and hydrological modeling. Journal of Hydrology: Regional Studies, 2022, 42, 101132.	2.4	7
116	Evaluation of Global Surface Water Temperature Data Sets for Use in Passive Remote Sensing of Soil Moisture. Remote Sensing, 2021, 13, 1872.	4.0	6
117	Thermal Hydraulic Disaggregation of SMAP Soil Moisture Over the Continental United States. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 4072-4092.	4.9	6
118	Flood Depth Estimation during Hurricane Harvey Using Sentinel-1 and UAVSAR Data. Remote Sensing, 2022, 14, 1450.	4.0	6
119	Comparison of surface meteorological variables from TOVS and AVHRR. Remote Sensing of Environment, 2002, 79, 176-188.	11.0	5
120	Terrain: Slope Influence on QuikSCAT Backscatter. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 2722-2732.	6.3	5
121	Estimation of total water storage changes in India. International Journal of Digital Earth, 2021, 14, 1294-1315.	3.9	5
122	Optical and Physical Methods for Mapping Flooding with Satellite Imagery. Springer Remote Sensing/photogrammetry, 2017, , 83-103.	0.4	5
123	Assimilation of fAPAR and surface temperature into a land surface and vegetation model. Water Science and Application, 2001, , 177-200.	0.3	4
124	Monitoring Drought in Brazil by Remote Sensing. Springer Remote Sensing/photogrammetry, 2017, , 197-218.	0.4	4
125	Assessment of the Biomass Productivity Decline in the Lower Mekong Basin. Remote Sensing, 2019, 11, 2796.	4.0	4
126	A comprehensive assessment of SM2RAIN-NWF using ASCAT and a combination of ASCAT and SMAP soil moisture products for rainfall estimation. Science of the Total Environment, 2022, 838, 156416.	8.0	4

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127	A Simple Method for Spatial Disaggregation of Radiometer Derived Soil Moisture using Higher Resolution Radar Observations. Journal of Electromagnetic Waves and Applications, 2005, 19, 1711-1719.	1.6	3
128	A Novel Method for Gaining New Insight on Flows Over Inundated Landscapes. Geophysical Research Letters, 2021, 48, e2021GL094190.	4.0	3
129	Comparing Precipitation during Typhoons in the Western North Pacific Using Satellite and In Situ Observations. Remote Sensing, 2022, 14, 877.	4.0	3
130	Simulation of microwave brightness temperatures using a coupled land-surface-canopy-atmosphere model. , 0, , .		2
131	Passive/active microwave soil moisture retrieval disaggregation using SMAPVEX12 data. Proceedings of SPIE, 2014, , .	0.8	2
132	Land surface hydrological processes using satellite data. , 0, , .		1
133	Downscaling and Validation of SMAP Radiometer Soil Moisture in CONUS. , 2019, , .		1
134	Estimating Local-Scale Groundwater Withdrawals Using Integrated Remote Sensing Products and Deep Learning. , 2021, , .		1
135	Sensitivity of Remotely Sensed Vegetation to Hydrologic Predictors across the Colorado River Basin, 2001â€“2019. Journal of the American Water Resources Association, 0, , .	2.4	1
136	Estimation of Flood Inundation and Depth During Hurricane Florence Using Sentinel-1 and UAVSAR Data. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	1
137	Validation of satellite retrieved land surface variables. , 0, , .		0
138	Surface temperature assimilation in land surface models. , 0, , .		0
139	Long Term Trends in Microwave Brightness Temperature and Vegetation from SSM/I and AVHRR. , 2006, , .		0
140	Monitoring water from space. Eos, 2012, 93, 203-204.	0.1	0
141	Spatial downscaling of coarse passive radiometer soil moisture using radar, vegetation index and surface temperature. , 2013, , .		0
142	Passive/active microwave soil moisture disaggregation using SMAP data. , 2017, , .		0
143	Smap Radiometer Soil Moisture Downscaling in Conus. , 2018, , .		0
144	20 years of Vadose Zone Journal. Vadose Zone Journal, 2021, 20, e20141.	2.2	0

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145	Remote Sensing and Hydrology. , 2005, , .		0
146	Simulation of Water and Energy Budgets Using a Macroscale Hydrological Model for the Upper Mississippi River Basin. , 2005, , 97-127.		0
147	Application of Soil Water Assessment Tool (SWAT) Model in Analyzing Nitrogen Transport Inside the Narmada River Basin. Frontiers in Water, 2021, 3, .	2.3	0
148	Quantifying the Economic Impact of the Grand Ethiopian Renaissance Dam on the Nile River Basin. , 2022, , .		0