

# Madan Kumar Jha

## List of Publications by Year in descending order

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121  
papers

5,724  
citations

87723

38  
h-index

82410

72  
g-index

122  
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122  
docs citations

122  
times ranked

4383  
citing authors

#	ARTICLE	IF	CITATIONS
1	Assessment of Groundwater Potential in a Semi-Arid Region of India Using Remote Sensing, GIS and MCDM Techniques. <i>Water Resources Management</i> , 2011, 25, 1359-1386.	1.9	390
2	Groundwater management and development by integrated remote sensing and geographic information systems: prospects and constraints. <i>Water Resources Management</i> , 2007, 21, 427-467.	1.9	384
3	Integrated remote sensing and GIS-based approach for assessing groundwater potential in West Medinipur district, West Bengal, India. <i>International Journal of Remote Sensing</i> , 2009, 30, 231-250.	1.3	323
4	Delineation of groundwater recharge zones and identification of artificial recharge sites in West Medinipur district, West Bengal, using RS, GIS and MCDM techniques. <i>Environmental Earth Sciences</i> , 2010, 59, 1209-1222.	1.3	313
5	Groundwater assessment in Salboni Block, West Bengal (India) using remote sensing, geographical information system and multi-criteria decision analysis techniques. <i>Hydrogeology Journal</i> , 2010, 18, 1713-1728.	0.9	311
6	Assessment and mapping of groundwater vulnerability to pollution: Current status and challenges. <i>Earth-Science Reviews</i> , 2018, 185, 901-927.	4.0	167
7	Artificial Neural Network Modeling for Groundwater Level Forecasting in a River Island of Eastern India. <i>Water Resources Management</i> , 2010, 24, 1845-1865.	1.9	157
8	Multi-criteria analysis and GIS modeling for identifying prospective water harvesting and artificial recharge sites for sustainable water supply. <i>Journal of Cleaner Production</i> , 2017, 142, 1436-1456.	4.6	156
9	Assessing groundwater quality for drinking water supply using hybrid fuzzy-GIS-based water quality index. <i>Water Research</i> , 2020, 179, 115867.	5.3	146
10	Groundwater-level prediction using multiple linear regression and artificial neural network techniques: a comparative assessment. <i>Hydrogeology Journal</i> , 2013, 21, 1865-1887.	0.9	140
11	Identifying sources of groundwater contamination in a hard-rock aquifer system using multivariate statistical analyses and GIS-based geostatistical modeling techniques. <i>Journal of Hydrology: Regional Studies</i> , 2015, 4, 80-110.	1.0	137
12	Assessing the accuracy of GIS-based Multi-Criteria Decision Analysis approaches for mapping groundwater potential. <i>Ecological Indicators</i> , 2018, 91, 24-37.	2.6	120
13	Hydrologic Time Series Analysis: Theory and Practice. , 2012, , .		118
14	Design and technology for greenhouse cooling in tropical and subtropical regions: A review. <i>Energy and Buildings</i> , 2009, 41, 1269-1275.	3.1	115
15	Comparative evaluation of numerical model and artificial neural network for simulating groundwater flow in Kathajodi-Surua Inter-basin of Odisha, India. <i>Journal of Hydrology</i> , 2013, 495, 38-51.	2.3	112
16	Comparison of Analytic Hierarchy Process, Catastrophe and Entropy techniques for evaluating groundwater prospect of hard-rock aquifer systems. <i>Journal of Hydrology</i> , 2017, 548, 605-624.	2.3	110
17	Rainwater harvesting planning using geospatial techniques and multicriteria decision analysis. <i>Resources, Conservation and Recycling</i> , 2014, 83, 96-111.	5.3	108
18	Using Artificial Neural Network Approach for Simultaneous Forecasting of Weekly Groundwater Levels at Multiple Sites. <i>Water Resources Management</i> , 2015, 29, 5521-5532.	1.9	97

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19	Simulation Modeling for Efficient Groundwater Management in Balasore Coastal Basin, India. <i>Water Resources Management</i> , 2008, 22, 23-50.	1.9	91
20	Assessing Climate Change Impact on Water Balance Components of a River Basin Using SWAT Model. <i>Water Resources Management</i> , 2015, 29, 4767-4785.	1.9	89
21	Evaluation of HEC-HMS and WEPP for simulating watershed runoff using remote sensing and geographical information system. <i>Paddy and Water Environment</i> , 2010, 8, 131-144.	1.0	88
22	Development and analysis of the Soil Water Infiltration Global database. <i>Earth System Science Data</i> , 2018, 10, 1237-1263.	3.7	85
23	Comparative evaluation of statistical tests for time series analysis: application to hydrological time series / Evaluation comparative de tests statistiques pour l'analyse de s�ries temporelles: application � des s�ries temporelles hydrologiques. <i>Hydrological Sciences Journal</i> , 2008, 53, 353-366.	1.2	73
24	Comparison of Drought Indices in a Semi-Arid River Basin of India. <i>Water Resources Management</i> , 2019, 33, 75-102.	1.9	70
25	Modelling Infiltration and quantifying Spatial Soil Variability in a Wasteland of Kharagpur, India. <i>Biosystems Engineering</i> , 2006, 95, 569-582.	1.9	69
26	Observed rainfall changes in the past century (1901�2019) over the wettest place on Earth. <i>Environmental Research Letters</i> , 2021, 16, 024018.	2.2	66
27	Estimation of Aquifer Parameters from Pumping Test Data by Genetic Algorithm Optimization Technique. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2003, 129, 348-359.	0.6	61
28	Efficacy of neural network and genetic algorithm techniques in simulating spatio-temporal fluctuations of groundwater. <i>Hydrological Processes</i> , 2015, 29, 671-691.	1.1	61
29	Analysis of trend in temperature and rainfall time series of an Indian arid region: comparative evaluation of salient techniques. <i>Theoretical and Applied Climatology</i> , 2019, 136, 301-320.	1.3	61
30	Challenges of using remote sensing and GIS in developing nations. <i>Hydrogeology Journal</i> , 2007, 15, 197-200.	0.9	59
31	Identification of critical areas and evaluation of best management practices using SWAT for sustainable watershed management. <i>Science of the Total Environment</i> , 2020, 744, 140737.	3.9	57
32	Neural network modeling for groundwater-level forecasting in coastal aquifers. <i>Neural Computing and Applications</i> , 2020, 32, 12737-12754.	3.2	56
33	Parameter identification and uncertainty analysis for simulating streamflow in a river basin of Eastern India. <i>Hydrological Processes</i> , 2015, 29, 3744-3766.	1.1	55
34	Pattern recognition in lithology classification: modeling using neural networks, self-organizing maps and genetic algorithms. <i>Hydrogeology Journal</i> , 2017, 25, 311-330.	0.9	54
35	GIS-based assessment and characterization of groundwater quality in a hard-rock hilly terrain of Western India. <i>Environmental Monitoring and Assessment</i> , 2011, 174, 645-663.	1.3	52
36	Simulation-Optimization Modelling for Sustainable Groundwater Management in a Coastal Basin of Orissa, India. <i>Water Resources Management</i> , 2009, 23, 235-263.	1.9	46

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37	Hydraulic Parameters of Coastal Aquifer Systems by Direct Methods and an Extended Tide-Aquifer Interaction Technique. <i>Water Resources Management</i> , 2008, 22, 1899-1923.	1.9	45
38	Modeling Short-Term Spatial and Temporal Variability of Groundwater Level Using Geostatistics and GIS. <i>Natural Resources Research</i> , 2012, 21, 117-136.	2.2	45
39	Characterizing rainfall-groundwater dynamics in a hard-rock aquifer system using time series, geographic information system and geostatistical modelling. <i>Hydrological Processes</i> , 2014, 28, 2824-2843.	1.1	45
40	Vertical electrical sounding survey and resistivity inversion using genetic algorithm optimization technique. <i>Journal of Hydrology</i> , 2008, 359, 71-87.	2.3	40
41	Planning and Design of Cost-effective Water Harvesting Structures for Efficient Utilization of Scarce Water Resources in Semi-arid Regions of Rajasthan, India. <i>Water Resources Management</i> , 2004, 18, 219-235.	1.9	39
42	Simulation of regional irrigation requirement with SWAT in different agro-climatic zones driven by observed climate and two reanalysis datasets. <i>Science of the Total Environment</i> , 2019, 649, 846-865.	3.9	39
43	Numerical groundwater-flow modeling to evaluate potential effects of pumping and recharge: implications for sustainable groundwater management in the Mahanadi delta region, India. <i>Hydrogeology Journal</i> , 2017, 25, 2489-2511.	0.9	37
44	Evaluation of GIS-based multicriteria decision analysis and probabilistic modeling for exploring groundwater prospects. <i>Environmental Earth Sciences</i> , 2015, 74, 2223-2246.	1.3	36
45	Assessing Variability of Infiltration Characteristics and Reliability of Infiltration Models in a Tropical Sub-humid Region of India. <i>Scientific Reports</i> , 2020, 10, 1515.	1.6	35
46	Efficacy of machine learning techniques in predicting groundwater fluctuations in agro-ecological zones of India. <i>Science of the Total Environment</i> , 2021, 785, 147319.	3.9	34
47	Cost-effective Approaches for Sustainable Groundwater Management in Alluvial Aquifer Systems. <i>Water Resources Management</i> , 2009, 23, 219-233.	1.9	32
48	Development and Evaluation of Hybrid Artificial Neural Network Architectures for Modeling Spatio-Temporal Groundwater Fluctuations in a Complex Aquifer System. <i>Water Resources Management</i> , 2019, 33, 2381-2397.	1.9	31
49	Evaluation of Traditional and Nontraditional Optimization Techniques for Determining Well Parameters from Step-Drawdown Test Data. <i>Journal of Hydrologic Engineering - ASCE</i> , 2006, 11, 617-630.	0.8	30
50	Modeling and evaluation of greenhouse for floriculture in subtropics. <i>Energy and Buildings</i> , 2010, 42, 1075-1083.	3.1	28
51	GIS-based water balance modeling for estimating regional specific yield and distributed recharge in data-scarce hard-rock regions. <i>Journal of Hydro-Environment Research</i> , 2015, 9, 554-568.	1.0	26
52	On the Estimation of Phreatic Aquifer Parameters by the Tidal Response Technique. <i>Water Resources Management</i> , 2003, 17, 69-88.	1.9	25
53	On the statistical forecasting of groundwater levels in unconfined aquifer systems. <i>Environmental Earth Sciences</i> , 2015, 73, 3119-3136.	1.3	25
54	Infiltration characteristics of lateritic vadose zones: Field experiments and modeling. <i>Soil and Tillage Research</i> , 2019, 187, 219-234.	2.6	25

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55	Field Investigations for Sustainable Groundwater Utilization in the Konan Basin. <i>Water Resources Management</i> , 1999, 13, 443-470.	1.9	24
56	Harnessing earth observation (EO) capabilities in hydrogeology: an Indian perspective. <i>Hydrogeology Journal</i> , 2007, 15, 155-158.	0.9	24
57	Predicting groundwater depth fluctuations using deep learning, extreme learning machine and Gaussian process: a comparative study. <i>Earth Science Informatics</i> , 2020, 13, 1237-1250.	1.6	24
58	Evaluating persistence and identifying trends and abrupt changes in monthly and annual rainfalls of a semi-arid region in Western India. <i>Theoretical and Applied Climatology</i> , 2017, 128, 689-708.	1.3	23
59	Field Investigation of Water Movement and Nitrate Transport under Perched Water Table Conditions. <i>Biosystems Engineering</i> , 2005, 92, 69-84.	1.9	22
60	Optimizing chlorophyll meter (SPAD) reading to allow efficient nitrogen use in rice and wheat under rice-wheat cropping system in eastern India. <i>Plant Production Science</i> , 2020, 23, 270-285.	0.9	21
61	Dynamics of water flow and fertilizer solute leaching in lateritic soils of Kharagpur region, India. <i>Agricultural Water Management</i> , 2003, 63, 77-98.	2.4	20
62	Comprehensive risk assessment of groundwater contamination in a weathered hard-rock aquifer system of India. <i>Journal of Cleaner Production</i> , 2018, 201, 853-868.	4.6	20
63	Assessment of precipitation trends and its implications in the semi-arid region of Southern India. <i>Environmental Challenges</i> , 2021, 5, 100269.	2.0	18
64	Determination of hydraulic parameters of an unconfined alluvial aquifer by the floodwave-response technique. <i>Hydrogeology Journal</i> , 2004, 12, 628-642.	0.9	17
65	Determining Hydraulic Characteristics of Production Wells using Genetic Algorithm. <i>Water Resources Management</i> , 2004, 18, 353-377.	1.9	14
66	Precision nitrogen management using chlorophyll meter for Improving Growth, Productivity and N Use Efficiency of Rice in Subtropical Climate. <i>Journal of Agricultural Science</i> , 2013, 5, .	0.1	14
67	Comparative evaluation of GIS-based models for mapping aquifer vulnerability in hard-rock terrains. <i>Environmental Earth Sciences</i> , 2018, 77, 1.	1.3	14
68	Application of genetic algorithm technique to inverse modeling of tide-aquifer interaction. <i>Environmental Earth Sciences</i> , 2014, 71, 3655-3672.	1.3	13
69	Evaluation of a GIS-Based Watershed Model for Streamflow and Sediment-Yield Simulation in the Upper Baitarani River Basin of Eastern India. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015, 20, .	0.8	13
70	Insight into the precipitation behavior of gridded precipitation data in the Sina basin. <i>Environmental Monitoring and Assessment</i> , 2020, 192, 729.	1.3	13
71	Mole drainage: Prospective drainage solution to Bangkok clay soils. <i>Agricultural Water Management</i> , 1995, 28, 253-270.	2.4	12
72	Application of Archimedean copulas to the impact assessment of hydro-climatic variables in semi-arid aquifers of western India. <i>Hydrogeology Journal</i> , 2018, 26, 89-108.	0.9	12

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73	Investigating Groundwater Condition and Seawater Intrusion Status in Coastal Aquifer Systems of Eastern India. <i>Water (Switzerland)</i> , 2021, 13, 1952.	1.2	11
74	Hydrogeologic and hydraulic characterization of aquifer and nonaquifer layers in a lateritic terrain (West Bengal, India). <i>Hydrogeology Journal</i> , 2018, 26, 1947-1973.	0.9	9
75	Mapping lithological variations in a river basin of West Bengal, India using electrical resistivity survey: implications for artificial recharge. <i>Environmental Earth Sciences</i> , 2018, 77, 1.	1.3	9
76	Optimization modeling for conjunctive use planning in Upper Damodar River basin, India. <i>Journal of Cleaner Production</i> , 2020, 273, 123098.	4.6	9
77	Planning rainwater conservation measures using geospatial and multi-criteria decision making tools. <i>Environmental Science and Pollution Research</i> , 2021, 28, 1734-1751.	2.7	9
78	Simulation-Optimization for Conjunctive Water Resources Management and Optimal Crop Planning in Kushabhadra-Bhargavi River Delta of Eastern India. <i>International Journal of Environmental Research and Public Health</i> , 2020, 17, 3521.	1.2	9
79	Groundwater recharge over the past 100 years: Regional spatiotemporal assessment and climate change impact over the Saguenay–St. Jean region, Canada. <i>Hydrological Processes</i> , 2022, 36, .	1.1	9
80	Exploring hydrogeology and groundwater dynamics in a lateritic terrain of West Bengal, India, under limited data conditions. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	1.3	8
81	Hydrologic and Hydrogeologic Characterization of a Deltaic Aquifer System in Orissa, Eastern India. <i>Water Resources Management</i> , 2012, 26, 1899-1928.	1.9	7
82	Overview, Current Status, and Future Prospect of Stochastic Time Series Modeling in Subsurface Hydrology. , 2019, , 133-151.		7
83	Application of catastrophe theory to spatial analysis of groundwater potential in a sub-humid tropical region: a hybrid approach. <i>Geocarto International</i> , 2022, 37, 700-719.	1.7	7
84	Assessing Multi-Criteria Decision Analysis Models for Predicting Groundwater Quality in a River Basin of South India. <i>Sustainability</i> , 2021, 13, 6719.	1.6	7
85	Natural and Anthropogenic Disasters: An Overview. , 2010, , 1-16.		7
86	A Novel GIS-Based Modeling Approach for Evaluating Aquifer Susceptibility to Anthropogenic Contamination. <i>Sustainability</i> , 2022, 14, 4538.	1.6	7
87	A data-driven approach for analyzing dynamics of tide–aquifer interaction in coastal aquifer systems. <i>Environmental Earth Sciences</i> , 2012, 65, 1333-1355.	1.3	6
88	Evaluation of groundwater resources for sustainable groundwater development in a semiarid river basin of India. <i>Environmental Earth Sciences</i> , 2017, 76, 1.	1.3	6
89	CHLOROPHYLLMETER-BASED NITROGEN MANAGEMENT OF WHEAT IN EASTERN INDIA. <i>Experimental Agriculture</i> , 2018, 54, 349-362.	0.4	6
90	Chlorophyll Meter-Based Nitrogen Management in a Rice–Wheat Cropping System in Eastern India. <i>International Journal of Plant Production</i> , 2020, 14, 355-371.	1.0	6

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91	Methods for Time Series Analysis. , 2012, , 51-84.		6
92	Framework for Standardizing Less Data-Intensive Methods of Reference Evapotranspiration Estimation. Water Resources Management, 2018, 32, 4159-4175.	1.9	5
93	On the estimation of hydraulic conductivity of layered vadose zones with limited data availability. Journal of Earth System Science, 2019, 128, 1.	0.6	5
94	OPTIMAL DEVELOPMENT OF GROUNDWATER IN A WELL COMMAND OF EASTERN INDIA USING INTEGRATED SIMULATION AND OPTIMIZATION MODELLING. Irrigation and Drainage, 2013, 62, 363-376.	0.8	4
95	Mapping of laterite zones using 2D electrical resistivity tomography survey in parts of Paschim Medinipur, West Bengal, India: An approach for artificial groundwater recharge. Journal of Earth System Science, 2020, 129, 1.	0.6	4
96	Development of a rainfall Stability Index using probabilistic indicators. Ecological Indicators, 2020, 115, 106406.	2.6	4
97	Evaluation of water demand and supply under varying meteorological conditions in Eastern India and mitigation strategies for sustainable agricultural production. Environment, Development and Sustainability, 2021, 23, 1264-1291.	2.7	4
98	Long-term trends and projections of hydrological fluxes under RCP climate change scenarios for a mountainous river catchment of northeast India. Journal of Water and Climate Change, 2022, 13, 1776-1789.	1.2	4
99	Sustainable Management of Groundwater Resources in Developing Countries: Constraints and Challenges. , 2013, , 325-348.		2
100	Clustering of Groundwater Wells and Spatial Variation of Groundwater Recharge in Sina Basin, India. Asian Journal of Water, Environment and Pollution, 2020, 17, 11-21.	0.4	2
101	Management of groundwater drought risk by reliability theory and copula model in Sina basin, India. Sustainable Water Resources Management, 2022, 8, 1.	1.0	2
102	Effective Utilization of Chauris in North Bihar, India. Biosystems Engineering, 1995, 60, 237-247.	0.4	1
103	Hydrologic and hydrogeologic analyses of an alluvial aquifer underlying Kushabhadra-Bhargavi River basin, Odisha, India. Arabian Journal of Geosciences, 2016, 9, 1.	0.6	1
104	Probability-based approach for evaluating groundwater risk assessment in Sina basin, India. , 2020, , 289-304.		1
105	Current Status of Time Series Analysis in Hydrological Sciences. , 2012, , 96-136.		1
106	Analysis of Trends in Low-Flow Time Series of Canadian Rivers. , 2012, , 201-221.		1
107	Efficacy of Tide-Aquifer Interaction Models for Characterizing Coastal Aquifer Systems. , 2013, , 435-444.		1
108	Water Quality of the Monobe River with Dams (I) : Seasonal Variations and Changes in Surface Water Quality from Upper to Lower Reaches. Journal of Rainwater Catchment Systems, 2004, 9, 1-10.	0.2	0

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109	Ensuring sustainable water supplies: A study of groundwater conditions in Salboni Block, West Bengal. Environmental Quality Management, 2008, 18, 29-46.	1.0	0
110	Modeling Soil Moisture and Flow Dynamics of Variably Saturated Heterogeneous Lateritic Porous Media under Wheat Crop. Journal of Irrigation and Drainage Engineering - ASCE, 2021, 147, 04021049.	0.6	0
111	On the Basic Stochastic Characteristics (Moments) of Global Annual Precipitations. Journal of Rainwater Catchment Systems, 2004, 10, 7-14.	0.2	0
112	Sustainable Management of Disasters: Challenges and Prospects. , 2010, , 598-609.		0
113	Potential of Geospatial Technologies for Mitigating Land and Water Related Disasters. , 2010, , 469-502.		0
114	Decision Support System: Concept and Potential for Integrated Water Resources Management. , 2010, , 503-535.		0
115	Efficacy of Time Series Tests: A Critical Assessment. , 2012, , 139-164.		0
116	GIS-Based Probabilistic Models as Spatial Prediction Tools for Mapping Regional Groundwater Potential. , 2016, , 85-98.		0
117	Ground Water Contamination: Recent Advances in Identifying Sources. , 2017, , 97-134.		0
118	Scientific Framework For Subsurface Characterization and Evaluation of Grain-Size Analysis Methods. , 2019, , 261-272.		0
119	Long-term geochemical assessment of groundwater in a hardrock aquifer system. International Journal of Agricultural Engineering, 2019, 12, 264-285.	0.0	0
120	Trends and Variability of Rainfall in Tripura State of India in 1986â€“2019 and Key Drivers. Pure and Applied Geophysics, 0, , 1.	0.8	0
121	Thank You to Our 2021 Reviewers. Water Resources Research, 2022, 58, .	1.7	0