Bithin Datta

List of Publications by Year
in descending order

130 papers	3,920 citations	94381 37 h-index	138417 58 g-index
130 all docs	130 docs citations	130 times ranked	1520 citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-objective management of saltwater intrusion in coastal aquifers using genetic programming and modular neural network based surrogate models. Journal of Hydrology, 2010, 393, 245-256.	2.3	164
2	Optimal Monitoring Network and Ground-Water–Pollution Source Identification. Journal of Water Resources Planning and Management - ASCE, 1997, 123, 199-207.	1.3	154
3	Optimal Identification of Ground-Water Pollution Sources and Parameter Estimation. Journal of Water Resources Planning and Management - ASCE, 2001, 127, 20-29.	1.3	150
4	Identification of Groundwater Pollution Sources Using GA-based Linked Simulation Optimization Model. Journal of Hydrologic Engineering - ASCE, 2006, 11, 101-109.	0.8	141
5	Identification of Unknown Groundwater Pollution Sources Using Artificial Neural Networks. Journal of Water Resources Planning and Management - ASCE, 2004, 130, 506-514.	1.3	137
6	Saltwater Intrusion Management of Coastal Aquifers. I: Linked Simulation-Optimization. Journal of Hydrologic Engineering - ASCE, 2009, 14, 1263-1272.	0.8	133
7	Optimal Management of Coastal Aquifers Using Linked Simulation Optimization Approach. Water Resources Management, 2005, 19, 295-320.	1.9	125
8	Identification of Pollution Sources in Transient Groundwater Systems. Water Resources Management, 2000, 14, 209-227.	1.9	120
9	Coupled simulation–optimization model for coastal aquifer management using genetic programming–based ensemble surrogate models and multiple–realization optimization. Water Resources Research, 2011, 47, .	1.7	112
10	Development of Multiobjective Management Models for Coastal Aquifers. Journal of Water Resources Planning and Management - ASCE, 1999, 125, 76-87.	1.3	88
11	Identification of unknown groundwater pollution sources using classical optimization with linked simulation. Journal of Hydro-Environment Research, 2011, 5, 25-36.	1.0	86
12	Modeling and control of saltwater intrusion in a coastal aquifer of Andhra Pradesh, India. Journal of Hydro-Environment Research, 2009, 3, 148-159.	1.0	82
13	Artificial neural network modeling for identification of unknown pollution sources in groundwater with partially missing concentration observation data. Water Resources Management, 2007, 21, 557-572.	1.9	78
14	Three-Dimensional Groundwater Contamination Source Identification Using Adaptive Simulated Annealing. Journal of Hydrologic Engineering - ASCE, 2013, 18, 307-317.	0.8	76
15	Comparative Evaluation of Genetic Programming and Neural Network as Potential Surrogate Models for Coastal Aquifer Management. Water Resources Management, 2011, 25, 3201-3218.	1.9	74
16	ANN-GA-Based Model for Multiple Objective Management of Coastal Aquifers. Journal of Water Resources Planning and Management - ASCE, 2009, 135, 314-322.	1.3	73
17	Simultaneous identification of unknown groundwater pollution sources and estimation of aquifer parameters. Journal of Hydrology, 2009, 376, 48-57.	2.3	69
18	Short–Term, Single, Multiple–Purpose Reservoir Operation: Importance of Loss Functions and Forecast Errors. Water Resources Research, 1984, 20, 1167-1176.	1.7	68

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19	Development of Management Models for Sustainable Use of Coastal Aquifers. Journal of Irrigation and Drainage Engineering - ASCE, 1999, 125, 112-121.	0.6	63
20	Optimal Estimation of Roughness in Open-Channel Flows. Journal of Hydraulic Engineering, 2000, 126, 299-303.	0.7	61
21	Review: Simulation-optimization models for the management and monitoring of coastal aquifers. Hydrogeology Journal, 2015, 23, 1155-1166.	0.9	60
22	Application of optimisation techniques in groundwater quantity and quality management. Sadhana - Academy Proceedings in Engineering Sciences, 2001, 26, 293-316.	0.8	57
23	Optimal Dynamic Monitoring Network Design and Identification of Unknown Groundwater Pollution Sources. Water Resources Management, 2009, 23, 2031-2049.	1.9	54
24	Identification of Contaminant Source Characteristics and Monitoring Network Design in Groundwater Aquifers: An Overview. Journal of Environmental Protection, 2013, 04, 26-41.	0.3	54
25	Chance-Constrained Optimal Monitoring Network Design for Pollutants in Ground Water. Journal of Water Resources Planning and Management - ASCE, 1996, 122, 180-188.	1.3	52
26	Optimal operation of reservoirs for downstream water quality control using linked simulation optimization. Hydrological Processes, 2008, 22, 842-853.	1.1	51
27	Sequential optimal monitoring network design and iterative spatial estimation of pollutant concentration for identification of unknown groundwater pollution source locations. Environmental Monitoring and Assessment, 2013, 185, 5611-5626.	1.3	50
28	Dynamic Optimal Monitoring Network Design for Transient Transport of Pollutants in Groundwater Aquifers. Water Resources Management, 2008, 22, 651-670.	1.9	49
29	Development and Implementation of Support Vector Machine Regression Surrogate Models for Predicting Groundwater Pumping-Induced Saltwater Intrusion into Coastal Aquifers. Water Resources Management, 2018, 32, 2405-2419.	1.9	48
30	Stochastic and Robust Multi-Objective Optimal Management of Pumping from Coastal Aquifers Under Parameter Uncertainty. Water Resources Management, 2014, 28, 2005-2019.	1.9	46
31	Groundwater Pollution Source Identification and Simultaneous Parameter Estimation Using Pattern Matching by Artificial Neural Network. Environmental Forensics, 2004, 5, 143-153.	1.3	45
32	A Stochastic Optimization Model for Real‐Time Operation of Reservoirs Using Uncertain Forecasts. Water Resources Research, 1984, 20, 1039-1046.	1.7	44
33	Artificial Neural Networks Approximation of Density Dependent Saltwater Intrusion Process in Coastal Aquifers. Journal of Hydrologic Engineering - ASCE, 2007, 12, 273-282.	0.8	44
34	Multi-objective groundwater management strategy under uncertainties for sustainable control of saltwater intrusion: Solution for an island country in the South Pacific. Journal of Environmental Management, 2019, 234, 115-130.	3.8	42
35	Multiobjective Design of Dynamic Monitoring Networks for Detection of Groundwater Pollution. Journal of Water Resources Planning and Management - ASCE, 2007, 133, 329-338.	1.3	41
36	Multivariate Adaptive Regression Spline Ensembles for Management of Multilayered Coastal Aquifers. Journal of Hydrologic Engineering - ASCE, 2017, 22, .	0.8	39

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37	Fuzzy C-Mean Clustering Based Inference System for Saltwater Intrusion Processes Prediction in Coastal Aquifers. Water Resources Management, 2017, 31, 355-376.	1.9	38
38	Optimization Based Solution of Density Dependent Seawater Intrusion in Coastal Aquifers. Journal of Hydrologic Engineering - ASCE, 2000, 5, 82-89.	0.8	37
39	Optimization algorithms as training approaches for prediction of reference evapotranspiration using adaptive neuro fuzzy inference system. Agricultural Water Management, 2021, 255, 107003.	2.4	37
40	Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction. Journal of Water Resources Planning and Management - ASCE, 2010, 136, 88-94.	1.3	35
41	Interactive computer graphics-based multiobjective decision-making for regional groundwater management. Agricultural Water Management, 1986, 11, 91-116.	2.4	31
42	Optimal characterization of pollutant sources in contaminated aquifers by integrating sequential-monitoring-network design and source identification: methodology and an application in Australia. Hydrogeology Journal, 2015, 23, 1089-1107.	0.9	30
43	Simulated annealing based simulation-optimization approach for identification of unknown contaminant sources in groundwater aquifers. Desalination and Water Treatment, 2011, 32, 79-85.	1.0	29
44	Optimal Short-term Reservoir Operation with Integrated Long-term Goals. Water Resources Management, 2012, 26, 2833-2850.	1.9	29
45	Uncertainty based optimal monitoring network design for a chlorinated hydrocarbon contaminated site. Environmental Monitoring and Assessment, 2011, 173, 929-940.	1.3	28
46	Efficient Identification of Unknown Groundwater Pollution Sources Using Linked Simulation-Optimization Incorporating Monitoring Location Impact Factor and Frequency Factor. Water Resources Management, 2013, 27, 4959-4976.	1.9	28
47	Modelling saltwater intrusion processes and development of a multi-objective strategy for management of coastal aquifers utilizing planned artificial freshwater recharge. Modeling Earth Systems and Environment, 2018, 4, 111-126.	1.9	28
48	Optimisation approach for pollution source identification in groundwater: an overview. International Journal of Environment and Waste Management, 2011, 8, 40.	0.2	26
49	Optimal combined operation of production and barrier wells for the control of saltwater intrusion in coastal groundwater well fields. Desalination and Water Treatment, 2011, 32, 72-78.	1.0	25
50	Characterization of Groundwater Pollution Sources with Unknown Release Time History. Journal of Water Resource and Protection, 2014, 06, 337-350.	0.3	25
51	Saltwater Intrusion Management of Coastal Aquifers. II: Operation Uncertainty and Monitoring. Journal of Hydrologic Engineering - ASCE, 2009, 14, 1273-1282.	0.8	23
52	Performance evaluation of a stochastic optimization model for reservoir design and management with explicit reliability criteria. Water Resources Research, 1981, 17, 827-832.	1.7	22
53	Linked Simulation-Optimization based Dedicated Monitoring Network Design for Unknown Pollutant Source Identification using Dynamic Time Warping Distance. Water Resources Management, 2014, 28, 4161-4182.	1.9	20
54	A surrogate based multi-objective management model to control saltwater intrusion in multi-layered coastal aquifer systems. Civil Engineering and Environmental Systems, 2017, 34, 238-263.	0.4	20

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55	Optimal Identification of Groundwater Pollution Sources Using Feedback Monitoring Information: A Case Study. Environmental Forensics, 2012, 13, 140-153.	1.3	19
56	An Ensemble Meta-Modelling Approach Using the Dempster-Shafer Theory of Evidence for Developing Saltwater Intrusion Management Strategies in Coastal Aquifers. Water Resources Management, 2019, 33, 775-795.	1.9	19
57	Performance Evaluation of Homogeneous and Heterogeneous Ensemble Models for Groundwater Salinity Predictions: a Regional-Scale Comparison Study. Water, Air, and Soil Pollution, 2020, 231, 1.	1.1	19
58	Design of an Optimal Compliance Monitoring Network and Feedback Information for Adaptive Management of Saltwater Intrusion in Coastal Aquifers. Journal of Water Resources Planning and Management - ASCE, 2014, 140, .	1.3	18
59	Influence of Sea Level Rise on Multiobjective Management of Saltwater Intrusion in Coastal Aquifers. Journal of Hydrologic Engineering - ASCE, 2018, 23, .	0.8	18
60	A review of groundwater sustainability crisis in the Pacific Island countries: Challenges and solutions. Journal of Hydrology, 2021, 603, 127165.	2.3	18
61	Reconnaissanceâ€‘Level Alternative Optimal Groundâ€‘Water Use Strategies. Journal of Water Resources Planning and Management - ASCE, 1990, 116, 676-692.	1.3	17
62	Global Optimal Design of Ground Water Monitoring Network Using Embedded Kriging. Ground Water, 2009, 47, 806-815.	0.7	17
63	A Review of Surrogate Models and Their Ensembles to Develop Saltwater Intrusion Management Strategies in Coastal Aquifers. Earth Systems and Environment, 2018, 2, 193-211.	3.0	17
64	Optimal Groundwater-Use Strategy for Saltwater Intrusion Management in a Pacific Island Country. Journal of Water Resources Planning and Management - ASCE, 2019, 145, .	1.3	16
65	Multiobjective Monitoring Network Design for Efficient Identification of Unknown Groundwater Pollution Sources Incorporating Genetic Programmingâ€“Based Monitoring. Journal of Hydrologic Engineering - ASCE, 2014, 19, 04014025.	0.8	15
66	Genetic algorithm tuned fuzzy inference system to evolve optimal groundwater extraction strategies to control saltwater intrusion in multi-layered coastal aquifers under parameter uncertainty. Modeling Earth Systems and Environment, 2017, 3, 1707-1725.	1.9	15
67	Optimizing monthly ecological flow regime by a coupled fuzzy physical habitat simulationâ€“genetic algorithm method. Environment Systems and Decisions, 2021, 41, 425-436.	1.9	15
68	Multiobjective management of a contaminated aquifer for agricultural use. Water Resources Management, 1996, 10, 373-395.	1.9	14
69	Discussion of â€œIdentification of Contaminant Source Location and Release History in Aquifersâ€•by Mustafa M. Aral, Jiabao Guan, and Morris L. Maslia. Journal of Hydrologic Engineering - ASCE, 2002, 7, 399-400.	0.8	14
70	Preface: Optimization for groundwater characterization and management. Hydrogeology Journal, 2015, 23, 1043-1049.	0.9	14
71	Performance evaluation of a genetic algorithm-based linked simulation-optimization model for optimal hydraulic seepage-related design of concrete gravity dams. Journal of Applied Water Engineering and Research, 2019, 7, 173-197.	1.0	14
72	Linked Optimal Reactive Contaminant Source Characterization in Contaminated Mine Sites: Case Study. Journal of Water Resources Planning and Management - ASCE, 2016, 142, .	1.3	13

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73	Adaptive Management of Coastal Aquifers Using Entropy-Set Pair Analysis–Based Three-Dimensional Sequential Monitoring Network Design. Journal of Hydrologic Engineering - ASCE, 2019, 24, .	0.8	13
74	Application of Genetic Programming Models Incorporated in Optimization Models for Contaminated Groundwater Systems Management. Advances in Intelligent Systems and Computing, 2014, , 183-199.	0.5	13
75	Application of Unknown Groundwater Pollution Source Release History Estimation Methodology to Distributed Sources Incorporating Surface-Groundwater Interactions. Environmental Forensics, 2015, 16, 143-162.	1.3	12
76	Saltwater intrusion prediction in coastal aquifers utilizing a weighted-average heterogeneous ensemble of prediction models based on Dempster-Shafer theory of evidence. Hydrological Sciences Journal, 2020, 65, 1555-1567.	1.2	12
77	Minimizing physical habitat impacts at downstream of diversion dams by a multiobjective optimization of environmental flow regime. Environmental Modelling and Software, 2021, 140, 105029.	1.9	12
78	Trained meta-models and evolutionary algorithm based multi-objective management of coastal aquifers under parameter uncertainty. Journal of Hydroinformatics, 2018, 20, 1247-1267.	1.1	11
79	Groundwater Level Prediction Using a Multiple Objective Genetic Algorithm-Grey Relational Analysis Based Weighted Ensemble of ANFIS Models. Water (Switzerland), 2021, 13, 3130.	1.2	11
80	optimal Modification of Regional Potentiometric Surface Design for Groundwater Contaminant Containment. Transactions of the American Society of Agricultural Engineers, 1986, 29, 1611-1623.	0.9	10
81	Performance of an Artificial Neural Network model for simulating saltwater intrusion process in coastal aquifers when training with noisy data. KSCE Journal of Civil Engineering, 2009, 13, 205-215.	0.9	10
82	Fractal Singularity–Based Multiobjective Monitoring Networks for Reactive Species Contaminant Source Characterization. Journal of Water Resources Planning and Management - ASCE, 2018, 144, .	1.3	9
83	Application of Dedicated Monitoring–Network Design for Unknown Pollutant-Source Identification Based on Dynamic Time Warping. Journal of Water Resources Planning and Management - ASCE, 2015, 141, .	1.3	8
84	Genetic Programming and Gaussian Process Regression Models for Groundwater Salinity Prediction: Machine Learning for Sustainable Water Resources Management. , 2018, , .		8
85	Application of Monitoring Network Design and Feedback Information for Adaptive Management of Coastal Groundwater Resources. International Journal of Environmental Research and Public Health, 2019, 16, 4365.	1.2	8
86	Design of optimal environmental flow regime at downstream of reservoirs using wetted perimeter-optimization method. Journal of Hydro-Environment Research, 2021, 39, 1-14.	1.0	8
87	Adaptive Surrogate Model Based Optimization (ASMBO) for Unknown Groundwater Contaminant Source Characterizations Using Self-Organizing Maps. Journal of Water Resource and Protection, 2017, 09, 193-214.	0.3	8
88	CHANCE CONSTRAINED WATER QUALITY MANAGEMENT MODEL FOR RESERVOIR SYSTEMS. ISH Journal of Hydraulic Engineering, 2006, 12, 39-48.	1.1	7
89	Utilizing classic evolutionary algorithms to assess the Brown trout (Salmo trutta) habitats by ANFIS-based physical habitat model. Modeling Earth Systems and Environment, 2022, 8, 857-869.	1.9	7
90	Optimizing reservoir operation to avoid downstream physical habitat loss using coupled ANFIS-metaheuristic model. Earth Science Informatics, 2021, 14, 2203-2220.	1.6	7

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91	Optimal Management of Groundwater Extraction to Control Saltwater Intrusion in Multi-Layered Coastal Aquifers Using Ensembles of Adaptive Neuro-Fuzzy Inference System. , 2017, , .		6
92	Optimal pumping strategies for the management of coastal groundwater resources: application of Gaussian Process Regression metamodel-based simulation-optimization methodology. ISH Journal of Hydraulic Engineering, 2019, , 1-10.	1.1	6
93	Modelling and management of saltwater intrusion in a coastal aquifer system: A regional-scale study. Groundwater for Sustainable Development, 2020, 11, 100479.	2.3	6
94	Application of the group method of data handling and variable importance analysis for prediction and modelling of saltwater intrusion processes in coastal aquifers. Neural Computing and Applications, 2021, 33, 4179-4190.	3.2	6
95	Optimal Characterization of Unknown Multispecies Reactive Contamination Sources in an Aquifer. Journal of Hydrologic Engineering - ASCE, 2021, 26, .	0.8	6
96	Geochemistry of groundwater and saltwater intrusion in a coastal region of an island in Malacca Strait, Indonesia. Environmental Engineering Research, 2021, 26, 200006-0.	1.5	6
97	A simulation-optimization system for evaluating flood management and environmental flow supply by reservoirs. Natural Hazards, 2022, 111, 2855-2879.	1.6	6
98	A nonlinear time-variant constrained model for rainfall-runoff. Journal of Hydrology, 1985, 77, 1-18.	2.3	5
99	Simulation of seawater intrusion in coastal aquifers: Some typical responses. Sadhana - Academy Proceedings in Engineering Sciences, 2001, 26, 317-352.	0.8	5
100	Improved optimal design of concrete gravity dams founded on anisotropic soils utilizing simulation-optimization model and hybrid genetic algorithm. ISH Journal of Hydraulic Engineering, 2021, 27, 20-37.	1.1	5
101	Optimum design of hydraulic water retaining structures incorporating uncertainty in estimating heterogeneous hydraulic conductivity utilizing stochastic ensemble surrogate models within a multi-objective multi-realisation optimisation model. Journal of Computational Design and Engineering, 2019, 6, 296-315.	1.5	5
102	Use of Genetic Programming Based Surrogate Models to Simulate Complex Geochemical Transport Processes in Contaminated Mine Sites. , 2015, , 359-379.		5
103	An ecohydraulic-based expert system for optimal management of environmental flow at the downstream of reservoirs. Journal of Hydroinformatics, 2021, 23, 1343-1367.	1.1	5
104	Linked Optimization Model for Groundwater Monitoring Network Design. Water Science and Technology Library, 2016, , 107-125.	0.2	4
105	Minimum Cost Design of Hydraulic Water Retaining Structure by using Coupled Simulation Optimization Approach. KSCE Journal of Civil Engineering, 2019, 23, 1095-1107.	0.9	4
106	Application of a link simulation optimization model utilizing quantification of hydrogeologic uncertainty to characterize unknown groundwater contaminant sources. Modeling Earth Systems and Environment, 2019, 5, 119-131.	1.9	4
107	Comparative efficiency of different artificial intelligence based models for predicting density dependent saltwater intrusion processes in coastal aquifers and saltwater intrusion management utilizing the best performing model. , 0, 105, 160-180.		4
108	Reliability Evaluation of Groundwater Contamination Source Characterization under Uncertain Flow Field. International Journal of Environmental Science and Development, 2015, 6, 512-518.	0.2	4

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109	Reliability Analysis of Thaw‑Induced Pore Pressures. Journal of Cold Regions Engineering - ASCE, 1991, 5, 125-141.	0.5	3
110	Reliability-based optimum design of hydraulic water retaining structure constructed on heterogeneous porous media: utilizing stochastic ensemble surrogate model-based linked simulation optimization model. Life Cycle Reliability and Safety Engineering, 2019, 8, 65-84.	0.6	3
111	Encapsulating the Role of Solution Response Space Roughness on Global Optimal Solution: Application in Identification of Unknown Groundwater Pollution Sources. Open Journal of Optimization, 2014, 03, 26-41.	0.3	3
112	Application of Simulated Annealing and Adaptive Simulated Annealing in Search for Efficient Optimal Solutions of a Groundwater Contamination related Problem. , 2017, , .		2
113	Source Characterization of Multiple Reactive Species at an Abandoned Mine Site Using a Groundwater Numerical Simulation Model and Optimization Models. International Journal of Environmental Research and Public Health, 2021, 18, 4776.	1.2	2
114	Utilizing Evolutionary algorithms for continuous simulation of long-term reservoir inflows. Water Management, 0, , 1-35.	0.4	2
115	Reducing the conflict of interest in the optimal operation of reservoirs by linking mesohabitat hydraulic modeling and metaheuristic optimization. Water Science and Technology: Water Supply, 2022, 22, 2269-2286.	1.0	2
116	Transfer of optimization techniques from water reservoir to national grain reservoir systems: issues in economic modelling. Civil Engineering and Environmental Systems, 1985, 2, 209-216.	0.2	1
117	Selection of Meta-models to Predict Saltwater Intrusion in Coastal Aquifers Using Entropy Weight Based Decision Theory. , 2018, , .		1
118	Robust Ensemble Modeling Paradigm for Groundwater Salinity Predictions in Complex Aquifer Systems. , 2021, , 53-72.		1
119	Sequential Characterization of Contaminant Plumes Using Feedback Information. Society of Earth Scientists Series, 2021, , 21-35.	0.2	1
120	ARTIFICIAL INTELLIGENCE-BASED MODELS FOR THE OPTIMAL AND SUSTAINABLE USE OF GROUNDWATER IN COASTAL AQUIFERS. , 0, , 211-222.		0
121	Wavelet and Cross-Wavelet Analysis of Groundwater Quality Signals of Saltwater Intruded Coastal Aquifers. , 2011, , .		0
122	Density Dependent Flows, Saltwater Instrusion and Management. , 2011, , 394-429.		0
123	Comment on "Artificial neural network model as a potential alternative for groundwater salinity forecasting"by Pallavi Banerjee et al. [J. Hydrol. 398 (2011) 212–220]. Journal of Hydrology, 2012, 420-421, 419-420.	2.3	0
124	Reliability Based Management of Coastal Aquifers Using Heterogeneous Ensemble of Meta-models. , 2018, , .		0
125	Characterization of Groundwater Contaminant Sources by Utilizing MARS Based Surrogate Model Linked to Optimization Model. Advances in Intelligent Systems and Computing, 2019, , 153-162.	0.5	0
126	Prediction of Impending Drought Scenarios Based on Surface and Subsurface Parameters in a Selected Region of Tropical Queensland, Australia. Journal of Water Resource and Protection, 2021, 13, 605-631.	0.3	0

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127	New Hope for Resistant Hypertention. Cardiovascular Journal, 2012, 5, 81-91.	0.0	0
128	Comparative study of moisture release behaviour of soils, soil clays and pure clays. Soil Research, 1981, 19, 79.	0.6	0
129	Solution of Large-Scale Multi-objective Optimization Models for Saltwater Intrusion Control in Coastal Aquifers Utilizing ANFIS Based Linked Meta-Models for Computational Feasibility and Efficiency. Springer Proceedings in Mathematics and Statistics, 2020, , 163-171.	0.1	0
130	Reducing impacts of rice fields nitrate contamination on the river ecosystem by a coupled SWAT reservoir operation optimization model. Arabian Journal of Geosciences, 2022, 15, 1.	0.6	0