Saman S Razavi

List of Publications by Year
in descending order

69 papers	3,427 citations	172457 29 h-index	144013 57 g-index
88 all docs	88 docs citations	88 times ranked	3509 citing authors

#	Article	IF	Citations
1	Compound Effects of Climate Change on Future Transboundary Water Issues in the Middle East. Earth's Future, 2022, 10, .	6.3	4
2	Advances in modelling large river basins in cold regions with ModÃ©lisation Environmentale Communautaireâ€"Surface and Hydrology (MESH), the Canadian hydrological land surface scheme. Hydrological Processes, 2022, 36, .	2.6	14
3	Comparing the applicability of hydro-economic modelling approaches for large-scale decision-making in multi-sectoral and multi-regional river basins. Environmental Modelling and Software, 2022, 152, 105385.	4.5	5
4	Objective evaluation of the Global Environmental Multiscale Model (GEM) with precipitation and temperature for Iran. Natural Resource Modelling, 2022, 35, .	2.0	1
5	Coevolution of machine learning and processâ€based modelling to revolutionize Earth and environmental sciences: A perspective. Hydrological Processes, 2022, 36, .	2.6	20
6	Development of a Joint Probabilistic Rainfallâ€Runoff Model for Highâ€toâ€Extreme Flow Projections Under Changing Climatic Conditions. Water Resources Research, 2022, 58, .	4.2	7
7	Socio-technical scales in socio-environmental modeling: Managing a system-of-systems modeling approach. Environmental Modelling and Software, 2021, 135, 104885.	4.5	38
8	Assessment of the cascade of uncertainty in future snow depth projections across watersheds of mountainous, foothill, and plain areas in northern latitudes. Journal of Hydrology, 2021, 598, 125735.	5.4	12
9	Data assimilation of satellite-based terrestrial water storage changes into a hydrology land-surface model. Journal of Hydrology, 2021, 597, 125744.	5.4	8
10	Automatic clustering-based surrogate-assisted genetic algorithm for groundwater remediation system design. Journal of Hydrology, 2021, 598, 125752.	5.4	11
11	The Future of Sensitivity Analysis: An essential discipline for systems modeling and policy support. Environmental Modelling and Software, 2021, 137, 104954.	4.5	209
12	Breaking through language barriers. Science, 2021, 371, 206-206.	12.6	0
13	Understanding human adaptation to drought: agent-based agricultural water demand modeling in the Bow River Basin, Canada. Hydrological Sciences Journal, 2021, 66, 389-407.	2.6	12
14	Summary and synthesis of Changing Cold Regions Network (CCRN) research in the interior of western Canada â€" PartÂ2: Future change in cryosphere, vegetation, and hydrology. Hydrology and Earth System Sciences, 2021, 25, 1849-1882.	4.9	20
15	Analysis and prediction of land cover changes using the land change modeler (<scp>LCM</scp>) in a semiarid river basin, Iran. Land Degradation and Development, 2021, 32, 3092-3105.	3.9	25
16	Multi-criteria, time dependent sensitivity analysis of an event-oriented, physically-based, distributed sediment and runoff model. Journal of Hydrology, 2021, 598, 126268.	5.4	9
17	Great Lakes Runoff Intercomparison Project Phase 3: Lake Erie (GRIP-E). Journal of Hydrologic Engineering - ASCE, 2021, 26, .	1.9	12
18	Deep learning, explained: Fundamentals, explainability, and bridgeability to process-based modelling. Environmental Modelling and Software, 2021, 144, 105159.	4.5	63

#	ARTICLE	IF	CITATIONS
19	Peering into agricultural rebound phenomenon using a global sensitivity analysis approach. Journal of Hydrology, 2021, 602, 126739.	5.4	12
20	Integrated modelling to assess the impacts of water stress in a transboundary river basin: Bridging local-scale water resource operations to a river basin economy. Science of the Total Environment, 2021, 800, 149543.	8.0	9
21	Sensitivity analysis: A discipline coming of age. Environmental Modelling and Software, 2021, 146, 105226.	4.5	30
22	A Fresh Look at Variography: Measuring Dependence and Possible Sensitivities Across Geophysical Systems From Any Given Data. Geophysical Research Letters, 2020, 47, e2020GL089829.	4.0	9
23	The economic impacts of water supply restrictions due to climate and policy change: A transboundary river basin supply-side input-output analysis. Ecological Economics, 2020, 172, 106532.	5.7	27
24	Anthropocene flooding: Challenges for science and society. Hydrological Processes, 2020, 34, 1996-2000.	2.6	39
25	Correlation Effects? A Major but Often Neglected Component in Sensitivity and Uncertainty Analysis. Water Resources Research, 2020, 56, e2019WR025436.	4.2	25
26	On the configuration and initialization of a large-scale hydrological land surface model to represent permafrost. Hydrology and Earth System Sciences, 2020, 24, 349-379.	4.9	14
27	Assessment of Extremes in Global Precipitation Products: How Reliable Are They?. Journal of Hydrometeorology, 2020, 21, 2855-2873.	1.9	28
28	Paleo-hydrologic reconstruction of 400 years of past flows at a weekly time step for major rivers of Western Canada. Earth System Science Data, 2020, 12, 231-243.	9.9	2
29	MODELLING GROUNDWATER-SURFACE WATER INTERACTIONS IN THE CANADIAN BOREAL REGION. , 2020, , .		0
30	Introductory overview of identifiability analysis: A guide to evaluating whether you have the right type of data for your modeling purpose. Environmental Modelling and Software, 2019, 119, 418-432.	4.5	93
31	What should we do when a model crashes? Recommendations for global sensitivity analysis of Earth and environmental systems models. Geoscientific Model Development, 2019, 12, 4275-4296.	3.6	6
32	Representation and improved parameterization of reservoir operation in hydrological and land-surface models. Hydrology and Earth System Sciences, 2019, 23, 3735-3764.	4.9	79
33	Global sensitivity analysis for high-dimensional problems: How to objectively group factors and measure robustness and convergence while reducing computational cost. Environmental Modelling and Software, 2019, 111, 282-299.	4.5	53
34	A multi-method Generalized Global Sensitivity Matrix approach to accounting for the dynamical nature of earth and environmental systems models. Environmental Modelling and Software, 2019, 114, 1-11.	4.5	26
35	VARS-TOOL: A toolbox for comprehensive, efficient, and robust sensitivity and uncertainty analysis. Environmental Modelling and Software, 2019, 112, 95-107.	4.5	62
36	Introductory overview: Optimization using evolutionary algorithms and other metaheuristics. Environmental Modelling and Software, 2019, 114, 195-213.	4.5	169

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37	Prewhitening of hydroclimatic time series? Implications for inferred change and variability across time scales. Journal of Hydrology, 2018, 557, 109-115.	5.4	40
38	On the appropriate definition of soil profile configuration and initial conditions for land surfaceâ€“hydrology models in cold regions. Hydrology and Earth System Sciences, 2018, 22, 3295-3309.	4.9	22
39	Revisiting the Basis of Sensitivity Analysis for Dynamical Earth System Models. Water Resources Research, 2018, 54, 8692-8717.	4.2	58
40	A review and synthesis of hysteresis in hydrology and hydrological modeling: Memory, path-dependency, or missing physics?. Journal of Hydrology, 2018, 566, 500-519.	5.4	24
41	Historical drought patterns over Canada and their teleconnections with large-scale climate signals. Hydrology and Earth System Sciences, 2018, 22, 3105-3124.	4.9	70
42	Avoiding the Guise of an Anonymous Review. Eos, 2018, 99, .	0.1	0
43	Evaluation of Integrated Multisatellite Retrievals for GPM (IMERG) over Southern Canada against Ground Precipitation Observations: A Preliminary Assessment. Journal of Hydrometeorology, 2017, 18, 1033-1050.	1.9	102
44	Progressive Latin Hypercube Sampling: An efficient approach for robust sampling-based analysis of environmental models. Environmental Modelling and Software, 2017, 93, 109-126.	4.5	136
45	Multicriteria sensitivity analysis as a diagnostic tool for understanding model behaviour and characterizing model uncertainty. Hydrological Processes, 2017, 31, 4462-4476.	2.6	38
46	Improved Understanding of River Ice Processes Using Global Sensitivity Analysis Approaches. Journal of Hydrologic Engineering - ASCE, 2017, 22, .	1.9	24
47	Enhanced identification of a hydrologic model using streamflow and satellite water storage data: A multicriteria sensitivity analysis and optimization approach. Hydrological Processes, 2017, 31, 3320-3333.	2.6	53
48	Insights into sensitivity analysis of Earth and environmental systems models: On the impact of parameter perturbation scale. Environmental Modelling and Software, 2017, 95, 115-131.	4.5	33
49	Inter-comparison of daily precipitation products for large-scale hydro-climatic applications over Canada. Hydrology and Earth System Sciences, 2017, 21, 2163-2185.	4.9	80
50	An Integrated Modelling System to Predict Hydrological Processes under Climate and Land-Use/Cover Change Scenarios. Water (Switzerland), 2017, 9, 767.	2.7	31
51	Challenges and Future Outlook of Sensitivity Analysis. , 2017, , 397-415.		7
52	Time scale effect and uncertainty in reconstruction of paleoâ€hydrology. Hydrological Processes, 2016, 30, 1985-1999.	2.6	11
53	Correlation and causation in treeâ€ringâ€based reconstruction of paleohydrology in cold semiarid regions. Water Resources Research, 2016, 52, 7053-7069.	4.2	10
54	A new framework for comprehensive, robust, and efficient global sensitivity analysis: 1. Theory. Water Resources Research, 2016, 52, 423-439.	4.2	132

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55	A new framework for comprehensive, robust, and efficient global sensitivity analysis: 2. Application. Water Resources Research, 2016, 52, 440-455.	4.2	94
56	Toward understanding nonstationarity in climate and hydrology through tree ring proxy records. Water Resources Research, 2015, 51, 1813-1830.	4.2	57
57	What do we mean by sensitivity analysis? The need for comprehensive characterization of â€œglobalâ€• sensitivity in <scp>E</scp>arth and <scp>E</scp>nvironmental systems models. Water Resources Research, 2015, 51, 3070-3092.	4.2	230
58	Evaluation of New Control Structures for Regulating the Great Lakes System: Multiscenario, Multireservoir Optimization Approach. Journal of Water Resources Planning and Management - ASCE, 2014, 140, 04014018.	2.6	5
59	Pre-emption strategies for efficient multi-objective optimization: Application to the development of Lake Superior regulation plan. Environmental Modelling and Software, 2014, 54, 128-141.	4.5	26
60	An efficient framework for hydrologic model calibration on long data periods. Water Resources Research, 2013, 49, 8418-8431.	4.2	48
61	Review of surrogate modeling in water resources. Water Resources Research, 2012, 48, .	4.2	597
62	Numerical assessment of metamodelling strategies in computationally intensive optimization. Environmental Modelling and Software, 2012, 34, 67-86.	4.5	113
63	A New Formulation for Feedforward Neural Networks. IEEE Transactions on Neural Networks, 2011, 22, 1588-1598.	4.2	103
64	Reducing the computational cost of automatic calibration through model preemption. Water Resources Research, 2010, 46, .	4.2	38
65	Reservoir Inflow Modeling Using Temporal Neural Networks with Forgetting Factor Approach. Water Resources Management, 2009, 23, 39-55.	3.9	24
66	Long-lead seasonal rainfall forecasting using time-delay recurrent neural networks: a case study. Hydrological Processes, 2008, 22, 229-241.	2.6	39
67	Adaptive Neural Networks for Flood Routing in River Systems. Water International, 2007, 32, 360-375.	1.0	18
68	Application of Temporal Neural Networks in Long-Lead Rainfall Forecasting. , 2005, , 1.		1
69	Hydrologicâ€land surface modelling of the Canadian sporadicâ€discontinuous permafrost: initialization and uncertainty propagation. Hydrological Processes, 0, , .	2.6	3