

# Saman S Razavi

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

64  
papers

2,158  
citations

24  
h-index

46  
g-index

88  
ext. papers

2,753  
ext. citations

5.6  
avg, IF

5.86  
L-index

#	Paper	IF	Citations
64	Advances in modelling large river basins in cold regions with Modélisation Environnementale Communautaire Surface and Hydrology (MESH), the Canadian hydrological land surface scheme. <i>Hydrological Processes</i> , <b>2022</b> , 36,	3.3	2
63	Comparing the applicability of hydro-economic modelling approaches for large-scale decision-making in multi-sectoral and multi-regional river basins. <i>Environmental Modelling and Software</i> , <b>2022</b> , 152, 105385	5.2	
62	Sensitivity analysis: A discipline coming of age. <i>Environmental Modelling and Software</i> , <b>2021</b> , 146, 105226	5.2	2
61	Summary and synthesis of Changing Cold Regions Network (CCRN) research in the interior of western Canada [Part 2: Future change in cryosphere, vegetation, and hydrology. <i>Hydrology and Earth System Sciences</i> , <b>2021</b> , 25, 1849-1882	5.5	10
60	Analysis and prediction of land cover changes using the land change modeler (LCM) in a semiarid river basin, Iran. <i>Land Degradation and Development</i> , <b>2021</b> , 32, 3092-3105	4.4	4
59	Multi-criteria, time dependent sensitivity analysis of an event-oriented, physically-based, distributed sediment and runoff model. <i>Journal of Hydrology</i> , <b>2021</b> , 598, 126268	6	3
58	Socio-technical scales in socio-environmental modeling: Managing a system-of-systems modeling approach. <i>Environmental Modelling and Software</i> , <b>2021</b> , 135, 104885	5.2	24
57	Assessment of the cascade of uncertainty in future snow depth projections across watersheds of mountainous, foothill, and plain areas in northern latitudes. <i>Journal of Hydrology</i> , <b>2021</b> , 598, 125735	6	0
56	Data assimilation of satellite-based terrestrial water storage changes into a hydrology land-surface model. <i>Journal of Hydrology</i> , <b>2021</b> , 597, 125744	6	5
55	Automatic clustering-based surrogate-assisted genetic algorithm for groundwater remediation system design. <i>Journal of Hydrology</i> , <b>2021</b> , 598, 125752	6	5
54	The Future of Sensitivity Analysis: An essential discipline for systems modeling and policy support. <i>Environmental Modelling and Software</i> , <b>2021</b> , 137, 104954	5.2	75
53	Breaking through language barriers. <i>Science</i> , <b>2021</b> , 371, 206	33.3	
52	Understanding human adaptation to drought: agent-based agricultural water demand modeling in the Bow River Basin, Canada. <i>Hydrological Sciences Journal</i> , <b>2021</b> , 66, 389-407	3.5	5
51	Great Lakes Runoff Intercomparison Project Phase 3: Lake Erie (GRIP-E). <i>Journal of Hydrologic Engineering - ASCE</i> , <b>2021</b> , 26,	1.8	5
50	Deep learning, explained: Fundamentals, explainability, and bridgeability to process-based modelling. <i>Environmental Modelling and Software</i> , <b>2021</b> , 144, 105159	5.2	10
49	Peering into agricultural rebound phenomenon using a global sensitivity analysis approach. <i>Journal of Hydrology</i> , <b>2021</b> , 602, 126739	6	3
48	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. <i>Science of the Total Environment</i> , <b>2021</b> , 800, 149543	10.2	0

47	The economic impacts of water supply restrictions due to climate and policy change: A transboundary river basin supply-side input-output analysis. <i>Ecological Economics</i> , <b>2020</b> , 172, 106532	5.6	15
46	Anthropocene flooding: Challenges for science and society. <i>Hydrological Processes</i> , <b>2020</b> , 34, 1996-2000	3.3	21
45	Correlation Effects? A Major but Often Neglected Component in Sensitivity and Uncertainty Analysis. <i>Water Resources Research</i> , <b>2020</b> , 56, e2019WR025436	5.4	14
44	On the configuration and initialization of a large-scale hydrological land surface model to represent permafrost. <i>Hydrology and Earth System Sciences</i> , <b>2020</b> , 24, 349-379	5.5	6
43	Assessment of Extremes in Global Precipitation Products: How Reliable Are They?. <i>Journal of Hydrometeorology</i> , <b>2020</b> , 21, 2855-2873	3.7	14
42	Paleo-hydrologic reconstruction of 400 years of past flows at a weekly time step for major rivers of Western Canada. <i>Earth System Science Data</i> , <b>2020</b> , 12, 231-243	10.5	2
41	A Fresh Look at Variography: Measuring Dependence and Possible Sensitivities Across Geophysical Systems From Any Given Data. <i>Geophysical Research Letters</i> , <b>2020</b> , 47, e2020GL089829	4.9	3
40	Representation and improved parameterization of reservoir operation in hydrological and land-surface models. <i>Hydrology and Earth System Sciences</i> , <b>2019</b> , 23, 3735-3764	5.5	42
39	Introductory overview of identifiability analysis: A guide to evaluating whether you have the right type of data for your modeling purpose. <i>Environmental Modelling and Software</i> , <b>2019</b> , 119, 418-432	5.2	45
38	What should we do when a model crashes? Recommendations for global sensitivity analysis of Earth and environmental systems models. <i>Geoscientific Model Development</i> , <b>2019</b> , 12, 4275-4296	6.3	3
37	Global sensitivity analysis for high-dimensional problems: How to objectively group factors and measure robustness and convergence while reducing computational cost. <i>Environmental Modelling and Software</i> , <b>2019</b> , 111, 282-299	5.2	37
36	A multi-method Generalized Global Sensitivity Matrix approach to accounting for the dynamical nature of earth and environmental systems models. <i>Environmental Modelling and Software</i> , <b>2019</b> , 114, 1-11	5.2	13
35	VAR-S-TOOL: A toolbox for comprehensive, efficient, and robust sensitivity and uncertainty analysis. <i>Environmental Modelling and Software</i> , <b>2019</b> , 112, 95-107	5.2	41
34	Introductory overview: Optimization using evolutionary algorithms and other metaheuristics. <i>Environmental Modelling and Software</i> , <b>2019</b> , 114, 195-213	5.2	83
33	Historical drought patterns over Canada and their teleconnections with large-scale climate signals. <i>Hydrology and Earth System Sciences</i> , <b>2018</b> , 22, 3105-3124	5.5	42
32	Prewhitening of hydroclimatic time series? Implications for inferred change and variability across time scales. <i>Journal of Hydrology</i> , <b>2018</b> , 557, 109-115	6	24
31	On the appropriate definition of soil profile configuration and initial conditions for land surface hydrology models in cold regions. <i>Hydrology and Earth System Sciences</i> , <b>2018</b> , 22, 3295-3309	5.5	13
30	Revisiting the Basis of Sensitivity Analysis for Dynamical Earth System Models. <i>Water Resources Research</i> , <b>2018</b> , 54, 8692-8717	5.4	40

29	A review and synthesis of hysteresis in hydrology and hydrological modeling: Memory, path-dependency, or missing physics?. <i>Journal of Hydrology</i> , <b>2018</b> , 566, 500-519	6	15
28	Evaluation of Integrated Multisatellite Retrievals for GPM (IMERG) over Southern Canada against Ground Precipitation Observations: A Preliminary Assessment. <i>Journal of Hydrometeorology</i> , <b>2017</b> , 18, 1033-1050	3.7	70
27	Progressive Latin Hypercube Sampling: An efficient approach for robust sampling-based analysis of environmental models. <i>Environmental Modelling and Software</i> , <b>2017</b> , 93, 109-126	5.2	83
26	Multicriteria sensitivity analysis as a diagnostic tool for understanding model behaviour and characterizing model uncertainty. <i>Hydrological Processes</i> , <b>2017</b> , 31, 4462-4476	3.3	32
25	Improved Understanding of River Ice Processes Using Global Sensitivity Analysis Approaches. <i>Journal of Hydrologic Engineering - ASCE</i> , <b>2017</b> , 22, 04017048	1.8	17
24	Enhanced identification of a hydrologic model using streamflow and satellite water storage data: A multicriteria sensitivity analysis and optimization approach. <i>Hydrological Processes</i> , <b>2017</b> , 31, 3320-3333	3.3	41
23	Insights into sensitivity analysis of Earth and environmental systems models: On the impact of parameter perturbation scale. <i>Environmental Modelling and Software</i> , <b>2017</b> , 95, 115-131	5.2	22
22	Inter-comparison of daily precipitation products for large-scale hydro-climatic applications over Canada. <i>Hydrology and Earth System Sciences</i> , <b>2017</b> , 21, 2163-2185	5.5	51
21	An Integrated Modelling System to Predict Hydrological Processes under Climate and Land-Use/Cover Change Scenarios. <i>Water (Switzerland)</i> , <b>2017</b> , 9, 767	3	26
20	Challenges and Future Outlook of Sensitivity Analysis <b>2017</b> , 397-415		5
19	A new framework for comprehensive, robust, and efficient global sensitivity analysis: 1. Theory. <i>Water Resources Research</i> , <b>2016</b> , 52, 423-439	5.4	83
18	A new framework for comprehensive, robust, and efficient global sensitivity analysis: 2. Application. <i>Water Resources Research</i> , <b>2016</b> , 52, 440-455	5.4	71
17	Time scale effect and uncertainty in reconstruction of paleo-hydrology. <i>Hydrological Processes</i> , <b>2016</b> , 30, 1985-1999	3.3	11
16	Correlation and causation in tree-ring-based reconstruction of paleohydrology in cold semiarid regions. <i>Water Resources Research</i> , <b>2016</b> , 52, 7053-7069	5.4	9
15	What do we mean by sensitivity analysis? The need for comprehensive characterization of global sensitivity in Earth and Environmental systems models. <i>Water Resources Research</i> , <b>2015</b> , 51, 3070-3092	5.4	168
14	Toward understanding nonstationarity in climate and hydrology through tree ring proxy records. <i>Water Resources Research</i> , <b>2015</b> , 51, 1813-1830	5.4	51
13	Pre-emption strategies for efficient multi-objective optimization: Application to the development of Lake Superior regulation plan. <i>Environmental Modelling and Software</i> , <b>2014</b> , 54, 128-141	5.2	19
12	Evaluation of New Control Structures for Regulating the Great Lakes System: Multiscenario, Multireservoir Optimization Approach. <i>Journal of Water Resources Planning and Management - ASCE</i> , <b>2014</b> , 140, 04014018	2.8	5

11	An efficient framework for hydrologic model calibration on long data periods. <i>Water Resources Research</i> , <b>2013</b> , 49, 8418-8431	5.4	36
10	Numerical assessment of metamodelling strategies in computationally intensive optimization. <i>Environmental Modelling and Software</i> , <b>2012</b> , 34, 67-86	5.2	104
9	Review of surrogate modeling in water resources. <i>Water Resources Research</i> , <b>2012</b> , 48,	5.4	447
8	A new formulation for feedforward neural networks. <i>IEEE Transactions on Neural Networks</i> , <b>2011</b> , 22, 1588-98		79
7	Reducing the computational cost of automatic calibration through model preemption. <i>Water Resources Research</i> , <b>2010</b> , 46,	5.4	31
6	Reservoir Inflow Modeling Using Temporal Neural Networks with Forgetting Factor Approach. <i>Water Resources Management</i> , <b>2009</b> , 23, 39-55	3.7	18
5	Long-lead seasonal rainfall forecasting using time-delay recurrent neural networks: a case study. <i>Hydrological Processes</i> , <b>2008</b> , 22, 229-241	3.3	29
4	Adaptive Neural Networks for Flood Routing in River Systems. <i>Water International</i> , <b>2007</b> , 32, 360-375	2.4	14
3	Application of Temporal Neural Networks in Long-Lead Rainfall Forecasting <b>2005</b> , 1		1
2	Hydrologic-land surface modelling of the Canadian sporadic-discontinuous permafrost: initialization and uncertainty propagation. <i>Hydrological Processes</i> ,	3.3	2
1	Hydrologic-Land Surface Modelling of a Complex System under Precipitation Uncertainty: A Case Study of the Saskatchewan River Basin, Canada		3