Slobodan P Simonovic

List of Publications by Year in descending order

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152 papers

6,324 citations

66343 42 h-index 79698 73 g-index

162 all docs 162 docs citations

times ranked

162

4650 citing authors

#	Article	IF	CITATIONS
1	Short term streamflow forecasting using artificial neural networks. Journal of Hydrology, 1999, 214, 32-48.	5.4	415
2	System Dynamics Modeling of Reservoir Operations for Flood Management. Journal of Computing in Civil Engineering, 2000, 14, 190-198.	4.7	223
3	Reservoir Systems Analysis: Closing Gap between Theory and Practice. Journal of Water Resources Planning and Management - ASCE, 1992, 118, 262-280.	2.6	215
4	Global water resources modeling with an integrated model of the social–economic–environmental system. Advances in Water Resources, 2011, 34, 684-700.	3.8	194
5	A fuzzy compromise approach to water resource systems planning under uncertainty. Fuzzy Sets and Systems, 2000, 115, 35-44.	2.7	178
6	Optimization of Water Distribution Network Design Using Differential Evolution. Journal of Water Resources Planning and Management - ASCE, 2010, 136, 279-287.	2.6	177
7	Computer-based Model for Flood Evacuation Emergency Planning. Natural Hazards, 2005, 34, 25-51.	3.4	164
8	An Intelligent Decision Support System for Management of Floods. Water Resources Management, 2006, 20, 391-410.	3.9	160
9	Increase of Flood Risk due to Urbanisation: A Canadian Example. Natural Hazards, 2007, 40, 25-41.	3.4	156
10	Spatial System Dynamics: New Approach for Simulation of Water Resources Systems. Journal of Computing in Civil Engineering, 2004, 18, 331-340.	4.7	150
11	A new modeling approach for water resources policy analysis. Water Resources Research, 1999, 35, 295-304.	4.2	145
12	World water dynamics: global modeling of water resources. Journal of Environmental Management, 2002, 66, 249-267.	7.8	142
13	System dynamics model for predicting floods from snowmelt in North American prairie watersheds. Hydrological Processes, 2002, 16, 2645-2666.	2.6	109
14	An artificial neural network model for generating hydrograph from hydro-meteorological parameters. Journal of Hydrology, 2005, 315, 236-251.	5.4	102
15	Optimal Operation of Reservoir Systems using Simulated Annealing. Water Resources Management, 2002, 16, 401-428.	3.9	100
16	Equidistance Quantile Matching Method for Updating IDFCurves under Climate Change. Water Resources Management, 2014, 28, 2539-2562.	3.9	92
17	Dynamic Resilience to Climate Change Caused Natural Disasters in Coastal Megacities Quantification Framework. British Journal of Environment and Climate Change, 2013, 3, 378-401.	0.3	90
18	One View of the Future. Water International, 2000, 25, 76-88.	1.0	86

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19	Methodology for Assessment of Climate Change Impacts on Large-Scale Flood Protection System. Journal of Water Resources Planning and Management - ASCE, 2003, 129, 361-371.	2.6	83
20	World water dynamics: global modeling of water resources. Journal of Environmental Management, 2002, 66, 249-267.	7.8	80
21	Aggregation of fuzzy views of a large number of stakeholders for multi-objective flood management decision-making. Journal of Environmental Management, 2005, 77, 133-143.	7.8	80
22	Aggregation operators for soft decision making in water resources. Fuzzy Sets and Systems, 2000, 115, 11-33.	2.7	77
23	A web-based tool for the development of Intensity Duration Frequency curves under changing climate. Environmental Modelling and Software, 2016, 81, 136-153.	4.5	72
24	Integrated Reservoir Management System for Adaptation to Climate Change: The Nakdong River Basin in Korea. Water Resources Management, 2010, 24, 3397-3417.	3.9	70
25	Comparison of static and dynamic resilience for a multipurpose reservoir operation. Water Resources Research, 2016, 52, 8630-8649.	4.2	70
26	The Use of Object-Oriented Modeling for Water Resources Planning in Egypt. Water Resources Management, 1997, 11, 243-261.	3.9	69
27	Decision Support Systems for Sustainable Management of Water Resources: 1. General Principles. Water International, 1996, 21, 223-232.	1.0	65
28	Floods and the <scp>COVID</scp> â€19 pandemic—A new double hazard problem. Wiley Interdisciplinary Reviews: Water, 2021, 8, e1509.	6.5	65
29	Reliability programing in reservoir management: 1. Single multipurpose reservoir. Water Resources Research, 1980, 16, 844-848.	4.2	63
30	Integration of heuristic knowledge with analytical tools for the selection of flood damage reduction measures. Canadian Journal of Civil Engineering, 2001, 28, 208-221.	1.3	59
31	Short-Term Operation Model for Coupled Hydropower Reservoirs. Journal of Water Resources Planning and Management - ASCE, 2000, 126, 98-106.	2.6	58
32	Restoration resource allocation model for enhancing resilience of interdependent infrastructure systems. Safety Science, 2018, 102, 169-177.	4.9	56
33	Modeling uncertainty in reservoir loss functions using fuzzy sets. Water Resources Research, 1999, 35, 2815-2823.	4.2	55
34	Hydrological extremes in a southwestern Ontario river basin under future climate conditions/Extrêmes hydrologiques dans un basin versant du sud-ouest de l'Ontario sous conditions climatiques futures. Hydrological Sciences Journal, 2005, 50, .	2.6	55
35	Global water dynamics: issues for the 21st century. Water Science and Technology, 2002, 45, 53-64.	2.5	54
36	Sensitivity of the Red River Basin Flood Protection System to Climate Variability and Change. Water Resources Management, 2004, 18, 89-110.	3.9	54

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37	A spatial multi-objective decision-making under uncertainty for water resources management. Journal of Hydroinformatics, 2005, 7, 117-133.	2.4	54
38	Integrated assessment model of society-biosphere-climate-economy-energy system. Environmental Modelling and Software, 2013, 49, 1-21.	4.5	52
39	An improved methodology for shortâ€ŧerm operation of a single multipurpose reservoir. Water Resources Research, 1989, 25, 1-8.	4.2	51
40	Integrated Analyses of Canada's Water Resources: A System Dynamics Approach. Canadian Water Resources Journal, 2004, 29, 223-250.	1.2	50
41	Inverse flood risk modelling under changing climatic conditions. Hydrological Processes, 2007, 21, 563-577.	2.6	49
42	Spatial and temporal analysis of urban flood risk assessment. Urban Water Journal, 2013, 10, 26-49.	2.1	47
43	Integrated Reservoir Management System for Flood Risk Assessment Under Climate Change. Water Resources Management, 2012, 26, 3785-3802.	3.9	45
44	Comparison of fuzzy set ranking methods for implementation in water resources decision-making. Canadian Journal of Civil Engineering, 2002, 29, 692-701.	1.3	44
45	An Operational Model for Support of Integrated Watershed Management. Water Resources Management, 2010, 24, 1161-1194.	3.9	44
46	A new methodology for water resources multicriteria decision making under uncertainty. Physics and Chemistry of the Earth, 2008, 33, 322-329.	2.9	42
47	Fuzzy criteria for the evaluation of water resource systems performance. Water Resources Research, 2004, 40, .	4.2	41
48	Analytical Support for Integrated Water Resources Management: A New Method for Addressing Spatial and Temporal Variability. Water Resources Management, 2013, 27, 401-417.	3.9	38
49	A Multi-Objective Best Compromise Decision Model for Real-Time Flood Mitigation Operations of Multi-Reservoir System. Water Resources Management, 2016, 30, 3363-3387.	3.9	38
50	Use of beta regression for statistical downscaling of precipitation in the Campbell River basin, British Columbia, Canada. Journal of Hydrology, 2016, 538, 49-62.	5.4	38
51	Intelligent Decision Support and Reservoir Management and Operations. Journal of Computing in Civil Engineering, 1989, 3, 367-385.	4.7	37
52	Reliability programing in reservoir management: 3. System of multipurpose reservoirs. Water Resources Research, 1982, 18, 735-743.	4.2	36
53	Multi-method Modeling Framework for Support of Integrated Water Resources Management. Environmental Processes, 2015, 2, 461-483.	3.5	36
54	A decision support system for updating and incorporating climate change impacts into rainfall intensity-duration-frequency curves: Review of the stakeholder involvement process. Environmental Modelling and Software, 2016, 84, 193-209.	4.5	36

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55	Application Of Water Resources Systems Concept To The Formulation Of A Water Master Plan. Water International, 1989, 14, 37-50.	1.0	35
56	Decision Support Systems for Sustainable Management of Water Resources: 2. Case Studies. Water International, 1996, 21, 233-244.	1.0	35
57	ANEMI: a new model for integrated assessment of global change. Interdisciplinary Environmental Review, 2010, 11, 127.	0.2	35
58	An analytical procedure for multi-site, multi-season streamflow generation using maximum entropy bootstrapping. Environmental Modelling and Software, 2014, 59, 59-75.	4.5	35
59	Sequential Hazards Resilience of Interdependent Infrastructure System: A Case Study of Greater Toronto Area Energy Infrastructure System. Risk Analysis, 2019, 39, 1141-1168.	2.7	35
60	Risk-based parameter selection for short-term reservoir operation. Journal of Hydrology, 1992, 131, 269-291.	5.4	33
61	Resilience Assessment of Interdependent Infrastructure Systems: A Case Study Based on Different Response Strategies. Sustainability, 2019, 11, 6552.	3.2	33
62	The implicit stochastic model for reservoir yield optimization. Water Resources Research, 1987, 23, 2159-2165.	4.2	32
63	Interaction between land-use change, flooding and human health in Metro Vancouver, Canada. Natural Hazards, 2014, 72, 1219-1230.	3.4	32
64	Bringing Future Climatic Change into Water Resources Management Practice Today. Water Resources Management, 2017, 31, 2933-2950.	3.9	31
65	Sensitivity of reservoir operation performance to climatic change. Water Resources Management, 1996, 10, 463-478.	3.9	30
66	Future Changes in Flood Hazards across Canada under a Changing Climate. Water (Switzerland), 2018, 10, 1441.	2.7	30
67	A decision support system for the analysis and use of stage-discharge rating curves. Journal of Hydrology, 1996, 184, 225-241.	5.4	29
68	Understanding dynamics of population flood exposure in Canada with multiple high-resolution population datasets. Science of the Total Environment, 2021, 759, 143559.	8.0	29
69	DECISION SUPPORT SYSTEM FOR FLOOD MANAGEMENT IN THE RED RIVER BASIN. Canadian Water Resources Journal, 1999, 24, 203-223.	1.2	28
70	Simulation of Multiple Hydropower Reservoir Operations Using System Dynamics Approach. Water Resources Management, 2014, 28, 1937-1958.	3.9	28
71	Improved Weather Generator Algorithm for Multisite Simulation ofÂPrecipitation and Temperature. Journal of the American Water Resources Association, 2015, 51, 1305-1320.	2.4	28
72	Coupled Self-Adaptive Multiobjective Differential Evolution and Network Flow Algorithm Approach for Optimal Reservoir Operation. Journal of Water Resources Planning and Management - ASCE, 2015, 141, .	2.6	28

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73	Flooding in the Red River Basin – Lessons from Post Flood Activities. Natural Hazards, 2003, 28, 345-365.	3.4	27
74	Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea. Journal of Hydrologic Engineering - ASCE, 2010, 15, 772-785.	1.9	27
7 5	Multi-site, multivariate weather generator using maximum entropy bootstrap. Climate Dynamics, 2015, 44, 3431-3448.	3.8	27
76	Quantification of uncertainty in the assessment of future streamflow under changing climate conditions. Hydrological Processes, 2017, 31, 2076-2094.	2.6	26
77	Timeâ€Series Modeling for Longâ€Range Streamâ€Flow Forecasting. Journal of Water Resources Planning and Management - ASCE, 1994, 120, 857-870.	2.6	25
78	Web-Based Tool for the Development of Intensity Duration Frequency Curves under Changing Climate at Gauged and Ungauged Locations. Water (Switzerland), 2020, 12, 1243.	2.7	25
79	A system dynamics simulation approach for environmentally friendly operation of a reservoir system. Journal of Hydrology, 2020, 587, 124971.	5.4	25
80	Assessment on variability of extreme climate events for the Upper Thames River basin in Canada. Hydrological Processes, 2012, 26, 485-499.	2.6	24
81	Towards Reducing Climate Change Impact Assessment Process Uncertainty. Environmental Processes, 2015, 2, 275-290.	3.5	24
82	Social criteria for evaluation of flood control measures: Winnipeg case study. Urban Water, 1999, 1, 167-175.	0.5	23
83	A Two-Stage Restoration Resource Allocation Model for Enhancing the Resilience of Interdependent Infrastructure Systems. Sustainability, 2019, 11, 5143.	3.2	21
84	Uncertainty in Precipitation Projection under Changing Climate Conditions: A Regional Case Study. American Journal of Climate Change, 2016, 05, 116-132.	0.9	21
85	Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study. Journal of Hydrologic Engineering - ASCE, 2010, 15, 49-56.	1.9	20
86	A flood risk assessment to municipal infrastructure due to changing climate part I: methodology. Urban Water Journal, 2014, 11, 20-30.	2.1	20
87	Mapping Extreme Rainfall Statistics for Canada under Climate Change Using Updated Intensity-Duration-Frequency Curves. Journal of Water Resources Planning and Management - ASCE, 2017, 143, .	2.6	20
88	A Shared Vision for Management of Water Resources. Water International, 2000, 25, 1-2.	1.0	19
89	Engineering Procedure for the Climate Change Flood Risk Assessment in the Upper Thames River Basin. Journal of Hydrologic Engineering - ASCE, 2011, 16, 608-612.	1.9	19
90	Fuzzy multiobjective models for optimal operation of a hydropower system. Water Resources Research, 2013, 49, 3180-3193.	4.2	19

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91	ResilSIMâ€"A Decision Support Tool for Estimating Resilience of Urban Systems. Water (Switzerland), 2016, 8, 377.	2.7	19
92	Modeling joint restoration strategies for interdependent infrastructure systems. PLoS ONE, 2018, 13, e0195727.	2.5	19
93	Two New Non-structural Measures for Sustainable Management of Floods. Water International, 2002, 27, 38-46.	1.0	17
94	Participatory floodplain management in the Red River Basin, Canada. Annual Reviews in Control, 2006, 30, 183-192.	7.9	17
95	Simulation of historical temperatures using a multi-site, multivariate block resampling algorithm with perturbation. Hydrological Processes, 2014, 28, 905-912.	2.6	16
96	System Dynamics Approach for Assessing the Behaviour of the Lim Reservoir System (Serbia) under Changing Climate Conditions. Water (Switzerland), 2019, 11, 1620.	2.7	15
97	Systems Approach to Management of Water Resourcesâ€"Toward Performance Based Water Resources Engineering. Water (Switzerland), 2020, 12, 1208.	2.7	15
98	Practical sustainability criteria for decision-making. International Journal of Sustainable Development and World Ecology, 1997, 4, 231-244.	5.9	14
99	Extreme precipitation vulnerability in the Upper Thames River basin: uncertainty in climate model projections. International Journal of Climatology, 2011, 31, 2350-2364.	3.5	14
100	Flooding Related Consequences of Climate Change on Canadian Cities and Flow Regulation Infrastructure. Water (Switzerland), 2019, 11, 63.	2.7	14
101	Risk and Resilience: A Case of Perception versus Reality in Flood Management. Water (Switzerland), 2020, 12, 1254.	2.7	14
102	A computer-based system for modelling the stage-discharge relationships in steady state conditions. Hydrological Sciences Journal, 1994, 39, 487-506.	2.6	13
103	Wastewater Treatment Energy Recovery Potential For Adaptation To Global Change: An Integrated Assessment. Environmental Management, 2018, 61, 624-636.	2.7	13
104	Introducing Non-Stationarity Into the Development of Intensity-Duration-Frequency Curves under a Changing Climate. Water (Switzerland), 2021, 13, 1008.	2.7	13
105	System dynamics and hydrodynamic modelling approaches for spatial and temporal analysis of flood risk. International Journal of River Basin Management, 2015, 13, 443-461.	2.7	12
106	Are we modelling impacts of climatic change properly?. Hydrological Processes, 2006, 20, 431-433.	2.6	11
107	Synthesizing missing streamflow records on several Manitoba streams using multiple nonlinear standardized correlation analysis. Hydrological Sciences Journal, 1995, 40, 183-203.	2.6	10
108	An inverse-modelling approach to assess the impacts of climate change in the Seyhan River basin, Turkey / Une approche de modélisation inverse pour évaluer les impacts du changement climatique dans le bassin versant de la RiviÃ"re Seyhan, Turquie. Hydrological Sciences Journal, 2008, 53, 1121-1136.	2.6	10

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109	Future realities of climate change impacts: an integrated assessment study of Canada. International Journal of Global Warming, 2019, 17, 59.	0.5	10
110	The Role of Water Supply Development in the Earth System. Water (Switzerland), 2020, 12, 3349.	2.7	10
111	Parametric Vine Copula Framework in the Trivariate Probability Analysis of Compound Flooding Events. Water (Switzerland), 2022, 14, 2214.	2.7	10
112	Aggregation of Inputs from Stakeholders for Flood Management Decision-Making in the Red River Basin. Canadian Water Resources Journal, 2004, 29, 251-266.	1.2	9
113	Delineation of precipitation regions using location and atmospheric variables in two Canadian climate regions: the role of attribute selection. Hydrological Sciences Journal, 2017, 62, 191-204.	2.6	9
114	Development of a risk measure as a sustainable project selection criterion. International Journal of Sustainable Development and World Ecology, 1997, 4, 274-285.	5.9	8
115	System Dynamics Simulation Model for Flood Management of the Three Gorges Reservoir. Journal of Water Resources Planning and Management - ASCE, 2020, 146, .	2.6	8
116	A Deterministic Monte Carlo Simulation Framework for Dam Safety Flow Control Assessment. Water (Switzerland), 2020, 12, 505.	2.7	8
117	Fidelity of reanalysis datasets in floodplain mapping: Investigating performance at inundation level over large regions. Journal of Hydrology, 2021, 597, 125757.	5.4	8
118	Assessment of non-stationary IDF curves under a changing climate: Case study of different climatic zones in Canada. Journal of Hydrology: Regional Studies, 2021, 36, 100870.	2.4	8
119	Impacts of Changing Climatic Conditions in the Upper Thames River Basin. Canadian Water Resources Journal, 2007, 32, 265-284.	1.2	7
120	A flood risk assessment to municipal infrastructure due to changing climate part II: case study. Urban Water Journal, 2014, 11, 519-531.	2.1	7
121	A Combinatorial Procedure to Determine the Full Range of Potential Operating Scenarios for a Dam System. Water Resources Management, 2019, 33, 1451-1466.	3.9	7
122	Mixed General Extreme Value Distribution for Estimation of Future Precipitation Quantiles Using a Weighted Ensemble - Case Study of the Lim River Basin (Serbia). Water Resources Management, 2019, 33, 2885-2906.	3.9	7
123	Gridded Extreme Precipitation Intensity–Duration–Frequency Estimates for the Canadian Landmass. Journal of Hydrologic Engineering - ASCE, 2020, 25, 05020006.	1.9	7
124	Spatio-Temporal Heterogeneity of Climate Warming in the Chinese Tianshan Mountainous Region. Water (Switzerland), 2022, 14, 199.	2.7	7
125	Evaluation and application of Fuzzy Differential Evolution approach for benchmark optimization and reservoir operation problems. Journal of Hydroinformatics, 2013, 15, 1456-1473.	2.4	6
126	What are the main challenges facing the sustainable development of China's Yangtze economic belt in the future? An integrated view. Environmental Research Communications, 2021, 3, 115005.	2.3	6

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127	A knowledgeâ€based advisory system for single multipurpose reservoir management. International Journal of Water Resources Development, 1992, 8, 186-194.	2.0	5
128	Modeling Human Behavior for Evacuation Planning: A System Dynamics Approach., 2001,, 1.		5
129	Introduction to Physical Scaling. , 2019, , 199-273.		5
130	Application of the Systems Approach to the Management of Complex Water Systems. Water (Switzerland), 2020, 12, 2923.	2.7	4
131	Role of Cluster Validity Indices in Delineation of Precipitation Regions. Water (Switzerland), 2020, 12, 1372.	2.7	4
132	Performance and uncertainty analysis of a short-term climate reconstruction based on multi-source data in the Tianshan Mountains region, China. Journal of Arid Land, 2020, 12, 374-396.	2.3	4
133	Use of quantitative resilience in managing urban infrastructure response to natural hazards. International Journal of Safety and Security Engineering, 2019, 9, 13-25.	1.0	4
134	Comparison of the Theoretical Clausius–Clapeyron Scaling and <i>IDF_CC</i> Tool for Updating Intensity-Duration-Frequency Curves under Changing Climatic Conditions in Canada. Journal of Hydrologic Engineering - ASCE, 2018, 23, .	1.9	3
135	Identification of flood seasonality and drivers across Canada. Hydrological Processes, 2021, 35, e14398.	2.6	3
136	MODELLING OF FUTURE FLOOD RISK ACROSS CANADA DUE TO CLIMATE CHANGE. WIT Transactions on Engineering Sciences, 2018, , .	0.0	3
137	Systems approach and performance-based water resources management. Water International, 2021, 46, 1224-1235.	1.0	3
138	ANEMI_Yangtze v1.0: a coupled human–natural systems model for the Yangtze Economic Belt – model description. Geoscientific Model Development, 2022, 15, 4503-4528.	3.6	3
139	Simulation of the ice thickness of the Heilongjiang River and application of SD models to a river ice model. Hydrology Research, 2021, 52, 1261-1279.	2.7	2
140	OPTIMIZATION OF THE HYDROMETRIC NETWORK OPERATION BY A HEURISTIC TRAVELING SALESMAN ALGORITHM. Journal of the American Water Resources Association, 1988, 24, 1185-1192.	2.4	1
141	Red River Basin Canadian Flood Management Virtual Database. , 2000, , 1.		1
142	Delineation of precipitation regions in two Canadian study areas: the role of the temporal resolution of the precipitation data. Hydrological Sciences Journal, 2017, 62, 2061-2071.	2.6	1
143	Understanding the Uncertainty of the Lim River Basin Response to Changing Climate. Journal of Hydrologic Engineering - ASCE, 2020, 25, 05020023.	1.9	1
144	Global water dynamics: issues for the 21st century. Water Science and Technology, 2002, 45, 53-64.	2.5	1

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145	Systems Theory for the civil engineer Comparison of algorithms for hydropower optimization: Manitoba Hydro case study. Civil Engineering and Environmental Systems, 1991, 8, 3-8.	0.2	O
146	Engineering Risk Analysis of Water Pollution: Probabilities and Fuzzy Sets. Eos, 1996, 77, 266.	0.1	0
147	Response to Tanaka et al. Comment. Water International, 2004, 29, 404-405.	1.0	O
148	Sixth International Conference on Flood Management (ICFM6): Floods in a changing environment, part 2. Journal of Flood Risk Management, 2016, 9, 309-309.	3.3	0
149	Sixth International Conference on Flood Management (ICFM6): Floods in a changing environment, part 1. Journal of Flood Risk Management, 2016, 9, 195-195.	3.3	O
150	IWRA 50th anniversary interview. Water International, 2021, 46, 299-302.	1.0	O
151	Sustainable floodplain management and participatory planning in the red river basin, canada. , 2007, , $175-188$.		O
152	Multi-objective Analysis., 2012,, 527-614.		0