Vazken AndrÃ©assian

List of Publications by Year
in descending order

113 papers	11,788 citations	47006 47 h-index	29157 104 g-index
147 all docs	147 docs citations	147 times ranked	8571 citing authors

#	Article	IF	Citations
1	Characterising performance of environmental models. Environmental Modelling and Software, 2013, 40, 1-20.	4.5	1,141
2	Improvement of a parsimonious model for streamflow simulation. Journal of Hydrology, 2003, 279, 275-289.	5.4	1,041
3	Which potential evapotranspiration input for a lumped rainfallâ€"runoff model?. Journal of Hydrology, 2005, 303, 290-306.	5.4	740
4	Waters and forests: from historical controversy to scientific debate. Journal of Hydrology, 2004, 291, 1-27.	5.4	703
5	Model Parameter Estimation Experiment (MOPEX): An overview of science strategy and major results from the second and third workshops. Journal of Hydrology, 2006, 320, 3-17.	5.4	537
6	Does a large number of parameters enhance model performance? Comparative assessment of common catchment model structures on 429 catchments. Journal of Hydrology, 2001, 242, 275-301.	5.4	478
7	Twenty-three unsolved problems in hydrology (UPH) â€" a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	2.6	474
8	Spatial proximity, physical similarity, regression and ungaged catchments: A comparison of regionalization approaches based on 913 French catchments. Water Resources Research, 2008, 44, .	4.2	396
9	Crash testing hydrological models in contrasted climate conditions: An experiment on 216 Australian catchments. Water Resources Research, 2012, 48, .	4.2	307
10	A review of efficiency criteria suitable for evaluating low-flow simulations. Journal of Hydrology, 2012, 420-421, 171-182.	5.4	234
11	Impact of imperfect rainfall knowledge on the efficiency and the parameters of watershed models. Journal of Hydrology, 2001, 250, 206-223.	5.4	229
12	Are seemingly physically similar catchments truly hydrologically similar?. Water Resources Research, 2010, 46, .	4.2	220
13	Large-sample hydrology: a need to balance depth with breadth. Hydrology and Earth System Sciences, 2014, 18, 463-477.	4.9	208
14	Soil Conservation Service Curve Number method: How to mend a wrong soil moisture accounting procedure?. Water Resources Research, 2005, 41, .	4.2	181
15	Dynamic averaging of rainfall-runoff model simulations from complementary model parameterizations. Water Resources Research, 2006, 42, .	4.2	171
16	How crucial is it to account for the antecedent moisture conditions in flood forecasting? Comparison of event-based and continuous approaches on 178 catchments. Hydrology and Earth System Sciences, 2009, 13, 819-831.	4.9	165
17	Stepwise development of a two-parameter monthly water balance model. Journal of Hydrology, 2006, 318, 200-214.	5.4	160
18	The hydrological impact of the mediterranean forest: a review of French research. Journal of Hydrology, 2005, 301, 235-249.	5.4	156

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19	Impact of biased and randomly corrupted inputs on the efficiency and the parameters of watershed models. Journal of Hydrology, 2006, 320, 62-83.	5.4	154
20	The suite of lumped GR hydrological models in an R package. Environmental Modelling and Software, 2017, 94, 166-171.	4.5	153
21	When does higher spatial resolution rainfall information improve streamflow simulation? An evaluation using 3620 flood events. Hydrology and Earth System Sciences, 2014, 18, 575-594.	4.9	152
22	â€˜As simple as possible but not simplerâ€™: What is useful in a temperature-based snow-accounting routine? Part 2 â€“ Sensitivity analysis of the Cemaneige snow accounting routine on 380 catchments. Journal of Hydrology, 2014, 517, 1176-1187.	5.4	146
23	Impact of limited streamflow data on the efficiency and the parameters of rainfallâ€"runoff models. Hydrological Sciences Journal, 2007, 52, 131-151.	2.6	145
24	Has land cover a significant impact on mean annual streamflow? An international assessment using 1508 catchments. Journal of Hydrology, 2008, 357, 303-316.	5.4	145
25	Impact of the length of observed records on the performance of ANN and of conceptual parsimonious rainfall-runoff forecasting models. Environmental Modelling and Software, 2004, 19, 357-368.	4.5	141
26	A downward structural sensitivity analysis of hydrological models to improve low-flow simulation. Journal of Hydrology, 2011, 411, 66-76.	5.4	138
27	HESS Opinions "Crash tests for a standardized evaluation of hydrological models". Hydrology and Earth System Sciences, 2009, 13, 1757-1764.	4.9	124
28	A soil moisture index as an auxiliary ANN input for stream flow forecasting. Journal of Hydrology, 2004, 286, 155-167.	5.4	117
29	Impact of imperfect potential evapotranspiration knowledge on the efficiency and parameters of watershed models. Journal of Hydrology, 2004, 286, 19-35.	5.4	112
30	How can rainfall-runoff models handle intercatchment groundwater flows? Theoretical study based on 1040 French catchments. Water Resources Research, 2007, 43, .	4.2	109
31	Hydrology under change: an evaluation protocol to investigate how hydrological models deal with changing catchments. Hydrological Sciences Journal, 2015, 60, 1184-1199.	2.6	105
32	A framework for testing the ability of models to project climate change and its impacts. Climatic Change, 2014, 122, 271-282.	3.6	104
33	Accelerating advances in continental domain hydrologic modeling. Water Resources Research, 2015, 51, 10078-10091.	4.2	102
34	Results of the DMIP 2 Oklahoma experiments. Journal of Hydrology, 2012, 418-419, 17-48.	5.4	97
35	Benchmarking hydrological models for low-flow simulation and forecasting on French catchments. Hydrology and Earth System Sciences, 2014, 18, 2829-2857.	4.9	88
36	All that glitters is not gold: the case of calibrating hydrological models. Hydrological Processes, 2012, 26, 2206-2210.	2.6	84

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37	On the need to test hydrological models under changing conditions. Hydrological Sciences Journal, 2015, 60, 1165-1173.	2.6	75
38	â€˜As simple as possible but not simplerâ€™: What is useful in a temperature-based snow-accounting routine? Part 1 â€“ Comparison of six snow accounting routines on 380 catchments. Journal of Hydrology, 2014, 517, 1166-1175.	5.4	74
39	On the lack of robustness of hydrologic models regarding water balance simulation: a diagnostic approach applied to three models of increasing complexity on 20 mountainous catchments. Hydrology and Earth System Sciences, 2014, 18, 727-746.	4.9	73
40	Confronting surfaceâ€•and groundwater balances on the La Rochefoucauldâ€•Touvre karstic system (Charente, France). Water Resources Research, 2008, 44, .	4.2	67
41	Impact of temporal resolution of inputs on hydrological model performance: An analysis based on 2400 flood events. Journal of Hydrology, 2016, 538, 454-470.	5.4	65
42	Improvement of rainfall-runoff forecasts through mean areal rainfall optimization. Journal of Hydrology, 2006, 328, 717-725.	5.4	64
43	Regionalization of precipitation and air temperature over high-altitude catchments â€“ learning from outliers. Hydrological Sciences Journal, 2010, 55, 928-940.	2.6	59
44	A distribution-free test to detect gradual changes in watershed behavior. Water Resources Research, 2003, 39, .	4.2	57
45	What is really undermining hydrologic science today?. Hydrological Processes, 2007, 21, 2819-2822.	2.6	56
46	Impact of spatial aggregation of inputs and parameters on the efficiency of rainfall-runoff models: A theoretical study using chimera watersheds. Water Resources Research, 2004, 40, .	4.2	54
47	Discrete parameterization of hydrological models: Evaluating the use of parameter sets libraries over 900 catchments. Water Resources Research, 2008, 44, .	4.2	54
48	Do internal flow measurements improve the calibration of rainfallâ€•runoff models?. Water Resources Research, 2012, 48, .	4.2	50
49	The Court of Miracles of Hydrology: can failure stories contribute to hydrological science?. Hydrological Sciences Journal, 2010, 55, 849-856.	2.6	48
50	Comparing expert judgement and numerical criteria for hydrograph evaluation. Hydrological Sciences Journal, 2015, 60, 402-423.	2.6	46
51	Neighbors: Natureâ€™s own hydrological models. Journal of Hydrology, 2012, 414-415, 49-58.	5.4	45
52	The exponential store: a correct formulation for rainfallâ€"runoff modelling. Hydrological Sciences Journal, 2003, 48, 109-124.	2.6	43
53	Investigating the interactions between data assimilation and post-processing in hydrological ensemble forecasting. Journal of Hydrology, 2014, 519, 2775-2784.	5.4	42
54	Linking stream flow to rainfall at the annual time step: The Manabe bucket model revisited. Journal of Hydrology, 2006, 328, 283-296.	5.4	38

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55	The distributed model intercomparison project â€“ Phase 2: Experiment design and summary results of the western basin experiments. Journal of Hydrology, 2013, 507, 300-329.	5.4	38
56	Climate elasticity of streamflow revisited â€“ an elasticity index based on long-term hydrometeorological records. Hydrology and Earth System Sciences, 2016, 20, 4503-4524.	4.9	38
57	ANN OUTPUT UPDATING OF LUMPED CONCEPTUAL RAINFALL/RUNOFF FORECASTING MODELS. Journal of the American Water Resources Association, 2003, 39, 1269-1279.	2.4	36
58	Processâ€based interpretation of conceptual hydrological model performance using a multinational catchment set. Water Resources Research, 2017, 53, 7247-7268.	4.2	36
59	On the ambiguous interpretation of the Turcâ€Budyko nondimensional graph. Water Resources Research, 2012, 48, .	4.2	33
60	Locating the sources of low-pass behavior within rainfall-runoff models. Water Resources Research, 2004, 40, .	4.2	32
61	Assessing the performance and robustness of two conceptual rainfall-runoff models on a worldwide sample of watersheds. Journal of Hydrology, 2020, 585, 124698.	5.4	31
62	How should a rainfallâ€runoff model be parameterized in an almost ungauged catchment? A methodology tested on 609 catchments. Water Resources Research, 2016, 52, 4765-4784.	4.2	30
63	On evaluating the robustness of spatial-proximity-based regionalization methods. Journal of Hydrology, 2016, 539, 196-203.	5.4	30
64	Hydrological modelling at multiple sub-daily time steps: Model improvement via flux-matching. Journal of Hydrology, 2019, 575, 1308-1327.	5.4	30
65	Towards robust methods to couple lumped rainfallâ€“runoff models and hydraulic models: A sensitivity analysis on the Illinois River. Journal of Hydrology, 2012, 418-419, 123-135.	5.4	29
66	Transferring global uncertainty estimates from gauged to ungauged catchments. Hydrology and Earth System Sciences, 2015, 19, 2535-2546.	4.9	28
67	Hydrograph separation: an impartial parametrisation for an imperfect method. Hydrology and Earth System Sciences, 2020, 24, 1171-1187.	4.9	28
68	The model parameter estimation experiment (MOPEX). Journal of Hydrology, 2006, 320, 1-2.	5.4	27
69	Hydrological ensemble forecasting at ungauged basins: using neighbour catchments for model setup and updating. Advances in Geosciences, 0, 29, 1-11.	12.0	27
70	The Budyko hypothesis before Budyko: The hydrological legacy of Evald Oldekop. Journal of Hydrology, 2016, 535, 386-391.	5.4	27
71	On regionalizing the Turcâ€Mezentsev water balance formula. Water Resources Research, 2013, 49, 7508-7517.	4.2	24
72	What kind of water models are needed for the implementation of the European water framework directive? Examples from France. International Journal of River Basin Management, 2003, 1, 125-135.	2.7	23

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73	Hydrological impact of forest-fire from paired-catchment and rainfallâ€"runoff modelling perspectives. Hydrological Sciences Journal, 2015, 60, 1213-1224.	2.6	23
74	A Regularization Approach to Improve the Sequential Calibration of a Semidistributed Hydrological Model. Water Resources Research, 2019, 55, 8821-8839.	4.2	23
75	Streamflow naturalization methods: a review. Hydrological Sciences Journal, 2021, 66, 12-36.	2.6	23
76	Seeking genericity in the selection of parameter sets: Impact on hydrological model efficiency. Water Resources Research, 2014, 50, 8356-8366.	4.2	22
77	Comparison of two snowmelt modelling approaches in the Dudh Koshi basin (eastern Himalayas,) Tj ETQq1 1 0.784314 rgBT /Overloc	2.6	21
78	Impact of climate seasonality on catchment yield: A parameterization for commonly-used water balance formulas. Journal of Hydrology, 2018, 558, 266-274.	5.4	21
79	How can manâ€made water reservoirs be accounted for in a lumped rainfallâ€runoff model?. Water Resources Research, 2008, 44, .	4.2	19
80	Spatial variability of the parameters of a semi-distributed hydrological model. Proceedings of the International Association of Hydrological Sciences, 0, 373, 87-94.	1.0	18
81	Spatial and temporal variability of Total Suspended Solids in the Seine basin. Hydrobiologia, 1999, 410, 295-306.	2.0	17
82	How significant are quadratic criteria? Part 2. On the relative contribution of large flood events to the value of a quadratic criterion. Hydrological Sciences Journal, 2010, 55, 1063-1073.	2.6	17
83	Inundation mapping based on reach-scale effective geometry. Hydrology and Earth System Sciences, 2018, 22, 5967-5985.	4.9	15
84	Technical Note: On the puzzling similarity of two water balance formulas â€" Turcâ€"Mezentsev vs.ÂTixerontâ€"Fu. Hydrology and Earth System Sciences, 2019, 23, 2339-2350.	4.9	15
85	Dependence of model-based extreme flood estimation on the calibration period: case study of the Kamp River (Austria). Hydrological Sciences Journal, 2015, 60, 1424-1437.	2.6	14
86	A combined mixing model for high-frequency concentrationâ€"discharge relationships. Journal of Hydrology, 2020, 591, 125559.	5.4	13
87	Graphical tools based on Turc-Budyko plots to detect changes in catchment behaviour. Hydrological Sciences Journal, 2015, 60, 1394-1407.	2.6	12
88	Technical note: A two-sided affine power scaling relationship to represent the concentrationâ€"discharge relationship. Hydrology and Earth System Sciences, 2020, 24, 1823-1830.	4.9	11
89	Data-set cleansing practices and hydrological regionalization: is there any valuable information among outliers?. Hydrological Sciences Journal, 2010, 55, 941-951.	2.6	9
90	Quantifying multi-year hydrological memory with Catchment Forgetting Curves. Hydrology and Earth System Sciences, 2022, 26, 2715-2732.	4.9	9

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91	Should Bouchet's hypothesis be taken into account in rainfall-runoff modelling? An assessment over 308 catchments. Hydrological Processes, 2005, 19, 4093-4106.	2.6	8
92	Investigating hydrological model versatility to simulate extreme flood events. Hydrological Sciences Journal, 2022, 67, 628-645.	2.6	6
93	The Quantile Solidarity approach for the parsimonious regionalization of flow duration curves. Hydrological Sciences Journal, 2017, 62, 1364-1380.	2.6	5
94	When does a parsimonious model fail to simulate floods? Learning from the seasonality of model bias. Hydrological Sciences Journal, 2021, 66, 1288-1305.	2.6	5
95	Que sait-on des prÃ©cipitations en altitude dans les Andes semi-arides du ChiliÂ?. Houille Blanche, 2012, 98, 12-17.	0.3	5
96	Mieux prÃ©voir les crues nivalesÂ: Ã©valuation de prÃ©visions probabilistes de dÃ©bit sur des bassins versants de montagne franÃ§ais. Houille Blanche, 2012, 98, 26-33.	0.3	5
97	Simple benchmark models as a basis for model efficiency criteria. River Systems, 2006, 17, 221-244.	0.2	5
98	How significant are quadratic criteria? Part 1. How many years are necessary to ensure the data-independence of a quadratic criterion value?. Hydrological Sciences Journal, 2010, 55, 1051-1062.	2.6	4
99	Blending neighbor-based and climate-based information to obtain robust low-flow estimates from short time series. Water Resources Research, 2013, 49, 8017-8025.	4.2	4
100	Technical note: RAT â€“ a robustness assessment test for calibrated and uncalibrated hydrological models. Hydrology and Earth System Sciences, 2021, 25, 5013-5027.	4.9	4
101	Prise en compte de barrages-rÃ©servoirs dans un modÃ¨le pluie-dÃ©bit globalÂ: application au cas du bassin de la Seine amont. Houille Blanche, 2005, 91, 79-88.	0.3	4
102	Preface: HS02 â€“ Hydrologic Non-Stationarity and Extrapolating Models to Predict the Future. Proceedings of the International Association of Hydrological Sciences, 0, 371, 1-2.	1.0	4
103	Technical note: PMR â€“ a proxy metric to assess hydrological model robustness in a changing climate. Hydrology and Earth System Sciences, 2021, 25, 5703-5716.	4.9	4
104	Synergies entre acteurs opÃ©rationnels et scientifiques au service de l'amÃ©lioration de la prÃ©vision des crues. Houille Blanche, 2016, 102, 5-10.	0.3	3
105	Une cartographie de l'Ã©coulement des riviÃ¨res de Corse. Houille Blanche, 2019, 105, 68-77.	0.3	3
106	On constraining a lumped hydrological model with both piezometry and streamflow: results of a large sample evaluation. Hydrology and Earth System Sciences, 2022, 26, 2733-2758.	4.9	3
107	The hunting of the hydrological snark. Hydrological Processes, 2009, 23, 651-654.	2.6	2
108	Analyse de la sensibilitÃ© des calculs hydrologiques Ã la densitÃ© spatiale des rÃ©seaux hydromÃ©triques. Houille Blanche, 2014, 100, 39-44.	0.3	2

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109	Multiâ€objective fitting of concentrationâ€discharge relationships. Hydrological Processes, 2021, 35, .	2.6	2
110	Les modÃ¨les de prÃ©vision opÃ©rationnels dâ€™aujourdâ€™hui auraient-ils Ã©tÃ© fiables sur la crue de 1910 ? Analyse rÃ©trospective critique sur une base de donnÃ©es de 1910. Houille Blanche, 2011, 97, 22-29.	0.3	1
111	What part of natural flow can be considered a "water resource"?. Proceedings of the International Association of Hydrological Sciences, 0, 366, 86-92.	1.0	1
112	CaractÃ©risation de la mÃ©moire des bassins versants par approche croisÃ©e entre piÃ©zomÃ©trie et sÃ©paration d'hydrogramme. Houille Blanche, 2020, 106, 30-37.	0.3	1
113	Ã‰lasticitÃ© des dÃ©bits aux prÃ©cipitations en Afrique sub-saharienne. Houille Blanche, 2020, 106, 97-104.	0.3	0