

# Vazken AndrÃ©assian

## List of Publications by Year in descending order

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113  
papers

11,788  
citations

46918

47  
h-index

29081

104  
g-index

147  
all docs

147  
docs citations

147  
times ranked

8571  
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterising performance of environmental models. <i>Environmental Modelling and Software</i> , 2013, 40, 1-20.	1.9	1,141
2	Improvement of a parsimonious model for streamflow simulation. <i>Journal of Hydrology</i> , 2003, 279, 275-289.	2.3	1,041
3	Which potential evapotranspiration input for a lumped rainfall-runoff model?. <i>Journal of Hydrology</i> , 2005, 303, 290-306.	2.3	740
4	Waters and forests: from historical controversy to scientific debate. <i>Journal of Hydrology</i> , 2004, 291, 1-27.	2.3	703
5	Model Parameter Estimation Experiment (MOPEX): An overview of science strategy and major results from the second and third workshops. <i>Journal of Hydrology</i> , 2006, 320, 3-17.	2.3	537
6	Does a large number of parameters enhance model performance? Comparative assessment of common catchment model structures on 429 catchments. <i>Journal of Hydrology</i> , 2001, 242, 275-301.	2.3	478
7	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019, 64, 1141-1158.	1.2	474
8	Spatial proximity, physical similarity, regression and ungaged catchments: A comparison of regionalization approaches based on 913 French catchments. <i>Water Resources Research</i> , 2008, 44, .	1.7	396
9	Crash testing hydrological models in contrasted climate conditions: An experiment on 216 Australian catchments. <i>Water Resources Research</i> , 2012, 48, .	1.7	307
10	A review of efficiency criteria suitable for evaluating low-flow simulations. <i>Journal of Hydrology</i> , 2012, 420-421, 171-182.	2.3	234
11	Impact of imperfect rainfall knowledge on the efficiency and the parameters of watershed models. <i>Journal of Hydrology</i> , 2001, 250, 206-223.	2.3	229
12	Are seemingly physically similar catchments truly hydrologically similar?. <i>Water Resources Research</i> , 2010, 46, .	1.7	220
13	Large-sample hydrology: a need to balance depth with breadth. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 463-477.	1.9	208
14	Soil Conservation Service Curve Number method: How to mend a wrong soil moisture accounting procedure?. <i>Water Resources Research</i> , 2005, 41, .	1.7	181
15	Dynamic averaging of rainfall-runoff model simulations from complementary model parameterizations. <i>Water Resources Research</i> , 2006, 42, .	1.7	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. <i>Hydrology and Earth System Sciences</i> , 2009, 13, 819-831.	1.9	165
17	Stepwise development of a two-parameter monthly water balance model. <i>Journal of Hydrology</i> , 2006, 318, 200-214.	2.3	160
18	The hydrological impact of the mediterranean forest: a review of French research. <i>Journal of Hydrology</i> , 2005, 301, 235-249.	2.3	156

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19	Impact of biased and randomly corrupted inputs on the efficiency and the parameters of watershed models. <i>Journal of Hydrology</i> , 2006, 320, 62-83.	2.3	154
20	The suite of lumped GR hydrological models in an R package. <i>Environmental Modelling and Software</i> , 2017, 94, 166-171.	1.9	153
21	When does higher spatial resolution rainfall information improve streamflow simulation? An evaluation using 3620 flood events. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 575-594.	1.9	152
22	“As simple as possible but not simpler”: What is useful in a temperature-based snow-accounting routine? Part 2 “ Sensitivity analysis of the Cemaneige snow accounting routine on 380 catchments. <i>Journal of Hydrology</i> , 2014, 517, 1176-1187.	2.3	146
23	Impact of limited streamflow data on the efficiency and the parameters of rainfall-runoff models. <i>Hydrological Sciences Journal</i> , 2007, 52, 131-151.	1.2	145
24	Has land cover a significant impact on mean annual streamflow? An international assessment using 1508 catchments. <i>Journal of Hydrology</i> , 2008, 357, 303-316.	2.3	145
25	Impact of the length of observed records on the performance of ANN and of conceptual parsimonious rainfall-runoff forecasting models. <i>Environmental Modelling and Software</i> , 2004, 19, 357-368.	1.9	141
26	A downward structural sensitivity analysis of hydrological models to improve low-flow simulation. <i>Journal of Hydrology</i> , 2011, 411, 66-76.	2.3	138
27	HESS Opinions &quot;Crash tests for a standardized evaluation of hydrological models&quot;. <i>Hydrology and Earth System Sciences</i> , 2009, 13, 1757-1764.	1.9	124
28	A soil moisture index as an auxiliary ANN input for stream flow forecasting. <i>Journal of Hydrology</i> , 2004, 286, 155-167.	2.3	117
29	Impact of imperfect potential evapotranspiration knowledge on the efficiency and parameters of watershed models. <i>Journal of Hydrology</i> , 2004, 286, 19-35.	2.3	112
30	How can rainfall-runoff models handle intercatchment groundwater flows? Theoretical study based on 1040 French catchments. <i>Water Resources Research</i> , 2007, 43, .	1.7	109
31	Hydrology under change: an evaluation protocol to investigate how hydrological models deal with changing catchments. <i>Hydrological Sciences Journal</i> , 2015, 60, 1184-1199.	1.2	105
32	A framework for testing the ability of models to project climate change and its impacts. <i>Climatic Change</i> , 2014, 122, 271-282.	1.7	104
33	Accelerating advances in continental domain hydrologic modeling. <i>Water Resources Research</i> , 2015, 51, 10078-10091.	1.7	102
34	Results of the DMIP 2 Oklahoma experiments. <i>Journal of Hydrology</i> , 2012, 418-419, 17-48.	2.3	97
35	Benchmarking hydrological models for low-flow simulation and forecasting on French catchments. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 2829-2857.	1.9	88
36	All that glitters is not gold: the case of calibrating hydrological models. <i>Hydrological Processes</i> , 2012, 26, 2206-2210.	1.1	84

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37	On the need to test hydrological models under changing conditions. <i>Hydrological Sciences Journal</i> , 2015, 60, 1165-1173.	1.2	75
38	“As simple as possible but not simpler”: What is useful in a temperature-based snow-accounting routine? Part 1 – Comparison of six snow accounting routines on 380 catchments. <i>Journal of Hydrology</i> , 2014, 517, 1166-1175.	2.3	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. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 727-746.	1.9	73
40	Confronting surface and groundwater balances on the La Rochefoucauld-Touvre karstic system (Charente, France). <i>Water Resources Research</i> , 2008, 44, .	1.7	67
41	Impact of temporal resolution of inputs on hydrological model performance: An analysis based on 2400 flood events. <i>Journal of Hydrology</i> , 2016, 538, 454-470.	2.3	65
42	Improvement of rainfall-runoff forecasts through mean areal rainfall optimization. <i>Journal of Hydrology</i> , 2006, 328, 717-725.	2.3	64
43	Regionalization of precipitation and air temperature over high-altitude catchments – learning from outliers. <i>Hydrological Sciences Journal</i> , 2010, 55, 928-940.	1.2	59
44	A distribution-free test to detect gradual changes in watershed behavior. <i>Water Resources Research</i> , 2003, 39, .	1.7	57
45	What is really undermining hydrologic science today?. <i>Hydrological Processes</i> , 2007, 21, 2819-2822.	1.1	56
46	Impact of spatial aggregation of inputs and parameters on the efficiency of rainfall-runoff models: A theoretical study using chimera watersheds. <i>Water Resources Research</i> , 2004, 40, .	1.7	54
47	Discrete parameterization of hydrological models: Evaluating the use of parameter sets libraries over 900 catchments. <i>Water Resources Research</i> , 2008, 44, .	1.7	54
48	Do internal flow measurements improve the calibration of rainfall-runoff models?. <i>Water Resources Research</i> , 2012, 48, .	1.7	50
49	The Court of Miracles of Hydrology: can failure stories contribute to hydrological science?. <i>Hydrological Sciences Journal</i> , 2010, 55, 849-856.	1.2	48
50	Comparing expert judgement and numerical criteria for hydrograph evaluation. <i>Hydrological Sciences Journal</i> , 2015, 60, 402-423.	1.2	46
51	Neighbors: Nature’s own hydrological models. <i>Journal of Hydrology</i> , 2012, 414-415, 49-58.	2.3	45
52	The exponential store: a correct formulation for rainfall-runoff modelling. <i>Hydrological Sciences Journal</i> , 2003, 48, 109-124.	1.2	43
53	Investigating the interactions between data assimilation and post-processing in hydrological ensemble forecasting. <i>Journal of Hydrology</i> , 2014, 519, 2775-2784.	2.3	42
54	Linking stream flow to rainfall at the annual time step: The Manabe bucket model revisited. <i>Journal of Hydrology</i> , 2006, 328, 283-296.	2.3	38

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55	The distributed model intercomparison project â€“ Phase 2: Experiment design and summary results of the western basin experiments. <i>Journal of Hydrology</i> , 2013, 507, 300-329.	2.3	38
56	Climate elasticity of streamflow revisited â€“ an elasticity index based on long-term hydrometeorological records. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 4503-4524.	1.9	38
57	ANN OUTPUT UPDATING OF LUMPED CONCEPTUAL RAINFALL/RUNOFF FORECASTING MODELS. <i>Journal of the American Water Resources Association</i> , 2003, 39, 1269-1279.	1.0	36
58	Processâ€based interpretation of conceptual hydrological model performance using a multinational catchment set. <i>Water Resources Research</i> , 2017, 53, 7247-7268.	1.7	36
59	On the ambiguous interpretation of the Turcâ€Budyko nondimensional graph. <i>Water Resources Research</i> , 2012, 48, .	1.7	33
60	Locating the sources of low-pass behavior within rainfall-runoff models. <i>Water Resources Research</i> , 2004, 40, .	1.7	32
61	Assessing the performance and robustness of two conceptual rainfall-runoff models on a worldwide sample of watersheds. <i>Journal of Hydrology</i> , 2020, 585, 124698.	2.3	31
62	How should a rainfallâ€runoff model be parameterized in an almost ungauged catchment? A methodology tested on 609 catchments. <i>Water Resources Research</i> , 2016, 52, 4765-4784.	1.7	30
63	On evaluating the robustness of spatial-proximity-based regionalization methods. <i>Journal of Hydrology</i> , 2016, 539, 196-203.	2.3	30
64	Hydrological modelling at multiple sub-daily time steps: Model improvement via flux-matching. <i>Journal of Hydrology</i> , 2019, 575, 1308-1327.	2.3	30
65	Towards robust methods to couple lumped rainfallâ€runoff models and hydraulic models: A sensitivity analysis on the Illinois River. <i>Journal of Hydrology</i> , 2012, 418-419, 123-135.	2.3	29
66	Transferring global uncertainty estimates from gauged to ungauged catchments. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 2535-2546.	1.9	28
67	Hydrograph separation: an impartial parametrisation for an imperfect method. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 1171-1187.	1.9	28
68	The model parameter estimation experiment (MOPEX). <i>Journal of Hydrology</i> , 2006, 320, 1-2.	2.3	27
69	Hydrological ensemble forecasting at ungauged basins: using neighbour catchments for model setup and updating. <i>Advances in Geosciences</i> , 0, 29, 1-11.	12.0	27
70	The Budyko hypothesis before Budyko: The hydrological legacy of Evald Oldekop. <i>Journal of Hydrology</i> , 2016, 535, 386-391.	2.3	27
71	On regionalizing the Turcâ€Mezentsev water balance formula. <i>Water Resources Research</i> , 2013, 49, 7508-7517.	1.7	24
72	What kind of water models are needed for the implementation of the European water framework directive? Examples from France. <i>International Journal of River Basin Management</i> , 2003, 1, 125-135.	1.5	23

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73	Hydrological impact of forest-fire from paired-catchment and rainfall-runoff modelling perspectives. <i>Hydrological Sciences Journal</i> , 2015, 60, 1213-1224.	1.2	23
74	A Regularization Approach to Improve the Sequential Calibration of a Semidistributed Hydrological Model. <i>Water Resources Research</i> , 2019, 55, 8821-8839.	1.7	23
75	Streamflow naturalization methods: a review. <i>Hydrological Sciences Journal</i> , 2021, 66, 12-36.	1.2	23
76	Seeking genericity in the selection of parameter sets: Impact on hydrological model efficiency. <i>Water Resources Research</i> , 2014, 50, 8356-8366.	1.7	22
77	Comparison of two snowmelt modelling approaches in the Dudh Koshi basin (eastern Himalayas). <i>Tj ETQq1 1 0.784314 rgBT JOverlods</i>	1.2	21
78	Impact of climate seasonality on catchment yield: A parameterization for commonly-used water balance formulas. <i>Journal of Hydrology</i> , 2018, 558, 266-274.	2.3	21
79	How can man-made water reservoirs be accounted for in a lumped rainfall-runoff model?. <i>Water Resources Research</i> , 2008, 44, .	1.7	19
80	Spatial variability of the parameters of a semi-distributed hydrological model. <i>Proceedings of the International Association of Hydrological Sciences</i> , 0, 373, 87-94.	1.0	18
81	Spatial and temporal variability of Total Suspended Solids in the Seine basin. <i>Hydrobiologia</i> , 1999, 410, 295-306.	1.0	17
82	How significant are quadratic criteria? Part 2. On the relative contribution of large flood events to the value of a quadratic criterion. <i>Hydrological Sciences Journal</i> , 2010, 55, 1063-1073.	1.2	17
83	Inundation mapping based on reach-scale effective geometry. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5967-5985.	1.9	15
84	Technical Note: On the puzzling similarity of two water balance formulas – Turc – Mezentsev vs. Tixeront – Fu. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 2339-2350.	1.9	15
85	Dependence of model-based extreme flood estimation on the calibration period: case study of the Kamp River (Austria). <i>Hydrological Sciences Journal</i> , 2015, 60, 1424-1437.	1.2	14
86	A combined mixing model for high-frequency concentration-discharge relationships. <i>Journal of Hydrology</i> , 2020, 591, 125559.	2.3	13
87	Graphical tools based on Turc-Budyko plots to detect changes in catchment behaviour. <i>Hydrological Sciences Journal</i> , 2015, 60, 1394-1407.	1.2	12
88	Technical note: A two-sided affine power scaling relationship to represent the concentration-discharge relationship. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 1823-1830.	1.9	11
89	Data-set cleansing practices and hydrological regionalization: is there any valuable information among outliers?. <i>Hydrological Sciences Journal</i> , 2010, 55, 941-951.	1.2	9
90	Quantifying multi-year hydrological memory with Catchment Forgetting Curves. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 2715-2732.	1.9	9

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91	Should Bouchet's hypothesis be taken into account in rainfall-runoff modelling? An assessment over 308 catchments. <i>Hydrological Processes</i> , 2005, 19, 4093-4106.	1.1	8
92	Investigating hydrological model versatility to simulate extreme flood events. <i>Hydrological Sciences Journal</i> , 2022, 67, 628-645.	1.2	6
93	The Quantile Solidarity approach for the parsimonious regionalization of flow duration curves. <i>Hydrological Sciences Journal</i> , 2017, 62, 1364-1380.	1.2	5
94	When does a parsimonious model fail to simulate floods? Learning from the seasonality of model bias. <i>Hydrological Sciences Journal</i> , 2021, 66, 1288-1305.	1.2	5
95	Que sait-on des précipitations en altitude dans les Andes semi-arides du Chili? <i>Houille Blanche</i> , 2012, 98, 12-17.	0.3	5
96	Mieux prévoir les crues nivales: Évaluation de prévisions probabilistes de débit sur des bassins versants de montagne français. <i>Houille Blanche</i> , 2012, 98, 26-33.	0.3	5
97	Simple benchmark models as a basis for model efficiency criteria. <i>River Systems</i> , 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?. <i>Hydrological Sciences Journal</i> , 2010, 55, 1051-1062.	1.2	4
99	Blending neighbor-based and climate-based information to obtain robust low-flow estimates from short time series. <i>Water Resources Research</i> , 2013, 49, 8017-8025.	1.7	4
100	Technical note: RAT " a robustness assessment test for calibrated and uncalibrated hydrological models. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 5013-5027.	1.9	4
101	Prise en compte de barrages-réservoirs dans un modèle pluie-débit global: application au cas du bassin de la Seine amont. <i>Houille Blanche</i> , 2005, 91, 79-88.	0.3	4
102	Preface: HS02 " Hydrologic Non-Stationarity and Extrapolating Models to Predict the Future. <i>Proceedings of the International Association of Hydrological Sciences</i> , 0, 371, 1-2.	1.0	4
103	Technical note: PMR " a proxy metric to assess hydrological model robustness in a changing climate. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 5703-5716.	1.9	4
104	Synergies entre acteurs opérationnels et scientifiques au service de l'amélioration de la prévision des crues. <i>Houille Blanche</i> , 2016, 102, 5-10.	0.3	3
105	Une cartographie de l'écoulement des rivières de Corse. <i>Houille Blanche</i> , 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. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 2733-2758.	1.9	3
107	The hunting of the hydrological snark. <i>Hydrological Processes</i> , 2009, 23, 651-654.	1.1	2
108	Analyse de la sensibilité des calculs hydrologiques à la densité spatiale des réseaux hydrométriques. <i>Houille Blanche</i> , 2014, 100, 39-44.	0.3	2

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109	Multi-objective fitting of concentration-discharge relationships. Hydrological Processes, 2021, 35, .	1.1	2
110	Les modèles de prévision opérationnels d'aujourd'hui auraient-ils été fiables sur la crue de 1910 ? Analyse rétrospective critique sur une base de données 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	Caractérisation de la mémoire des bassins versants par approche croisée entre piézométrie et comparaison d'hydrogramme. Houille Blanche, 2020, 106, 30-37.	0.3	1
113	Élasticité des débits aux précipitations en Afrique sub-saharienne. Houille Blanche, 2020, 106, 97-104.	0.3	0