

Rafael Luis Bras

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

3,595
citations

136885

32
h-index

133188

59
g-index

72
all docs

72
docs citations

72
times ranked

4122
citing authors

#	ARTICLE	IF	CITATIONS
1	Catchment hydrologic response with a fully distributed triangulated irregular network model. <i>Water Resources Research</i> , 2004, 40, .	1.7	268
2	Vegetation-modulated landscape evolution: Effects of vegetation on landscape processes, drainage density, and topography. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	229
3	Vegetation-hydrology dynamics in complex terrain of semiarid areas: 1. A mechanistic approach to modeling dynamic feedbacks. <i>Water Resources Research</i> , 2008, 44, .	1.7	184
4	Preserving high-resolution surface and rainfall data in operational-scale basin hydrology: a fully-distributed physically-based approach. <i>Journal of Hydrology</i> , 2004, 298, 80-111.	2.3	164
5	Analysis and characterization of the vertical accuracy of digital elevation models from the Shuttle Radar Topography Mission. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	145
6	Generation of Triangulated Irregular Networks Based on Hydrological Similarity. <i>Journal of Hydrologic Engineering - ASCE</i> , 2004, 9, 288-302.	0.8	144
7	A distributed model for real-time flood forecasting using digital elevation models. <i>Journal of Hydrology</i> , 1995, 167, 279-306.	2.3	127
8	A quantitative evaluation of Playfair's law and its use in testing long-term stream erosion models. <i>Earth Surface Processes and Landforms</i> , 2001, 26, 1317-1332.	1.2	127
9	A simple model of river meandering and its comparison to natural channels. <i>Hydrological Processes</i> , 2002, 16, 1-26.	1.1	113
10	On the dynamics of soil moisture, vegetation, and erosion: Implications of climate variability and change. <i>Water Resources Research</i> , 2006, 42, .	1.7	112
11	The fate of Amazonian ecosystems over the coming century arising from changes in climate, atmospheric CO_2 and land use. <i>Global Change Biology</i> , 2015, 21, 2569-2587.	4.2	97
12	Real-world hydrologic assessment of a fully-distributed hydrological model in a parallel computing environment. <i>Journal of Hydrology</i> , 2011, 409, 483-496.	2.3	95
13	On the effects of triangulated terrain resolution on distributed hydrologic model response. <i>Hydrological Processes</i> , 2005, 19, 2101-2122.	1.1	88
14	Vegetation-hydrology dynamics in complex terrain of semiarid areas: 2. Energy-water controls of vegetation spatiotemporal dynamics and topographic niches of favorability. <i>Water Resources Research</i> , 2008, 44, .	1.7	88
15	Rainfall-induced landslide susceptibility zonation of Puerto Rico. <i>Environmental Earth Sciences</i> , 2012, 66, 1667-1681.	1.3	88
16	A weather generator for hydrological, ecological, and agricultural applications. <i>Water Resources Research</i> , 2007, 43, .	1.7	87
17	Seasonal carbon dynamics and water fluxes in an Amazon rainforest. <i>Global Change Biology</i> , 2012, 18, 1322-1334.	4.2	87
18	Network-scale dynamics of grain-size sorting: implications for downstream fining, stream-profile concavity, and drainage basin morphology. <i>Earth Surface Processes and Landforms</i> , 2004, 29, 401-421.	1.2	79

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19	Development of gullies on the landscape: A model of headcut retreat resulting from plunge pool erosion. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	79
20	Eco-geomorphic implications of hillslope aspect: Inferences from analysis of landscape morphology in central New Mexico. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	77
21	Ecohydrologic role of solar radiation on landscape evolution. <i>Water Resources Research</i> , 2015, 51, 1127-1157.	1.7	63
22	Effects of initialization on response of a fully-distributed hydrologic model. <i>Journal of Hydrology</i> , 2008, 352, 107-125.	2.3	58
23	Implications of bank failures and fluvial erosion for gully development: Field observations and modeling. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	55
24	A model of surface heat fluxes based on the theory of maximum entropy production. <i>Water Resources Research</i> , 2009, 45, .	1.7	55
25	On the observed ecohydrologic dynamics of a semiarid basin with aspect-delimited ecosystems. <i>Water Resources Research</i> , 2013, 49, 8263-8284.	1.7	54
26	Energy balance at the Earth's surface: Heat flux history in eastern Canada. <i>Geophysical Research Letters</i> , 2000, 27, 3385-3388.	1.5	52
27	Topographic variability and the influence of soil erosion on the carbon cycle. <i>Global Biogeochemical Cycles</i> , 2016, 30, 644-660.	1.9	49
28	Bias Correction of Climate Modeled Temperature and Precipitation Using Artificial Neural Networks. <i>Journal of Hydrometeorology</i> , 2017, 18, 1867-1884.	0.7	46
29	Ecohydrological response to a geomorphically significant flood event in a semiarid catchment with contrasting ecosystems. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	41
30	Geoarchaeological simulation of meandering river deposits and settlement distributions: A three-dimensional approach. <i>Geoarchaeology - an International Journal</i> , 2006, 21, 843-874.	0.7	40
31	An extremum principle of evaporation. <i>Water Resources Research</i> , 2004, 40, .	1.7	37
32	Sensitivity of a physically based method for terrain interpolation to initial conditions and its conditioning on stream location. <i>Earth Surface Processes and Landforms</i> , 2004, 29, 587-597.	1.2	34
33	tRIBS-Erosion: A parsimonious physically-based model for studying catchment hydro-geomorphic response. <i>Catena</i> , 2012, 92, 216-231.	2.2	34
34	A maximum hypothesis of transpiration. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	33
35	Dynamic root distributions in ecohydrological modeling: A case study at Walnut Gulch Experimental Watershed. <i>Water Resources Research</i> , 2013, 49, 3292-3305.	1.7	30
36	Shrunken Locally Linear Embedding for Passive Microwave Retrieval of Precipitation. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2015, 53, 3720-3736.	2.7	30

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37	Embedding landscape processes into triangulated terrain models. <i>International Journal of Geographical Information Science</i> , 2005, 19, 429-457.	2.2	29
38	Six Myths About Mathematical Modeling in Geomorphology. <i>Geophysical Monograph Series</i> , 0, , 63-79.	0.1	28
39	Complexity and organization in hydrology: A personal view. <i>Water Resources Research</i> , 2015, 51, 6532-6548.	1.7	25
40	Hydrologic data assimilation with a hillslope-scale-resolving model and L band radar observations: Synthetic experiments with the ensemble Kalman filter. <i>Water Resources Research</i> , 2012, 48, .	1.7	23
41	Identifying the optimal spatially and temporally invariant root distribution for a semiarid environment. <i>Water Resources Research</i> , 2012, 48, .	1.7	21
42	Dynamical Precipitation Downscaling for Hydrologic Applications Using WRF 4D-Var Data Assimilation: Implications for GPM Era. <i>Journal of Hydrometeorology</i> , 2015, 16, 811-829.	0.7	21
43	Soil moisture background error covariance and data assimilation in a coupled land-atmosphere model. <i>Water Resources Research</i> , 2017, 53, 1309-1335.	1.7	21
44	Breaking Down the Computational Barriers to Real-Time Urban Flood Forecasting. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093585.	1.5	21
45	Impact of hydrologically driven hillslope erosion and landslide occurrence on soil organic carbon dynamics in tropical watersheds. <i>Water Resources Research</i> , 2016, 52, 8895-8919.	1.7	18
46	Evaluation of SHARP Passive Rainfall Retrievals over Snow-Covered Land Surfaces and Coastal Zones. <i>Journal of Hydrometeorology</i> , 2016, 17, 1013-1029.	0.7	17
47	Bias-corrected data sets of climate model outputs at uniform space-time resolution for land surface modelling over Amazonia. <i>International Journal of Climatology</i> , 2017, 37, 621-636.	1.5	17
48	Combined Assimilation of Satellite Precipitation and Soil Moisture: A Case Study Using TRMM and SMOS Data. <i>Monthly Weather Review</i> , 2017, 145, 4997-5014.	0.5	17
49	A Brief History of Hydrology*. <i>Bulletin of the American Meteorological Society</i> , 1999, 80, 1151-1164.	1.7	16
50	Evaluation of the Quality of Precipitation Products: A Case Study Using WRF and IMERG Data over the Central United States. <i>Journal of Hydrometeorology</i> , 2018, 19, 2007-2020.	0.7	16
51	Sensitivity of channel profiles to precipitation properties in mountain ranges. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	15
52	A geomorphic perspective on terrain-modulated organization of vegetation productivity: analysis in two semiarid grassland ecosystems in Southwestern United States. <i>Ecohydrology</i> , 2014, 7, 242-257.	1.1	13
53	Detecting Shallow Groundwater From Spaceborne Soil Moisture Observations. <i>Water Resources Research</i> , 2021, 57, e2020WR029102.	1.7	13
54	Sensible heat flux estimated from one-level air temperature near the land surface. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	11

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55	Ecohydrological controls on grass and shrub above-ground net primary productivity in a seasonally dry climate. <i>Ecohydrology</i> , 2015, 8, 1572-1583.	1.1	11
56	A physically based interpolation method for fluvially eroded topography. <i>Water Resources Research</i> , 2003, 39, .	1.7	9
57	Building a freshman-year foundation for sustainability studies: Terrascope, a case study. <i>Sustainability Science</i> , 2009, 4, 37-43.	2.5	7
58	Forest Structure and Composition Are Critical to Hurricane Mortality. <i>Forests</i> , 2022, 13, 202.	0.9	7
59	Regression-based regionalization for bias correction of temperature and precipitation. <i>International Journal of Climatology</i> , 2019, 39, 3298-3312.	1.5	5
60	Global Shallow Groundwater Patterns From Soil Moisture Satellite Retrievals. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2022, 15, 89-101.	2.3	5
61	Structure in fluctuations of large-scale soil moisture climate due to external random forcing and internal feedbacks. <i>Stochastic Hydrology & Hydraulics</i> , 1997, 11, 95-114.	0.5	4
62	Numerical Predictions of the Sensitivity of Grain Size and Channel Slope to an Increase in Precipitation. , 2008, , 367-394.		4
63	Compressive Earth observatory: An insight from AIRS/AMSU retrievals. <i>Geophysical Research Letters</i> , 2015, 42, 362-369.	1.5	3
64	Hydrogeomorphic perturbations on the soil-atmosphere CO ₂ exchange: How (un)certain are our balances?. <i>Water Resources Research</i> , 2017, 53, 1664-1682.	1.7	3
65	Parsing Long-Term Tree Recruitment, Growth, and Mortality to Identify Hurricane Effects on Structural and Compositional Change in a Tropical Forest. <i>Forests</i> , 2022, 13, 796.	0.9	2
66	Hydrogeomorphic behavior of contrasting tropical landscapes and critical zone response to changing climate. <i>Earth Surface Processes and Landforms</i> , 2019, 44, 641-654.	1.2	1
67	Compressive Earth observatory: An insight from AIRS/AMSU retrievals. , 2015, 42, 362.		1
68	Shrunken Locally Linear Embedding for Passive Microwave Retrieval of Precipitation. , 0, .		1
69	Spatial distribution of precipitation recycling in the Amazon basin. <i>AIP Conference Proceedings</i> , 1992, , .	0.3	0
70	Stochastic modeling of the thermally induced atmospheric flow at mesoscale. <i>Meccanica</i> , 1996, 31, 15-25.	1.2	0
71	Eagleson receives the Stockholm Water Prize. <i>Eos</i> , 1997, 78, 568.	0.1	0