Ricardo I Mantilla

List of Publications by Year
in descending order

61	1,909	236925 25	265206 42
papers	citations	h-index	g-index

73	73	73	1728
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Seasonally in ENSO-related precipitation, river discharges, soil moisture, and vegetation index in Colombia. Water Resources Research, 2001, 37, 2169-2178.	4.2	200
2	Real-Time Flood Forecasting and Information System for the State of Iowa. Bulletin of the American Meteorological Society, 2017, 98, 539-554.	3.3	153
3	Coupling between annual and ENSO timescales in the malaria-climate association in Colombia.. Environmental Health Perspectives, 2001, 109, 489-493.	6.0	101
4	A GIS Numerical Framework to Study the Process Basis of Scaling Statistics in River Networks. IEEE Geoscience and Remote Sensing Letters, 2005, 2, 404-408.	3.1	91
5	Dissecting the effect of rainfall variability on the statistical structure of peak flows. Advances in Water Resources, 2009, 32, 1508-1525.	3.8	75
6	Role of coupled flow dynamics and real network structures on Hortonian scaling of peak flows. Journal of Hydrology, 2006, 322, 155-167.	5.4	74
7	Generalizing a nonlinear geophysical flood theory to mediumâ€sized river networks. Geophysical Research Letters, 2010, 37, .	4.0	73
8	Linking Long-Term Water Balances and Statistical Scaling to Estimate River Flows along the Drainage Network of Colombia. Journal of Hydrologic Engineering - ASCE, 2007, 12, 4-13.	1.9	66
9	Impact of radarâ€rainfall error structure on estimated flood magnitude across scales: An investigation based on a parsimonious distributed hydrological model. Water Resources Research, 2012, 48, .	4.2	64
10	Connecting the power-law scaling structure of peak-discharges to spatially variable rainfall and catchment physical properties. Advances in Water Resources, 2014, 71, 32-43.	3.8	54
11	A Spatialâ€“Dynamical Framework for Evaluation of Satellite Rainfall Products for Flood Prediction. Journal of Hydrometeorology, 2016, 17, 2137-2154.	1.9	54
12	An asynchronous solver for systems of ODEs linked by a directed tree structure. Advances in Water Resources, 2013, 53, 23-32.	3.8	51
13	Exploring the effects of hillslope-channel link dynamics and excess rainfall properties on the scaling structure of peak-discharge. Advances in Water Resources, 2014, 64, 9-20.	3.8	49
14	Recurrence plots and unstable periodic orbits. Chaos, 2002, 12, 596-600.	2.5	45
15	Hydrologic impacts of subsurface drainage at the field scale: Climate, landscape and anthropogenic controls. Agricultural Water Management, 2016, 165, 1-10.	5.6	44
16	The JGrass-NewAge system for forecasting and managing the hydrological budgets at the basin scale: models of flow generation and propagation/routing. Geoscientific Model Development, 2011, 4, 943-955.	3.6	42
17	Improvement and evaluation of the Iowa Flood Center Hillslope Link Model (HLM) by calibration-free approach. Journal of Hydrology, 2020, 584, 124686.	5.4	42
18	A framework for flood risk assessment under nonstationary conditions or in the absence of historical data. Journal of Flood Risk Management, 2011, 4, 3-22.	3.3	39

#	Article	IF	Citations
19	Analyzing the effects of excess rainfall properties on the scaling structure of peak discharges: Insights from a mesoscale river basin. Water Resources Research, 2015, 51, 3900-3921.	4.2	37
20	A remote sensing-based tool for assessing rainfall-driven hazards. Environmental Modelling and Software, 2017, 90, 34-54.	4.5	36
21	Assessment of Changes in Flood Frequency Due to the Effects of Climate Change: Implications for Engineering Design. Hydrology, 2018, 5, 19.	3.0	34
22	Exploring the Effect of Reservoir Storage on Peak Discharge Frequency. Journal of Hydrologic Engineering - ASCE, 2013, 18, 1697-1708.	1.9	28
23	Effect of Spatially Distributed Small Dams on Flood Frequency: Insights from the Soap Creek Watershed. Journal of Hydrologic Engineering - ASCE, 2017, 22, .	1.9	27
24	Precipitation Effects on Motor Vehicle Crashes Vary by Space, Time, and Environmental Conditions. Weather, Climate, and Society, 2016, 8, 399-407.	1.1	26
25	Investigating the role of antecedent SMAP satellite soil moisture, radar rainfall and MODIS vegetation on runoff production in an agricultural region. Journal of Hydrology, 2019, 579, 124210.	5.4	26
26	Testing statistical selfâ€similarity in the topology of river networks. Journal of Geophysical Research, 2010, 115, .	3.3	23
27	Classical and generalized Horton laws for peak flows in rainfall-runoff events. Chaos, 2015, 25, 075408.	2.5	22
28	Using Physically Based Synthetic Peak Flows to Assess Local and Regional Flood Frequency Analysis Methods. Water Resources Research, 2019, 55, 8384-8403.	4.2	22
29	Scaling relations between riparian vegetation and stream order in the Whitewater River network, Kansas, USA. Landscape Ecology, 2011, 26, 983-997.	4.2	21
30	A Power Law Model for River Flow Velocity in Iowa Basins. Journal of the American Water Resources Association, 2018, 54, 1055-1067.	2.4	21
31	Hydrologic impacts of subsurface drainage from the field to watershed scale. Hydrological Processes, 2017, 31, 3017-3028.	2.6	20
32	Scaling of peak flows with constant flow velocity in random self-similar networks. Nonlinear Processes in Geophysics, 2011, 18, 489-502.	1.3	18
33	An Initial Assessment of Radar Data Assimilation on Warm Season Rainfall Forecasts for Use in Hydrologic Models. Weather and Forecasting, 2015, 30, 1491-1520.	1.4	18
34	The Influence of Spatial Variability of Width Functions on Regional Peak Flow Regressions. Water Resources Research, 2018, 54, 7651-7669.	4.2	18
35	Coupling between Annual and ENSO Timescales in the Malaria: Climate Association in Colombia. Environmental Health Perspectives, 2001, 109, 489.	6.0	16
36	Insights into Expected Changes in Regulated Flood Frequencies due to the Spatial Configuration of Flood Retention Ponds. Journal of Hydrologic Engineering - ASCE, 2015, 20, .	1.9	16

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37	An integral-balance nonlinear model to simulate changes in soil moisture, groundwater and surface runoff dynamics at the hillslope scale. Advances in Water Resources, 2014, 71, 125-139.	3.8	14
38	HidroSIG: an interactive digital atlas of Colombia's hydro-climatology. Journal of Hydroinformatics, 2007, 9, 145-156.	2.4	11
39	Data-driven stochastic model for basin and sub-grid variability of SMAP satellite soil moisture. Journal of Hydrology, 2019, 576, 85-97.	5.4	11
40	Examining Observed Rainfall, Soil Moisture, and River Network Variabilities on Peak Flow Scaling of Rainfallâ€Runoff Events with Implications on Regionalization of Peak Flow Quantiles. Water Resources Research, 2019, 55, 10707-10726.	4.2	11
41	Extending generalized Horton laws to test embedding algorithms for topologic river networks. Geomorphology, 2012, 151-152, 13-26.	2.6	9
42	Development and Analysis of GIS Tools for the Automatic Implementation of 1D Hydraulic Models Coupled with Distributed Hydrological Models. Journal of Hydrologic Engineering - ASCE, 2015, 20, 06015005.	1.9	9
43	Hydrovise: A non-proprietary open-source software for hydrologic model and data visualization and evaluation. Environmental Modelling and Software, 2020, 134, 104853.	4.5	8
44	Data Assimilation of Satellite-Based Soil Moisture into a Distributed Hydrological Model for Streamflow Predictions. Hydrology, 2021, 8, 52.	3.0	8
45	The Effect of Storm Direction on Flood Frequency Analysis. Geophysical Research Letters, 2021, 48, e2020GL091918.	4.0	8
46	Real-time streamflow forecasting: AI vs. Hydrologic insights. Journal of Hydrology X, 2021, 13, 100110.	1.6	8
47	Implementation of a Hydraulic Routing Model for Dendritic Networks with Offline Coupling to a Distributed Hydrological Model. Journal of Hydrologic Engineering - ASCE, 2015, 20, .	1.9	7
48	On the propagation of diel signals in river networks using analytic solutions of flow equations. Hydrology and Earth System Sciences, 2016, 20, 2899-2912.	4.9	6
49	Spatial Patterns of Peak Flow Quantiles Based on Power-Law Scaling in the Mississippi River Basin. , 2018, , 497-518.		6
50	Development and Evaluation of an ODE Representation of 3D Subsurface Tile Drainage Flow Using the HLM Flood Forecasting System. Water Resources Research, 2021, 57, e2020WR028177.	4.2	6
51	Doing Hydrology Backwardsâ€"Analytic Solution Connecting Streamflow Oscillations at the Basin Outlet to Average Evaporation on a Hillslope. Hydrology, 2019, 6, 85.	3.0	4
52	Why Were the 2008 Floods So Large?. , 0, , 19-30.		4
53	Simulation of a Distributed Flood Control System using a Parallel Asynchronous Solver for Systems of ODEs. , 2012, , .		4
54	Analyzing Effects of Crops on SMAP Satellite-Based Soil Moisture Using a Rainfallâ€"Runoff Model in the U.S. Corn Belt. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 247-260.	4.9	4

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55	Improving Hillslope Link Model Performance from Non-Linear Representation of Natural and Artificially Drained Subsurface Flows. Hydrology, 2021, 8, 187.	3.0	4
56	Hydrologic-hydraulic modeling of sediment transport along the main stem of a watershed: role of tributaries and channel geometry. Hydrological Sciences Journal, 2020, 65, 183-199.	2.6	3
57	Limits of Predictability of a Global Self-Similar Routing Model in a Local Self-Similar Environment. Atmosphere, 2020, 11, 791.	2.3	3
58	Can floods in large river basins be predicted from floods observed in small subbasins?. Journal of Flood Risk Management, 2018, 11, 331-338.	3.3	2
59	Identification and Regionalization of Streamflow Routing Parameters Using Machine Learning for the HLM Hydrological Model in Iowa. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	2
60	Estimation of Historical-Annual and Historical-Monthly Scale-Invariant Flow Duration Curves with Implementation for Iowa. Journal of Hydrologic Engineering - ASCE, 2018, 23, .	1.9	1
61	On-demand aggregation of gridded data over user-specified spatio-temporal domains. , 2016, , .		1