Ricardo I Mantilla

List of Publications by Year
in descending order

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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	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
2	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
3	Data Assimilation of Satellite-Based Soil Moisture into a Distributed Hydrological Model for Streamflow Predictions. Hydrology, 2021, 8, 52.	3.0	8
4	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
5	The Effect of Storm Direction on Flood Frequency Analysis. Geophysical Research Letters, 2021, 48, e2020GL091918.	4.0	8
6	Real-time streamflow forecasting: AI vs. Hydrologic insights. Journal of Hydrology X, 2021, 13, 100110.	1.6	8
7	Improving Hillslope Link Model Performance from Non-Linear Representation of Natural and Artificially Drained Subsurface Flows. Hydrology, 2021, 8, 187.	3.0	4
8	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
9	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
10	Limits of Predictability of a Global Self-Similar Routing Model in a Local Self-Similar Environment. Atmosphere, 2020, 11, 791.	2.3	3
11	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
12	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
13	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
14	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
15	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
16	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
17	Spatial Patterns of Peak Flow Quantiles Based on Power-Law Scaling in the Mississippi River Basin. , 2018, , 497-518.		6
18	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

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19	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
20	The Influence of Spatial Variability of Width Functions on Regional Peak Flow Regressions. Water Resources Research, 2018, 54, 7651-7669.	4.2	18
21	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
22	Assessment of Changes in Flood Frequency Due to the Effects of Climate Change: Implications for Engineering Design. Hydrology, 2018, 5, 19.	3.0	34
23	A remote sensing-based tool for assessing rainfall-driven hazards. Environmental Modelling and Software, 2017, 90, 34-54.	4.5	36
24	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
25	Hydrologic impacts of subsurface drainage from the field to watershed scale. Hydrological Processes, 2017, 31, 3017-3028.	2.6	20
26	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
27	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
28	Precipitation Effects on Motor Vehicle Crashes Vary by Space, Time, and Environmental Conditions. Weather, Climate, and Society, 2016, 8, 399-407.	1.1	26
29	A Spatialâ€“Dynamical Framework for Evaluation of Satellite Rainfall Products for Flood Prediction. Journal of Hydrometeorology, 2016, 17, 2137-2154.	1.9	54
30	Hydrologic impacts of subsurface drainage at the field scale: Climate, landscape and anthropogenic controls. Agricultural Water Management, 2016, 165, 1-10.	5.6	44
31	On-demand aggregation of gridded data over user-specified spatio-temporal domains. , 2016, , .		1
32	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
33	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
34	Classical and generalized Horton laws for peak flows in rainfall-runoff events. Chaos, 2015, 25, 075408.	2.5	22
35	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
36	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

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37	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
38	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
39	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
40	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
41	An asynchronous solver for systems of ODEs linked by a directed tree structure. Advances in Water Resources, 2013, 53, 23-32.	3.8	51
42	Exploring the Effect of Reservoir Storage on Peak Discharge Frequency. Journal of Hydrologic Engineering - ASCE, 2013, 18, 1697-1708.	1.9	28
43	Extending generalized Horton laws to test embedding algorithms for topologic river networks. Geomorphology, 2012, 151-152, 13-26.	2.6	9
44	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
45	Simulation of a Distributed Flood Control System using a Parallel Asynchronous Solver for Systems of ODEs. , 2012, , .		4
46	Scaling of peak flows with constant flow velocity in random self-similar networks. Nonlinear Processes in Geophysics, 2011, 18, 489-502.	1.3	18
47	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
48	Scaling relations between riparian vegetation and stream order in the Whitewater River network, Kansas, USA. Landscape Ecology, 2011, 26, 983-997.	4.2	21
49	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
50	Generalizing a nonlinear geophysical flood theory to mediumâ€sized river networks. Geophysical Research Letters, 2010, 37, .	4.0	73
51	Testing statistical selfâ€similarity in the topology of river networks. Journal of Geophysical Research, 2010, 115, .	3.3	23
52	Dissecting the effect of rainfall variability on the statistical structure of peak flows. Advances in Water Resources, 2009, 32, 1508-1525.	3.8	75
53	HidroSIG: an interactive digital atlas of Colombia's hydro-climatology. Journal of Hydroinformatics, 2007, 9, 145-156.	2.4	11
54	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

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55	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
56	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
57	Recurrence plots and unstable periodic orbits. Chaos, 2002, 12, 596-600.	2.5	45
58	Seasonally in ENSO-related precipitation, river discharges, soil moisture, and vegetation index in Colombia. Water Resources Research, 2001, 37, 2169-2178.	4.2	200
59	Coupling between Annual and ENSO Timescales in the Malaria: Climate Association in Colombia. Environmental Health Perspectives, 2001, 109, 489.	6.0	16
60	Coupling between annual and ENSO timescales in the malaria-climate association in Colombia.. Environmental Health Perspectives, 2001, 109, 489-493.	6.0	101
61	Why Were the 2008 Floods So Large?. , 0, , 19-30.		4