Luis Garrote

List of Publications by Year in Descending Order

122 papers	3,470 citations	29 h-index	56 g-index
144 ext. papers	4,193 ext. citations	4.1 avg, IF	6.11 L-index

#	Paper	IF	Citations
122	Pluvial flooding: High-resolution stochastic hazard mapping in urban areas by using fast-processing DEM-based algorithms. *Journal of Hydrology*, **2022**, 608, 127649	6	0
121	Unit hydrograph identification based on fuzzy regression analysis. *Evolving Systems*, **2021**, 12, 701-722	2.1	2
120	Ecological impacts of run-of-river hydropower plants: Current status and future prospects on the brink of energy transition. *Renewable and Sustainable Energy Reviews*, **2021**, 142, 110833	16.2	118
119	Estimation of Fuzzy Parameters in the Linear Muskingum Model with the Aid of Particle Swarm Optimization. *Sustainability*, **2021**, 13, 7152	3.6	2
118	Stochastic Hybrid Event Based and Continuous Approach to Derive Flood Frequency Curve. *Water (Switzerland)*, **2021**, 13, 1931	3	
117	A Continental Assessment of Reservoir Storage and Water Availability in South America. *Water (Switzerland)*, **2021**, 13, 1992	3	1
116	A multicriteria fuzzy pattern recognition approach for assessing the vulnerability to drought: Mediterranean region. *Evolving Systems*, **2021**, 12, 109-122	2.1	5
115	Exploring the Role of Reservoir Storage in Enhancing Resilience to Climate Change in Southern Europe. *Water (Switzerland)*, **2021**, 13, 85	3	2
114	Dataset of Georeferenced Dams in South America (DDSA). *Earth System Science Data*, **2021**, 13, 213-229	10.5	5
113	A Stochastic Procedure for Temporal Disaggregation of Daily Rainfall Data in SuDS Design. *Water (Switzerland)*, **2021**, 13, 403	3	2
112	Looking into individual choices and local realities to define adaptation options to drought and climate change. *Journal of Environmental Management*, **2021**, 293, 112861	7.9	1
111	Influence of Erodible Beds on Shallow Water Hydrodynamics during Flood Events. *Water (Switzerland)*, **2020**, 12, 3340	3	2
110	A New Tool for Assessing Environmental Impacts of Altering Short-Term Flow and Water Level Regimes. *Water (Switzerland)*, **2020**, 12, 2913	3	1
109	Optimization of the Design of Water Distribution Systems for Variable Pumping Flow Rates. *Water (Switzerland)*, **2020**, 12, 359	3	16
108	Pump Efficiency Analysis for Proper Energy Assessment in Optimization of Water Supply Systems. *Water (Switzerland)*, **2020**, 12, 132	3	4
107	Facing Future Water Scarcity in the Duero-Douro Basin: Comparative Effect of Policy Measures on Irrigation Water Availability. *Journal of Water Resources Planning and Management - ASCE*, **2020**, 146, 04020011	2.8	2
106	Flood Control Versus Water Conservation in Reservoirs: A New Policy to Allocate Available Storage. *Water (Switzerland)*, **2020**, 12, 994	3	2

105	River Levee Overtopping: A Bivariate Methodology for Hydrological Characterization of Overtopping Failure. *Journal of Hydrologic Engineering - ASCE*, **2020**, 25, 04020026	1.8	0
104	Climate change risks and adaptation: new indicators for Mediterranean viticulture. *Mitigation and Adaptation Strategies for Global Change*, **2020**, 25, 881-899	3.9	13
103	Probabilistic Model for Real-Time Flood Operation of a Dam Based on a Deterministic Optimization Model. *Water (Switzerland)*, **2020**, 12, 3206	3	3
102	Water-energy-ecosystem nexus: Balancing competing interests at a run-of-river hydropower plant coupling a hydrologic□cohydraulic approach. *Energy Conversion and Management*, **2020**, 223, 113267	10.6	123
101	Influence of hydrologically based environmental flow methods on flow alteration and energy production in a run-of-river hydropower plant. *Journal of Cleaner Production*, **2019**, 232, 1028-1042	10.3	183
100	Adaptation Effort and Performance of Water Management Strategies to Face Climate Change Impacts in Six Representative Basins of Southern Europe. *Water (Switzerland)*, **2019**, 11, 1078	3	15
99	A Meta-multicriteria Approach to Estimate Drought Vulnerability Based on Fuzzy Pattern Recognition. *Communications in Computer and Information Science*, **2019**, 349-360	0.3	2
98	Experimental Analysis of the Influence of Aeration in the Energy Dissipation of Supercritical Channel Flows. *Water (Switzerland)*, **2019**, 11, 576	3	2
97	Tradeoff between economic and environmental costs and benefits of hydropower production at run-of-river-diversion schemes under different environmental flows scenarios. *Journal of Hydrology*, **2019**, 572, 790-804	6	47
96	Adapting viticulture to climate change in the Mediterranean region: Evaluations accounting for spatial differences in the producers-climate interactions. *BIO Web of Conferences*, **2019**, 12, 01001	0.4	4
95	Comparison between 2D Shallow-Water Simulations and Energy-Momentum Computations for Transcritical Flow Past Channel Contractions. *Water (Switzerland)*, **2019**, 11, 1476	3	5
94	Hydrological Risk Analysis of Dams: The Influence of Initial Reservoir Level Conditions. *Water (Switzerland)*, **2019**, 11, 461	3	6
93	Flow regime aspects in determining environmental flows and maximising energy production at run-of-river hydropower plants. *Applied Energy*, **2019**, 256, 113980	10.7	147
92	Effort and Performance of the Management of Water for Agriculture under Climate Change in Southern Europe. *Proceedings (mdpi)*, **2019**, 7, 6	0.3	
91	Energy Dissipation Structures: Influence of Aeration in Supercritical Flows. *Proceedings (mdpi)*, **2019** , 7, 5	0.3	2
90	Effects of Key Properties of Rainfall Series on Hydrologic Design of Sustainable Urban Drainage Systems (SUDS). *Proceedings (mdpi)*, **2019**, 7, 17	0.3	0
89	Stochastic Assessment of the Influence of Reservoir Operation in Hydrological Dam Safety through Risk Indexes. *Proceedings (mdpi)*, **2019**, 7, 12	0.3	
88	Dependence Between Extreme Rainfall Events and the Seasonality and Bivariate Properties of Floods. A Continuous Distributed Physically-Based Approach. *Water (Switzerland)*, **2019**, 11, 1896	3	3

87	Blue Water in Europe: Estimates of Current and Future Availability and Analysis of Uncertainty. *Water (Switzerland)*, **2019**, 11, 420	3	9
86	Vineyards in transition: A global assessment of the adaptation needs of grape producing regions under climate change. *Science of the Total Environment*, **2019**, 657, 839-852	10.2	35
85	Upscaling the Impacts of Climate Change in Different Sectors and Adaptation Strategies **2018**, 173-243		1
84	On the Barriers to Adaption to Less Water under Climate Change: Policy Choices in Mediterranean Countries. *Water Resources Management*, **2018**, 32, 4819-4832	3.7	20
83	Influencia del nivel inicial en la definici□ de resguardos estacionales en presas. *Ingenier□ Del Agua*, **2018**, 22, 225	0.7	4
82	Do users benefit from additional information in support of operational drought management decisions in the Ebro basin?. *Hydrology and Earth System Sciences*, **2018**, 22, 5901-5917	5.5	6
81	Applying Water Accounting Methods Through Statistical Data and Simulation Models: The Duero Transboundary Watershed. *Advances in Chemical Pollution, Environmental Management and Protection*, **2018**, 3, 115-146	1.5	1
80	Local and Collective Actions for Adaptation to Use Less Water for Agriculture in the Mediterranean Region **2018**, 73-84		6
79	Towards Adaptation to Climate Change: Water for Rice in the Coastal Wetlands of Do□ana, Southern Spain. *Water Resources Management*, **2017**, 31, 629-653	3.7	10
78	Managing Water Resources to Adapt to Climate Change: Facing Uncertainty and Scarcity in a Changing Context. *Water Resources Management*, **2017**, 31, 2951-2963	3.7	42
77	Influence of initial reservoir level and gate failure in dam safety analysis. Stochastic approach. *Journal of Hydrology*, **2017**, 550, 669-684	6	21
76	DRIHM(2US): An e-Science Environment for Hydrometeorological Research on High-Impact Weather Events. *Bulletin of the American Meteorological Society*, **2017**, 98, 2149-2166	6.1	10
75	Statistical Dependence of Pipe Breaks on Explanatory Variables. *Water (Switzerland)*, **2017**, 9, 158	3	1
74	A Parametric Flood Control Method for Dams with Gate-Controlled Spillways. *Water (Switzerland)*, **2017**, 9, 237	3	12
73	Analysis of Current and Future SPEI Droughts in the La Plata Basin Based on Results from the Regional Eta Climate Model. *Water (Switzerland)*, **2017**, 9, 857	3	16
72	Pressure Management in Water Distribution Systems: Current Status, Proposals, and Future Trends. *Journal of Water Resources Planning and Management - ASCE*, **2016**, 142, 04015061	2.8	61
71	Strategies to reduce water stress in Euro-Mediterranean river basins. *Science of the Total Environment*, **2016**, 543, 997-1009	10.2	20
70	Extension of observed flood series by combining a distributed hydro-meteorological model and a copula-based model. *Stochastic Environmental Research and Risk Assessment*, **2016**, 30, 1363-1378	3.5	21

69	Fully Stochastic Distributed Methodology for Multivariate Flood Frequency Analysis. *Water (Switzerland)*, **2016**, 8, 225	3	10
68	The Influence of the Annual Number of Storms on the Derivation of the Flood Frequency Curve through Event-Based Simulation. *Water (Switzerland)*, **2016**, 8, 335	3	8
67	Pressure as a predictor of occurrence of pipe breaks in water distribution networks. *Urban Water Journal*, **2016**, 13, 676-686	2.3	16
66	Application of the system of environmental economic accounting for water SEEAW to the Spanish part of the Duero basin: Lessons learned. *Science of the Total Environment*, **2016**, 563-564, 611-22	10.2	7
65	Optimization of Hedging Rules for Reservoir Operation During Droughts Based on Particle Swarm Optimization. *Water Resources Management*, **2016**, 30, 5759-5778	3.7	25
64	Impact of Hydrological Uncertainty on Water Management Decisions. *Water Resources Management* , **2016**, 30, 5535-5551	3.7	18
63	Hydrologic Determinants of Climate Change Impacts on Regulated Water Resources Systems. *Water Resources Management*, **2015**, 29, 1933-1947	3.7	7
62	Quantitative Assessment of Climate Change Vulnerability of Irrigation Demands in Mediterranean Europe. *Water Resources Management*, **2015**, 29, 325-338	3.7	60
61	Adaptation strategies for agricultural water management under climate change in Europe. *Agricultural Water Management*, **2015**, 155, 113-124	5.9	247
60	Use of Pressure Management to Reduce the Probability of Pipe Breaks: A Bayesian Approach. *Journal of Water Resources Planning and Management - ASCE*, **2015**, 141, 04015010	2.8	14
59	Adapting Water Allocation to Irrigation Demands to Constraints in Water Availability Imposed by Climate Change. *Water Resources Management*, **2015**, 29, 1413-1430	3.7	10
58	Probabilistic-Multiobjective Comparison of User-Defined Operating Rules. Case Study: Hydropower Dam in Spain. *Water (Switzerland)*, **2015**, 7, 956-974	3	12
57	Hydrometeorological multi-model ensemble simulations of the 4 November 2011 flash flood event in Genoa, Italy, in the framework of the DRIHM project. *Natural Hazards and Earth System Sciences*, **2015**, 15, 537-555	3.9	36
56	Reorganization of water demand under changing conditions with possibilistic programming. *Journal of Hydroinformatics*, **2015**, 17, 239-259	2.6	2
55	A Fuzzy Multicriteria Categorization of Water Scarcity in Complex Water Resources Systems. *Water Resources Management*, **2015**, 29, 521-539	3.7	10
54	Assessing maximum potential water withdrawal for food production under climate change - an application in Spain. *Journal of Water and Climate Change*, **2014**, 5, 633-651	2.3	4
53	Drought in the Light of Climate Change in the Mediterranean Area **2014**, 203-225		
52	Modelling uncertainty of flood quantile estimations at ungauged sites by Bayesian networks. *Journal of Hydroinformatics*, **2014**, 16, 822-838	2.6	3

51	Looking beyond the average agricultural impacts in defining adaptation needs in Europe. *Regional Environmental Change*, **2014**, 14, 1983-1993	4.3	9
50	Setting Up an Hydro-Meteo Experiment in Minutes: The DRIHM e-Infrastructure for HM Research **2014**,		12
49	The DRIHM Project: A Flexible Approach to Integrate HPC, Grid and Cloud Resources for Hydro-Meteorological Research **2014**,		9
48	Detection and attribution of trends in magnitude, frequency and timing of floods in Spain. *Journal of Hydrology*, **2014**, 517, 1072-1088	6	72
47	Exploring drought vulnerability in Africa: an indicator based analysis to be used in early warning systems. *Hydrology and Earth System Sciences*, **2014**, 18, 1591-1604	5.5	81
46	How Safe is Hydrologic Infrastructure Design? Analysis of Factors Affecting Extreme Flood Estimation. *Journal of Hydrologic Engineering - ASCE*, **2014**, 19, 04014028	1.8	11
45	Characterisation of the Sensitivity of Water Resources Systems to Climate Change. *Water Resources Management*, **2013**, 27, 4237-4258	3.7	29
44	Diagnosing Causes of Water Scarcity in Complex Water Resources Systems and Identifying Risk Management Actions. *Water Resources Management*, **2013**, 27, 1693-1705	3.7	50
43	Extreme flood abatement in large dams with gate-controlled spillways. *Journal of Hydrology*, **2013**, 498, 113-123	6	22
42	Risk-based methodology for parameter calibration of a reservoir flood control model. *Natural Hazards and Earth System Sciences*, **2013**, 13, 965-981	3.9	15
41	Water and People: Assessing Policy Priorities for Climate Change Adaptation in the Mediterranean. *Advances in Global Change Research*, **2013**, 201-233	1.2	3
40	A bivariate return period based on copulas for hydrologic dam design: accounting for reservoir routing in risk estimation. *Hydrology and Earth System Sciences*, **2013**, 17, 3023-3038	5.5	108
39	Extreme flood abatement in large dams with fixed-crest spillways. *Journal of Hydrology*, **2012**, 466-467, 60-72	6	23
38	Improving runoff estimates from regional climate models: a performance analysis in Spain. *Hydrology and Earth System Sciences*, **2012**, 16, 1709-1723	5.5	21
37	Improving probabilistic flood forecasting through a data assimilation scheme based on genetic programming. *Natural Hazards and Earth System Sciences*, **2012**, 12, 3719-3732	3.9	3
36	A regional comparison of the effects of climate change on agricultural crops in Europe. *Climatic Change*, **2012**, 112, 29-46	4.5	86
35	From climate change impacts to the development of adaptation strategies: Challenges for agriculture in Europe. *Climatic Change*, **2012**, 112, 143-168	4.5	99
34	Definition of Risk Indicators for Reservoirs Management Optimization. *Water Resources Management*, **2012**, 26, 981-996	3.7	14

33	The economic value of drought information for water management under climate change: a case study in the Ebro basin. *Natural Hazards and Earth System Sciences*, **2011**, 11, 643-657	3.9	31
32	Effect of radar rainfall time resolution on the predictive capability of a distributed hydrologic model. *Hydrology and Earth System Sciences*, **2011**, 15, 3809-3827	5.5	19
31	A methodology to diagnose the effect of climate change and to identify adaptive strategies to reduce its impacts in conjunctive-use systems at basin scale. *Journal of Hydrology*, **2011**, 405, 110-122	6	50
30	Re-thinking water policy priorities in the Mediterranean region in view of climate change. *Environmental Science and Policy*, **2011**, 14, 744-757	6.2	71
29	The FLASH Project: using lightning data to better understand and predict flash floods. *Environmental Science and Policy*, **2011**, 14, 898-911	6.2	24
28	Using Lightning Data to Better Understand and Predict Flash Floods in the Mediterranean. *Surveys in Geophysics*, **2011**, 32, 733-751	7.6	29
27	Physical and economic consequences of climate change in Europe. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 2678-83	11.5	253
26	Probabilistic calibration of a distributed hydrological model for flood forecasting. *Hydrological Sciences Journal*, **2011**, 56, 1129-1149	3.5	17
25	Valuing drought information for irrigation farmers: potential development of a hydrological risk insurance in Spain. *Spanish Journal of Agricultural Research*, **2011**, 9, 1059	1.1	8
24	Improving QPF by blending techniques at the Meteorological Service of Catalonia. *Natural Hazards and Earth System Sciences*, **2010**, 10, 1443-1455	3.9	33
23	Design flood hydrographs from the relationship between flood peak and volume. *Hydrology and Earth System Sciences*, **2010**, 14, 2495-2505	5.5	60
22	Effect of radar rainfall time resolution on the predictive capability of a distributed hydrologic model **2010**,		4
21	Smoothed particle hydrodynamics model applied to hydraulic structures: a hydraulic jump test case. *Journal of Hydraulic Research/De Recherches Hydrauliques*, **2010**, 48, 142-158	1.9	50
20	Drought risk management in Mediterranean river basins. *Integrated Environmental Assessment and Management*, **2009**, 5, 11-6	2.5	18
19	Learning Bayesian Networks from Deterministic Rainfall–Runoff Models and Monte Carlo Simulation. *Water Science and Technology Library*, **2009**, 375-388	0.3	7
18	Drought and climate risks **2009**, 62-75		
17	The Hydrometeorological Forecasting in the Framework of the European Project Flash. *Houille Blanche*, **2009**, 95, 66-71	0.3	1
16	Development of Drought Management Plans in Spain **2009**, 175-186		1

15	Guidelines to Develop Drought Management Plans **2009**, 55-65		3
14	A probabilistic model to support reservoir operation decisions during flash floods. *Hydrological Sciences Journal*, **2007**, 52, 523-537	3.5	31
13	Linking Drought Indicators to Policy Actions in the Tagus Basin Drought Management Plan. *Water Resources Management*, **2007**, 21, 873-882	3.7	34
12	Challenges to Manage the Risk of Water Scarcity and Climate Change in the Mediterranean. *Water Resources Management*, **2007**, 21, 775-788	3.7	308
11	DROUGHT-INDUCED WATER SCARCITY IN WATER RESOURCES SYSTEMS **2006**, 301-311		6
10	PROBABILISTIC FORECASTS USING BAYESIAN NETWORKS CALIBRATED WITH DETERMINISTIC RAINFALL-RUNOFF MODELS **2006**, 173-183		4
9	Hydrologic Models for Emergency Decision Support Using Bayesian Networks. *Lecture Notes in Computer Science*, **2005**, 88-99	0.9	8
8	Object-Oriented Software for Distributed Rainfall-Runoff Models. *Journal of Computing in Civil Engineering*, **1997**, 11, 190-194	5	6
7	A distributed model for real-time flood forecasting using digital elevation models. *Journal of Hydrology*, **1995**, 167, 279-306	6	114
6	An integrated software environment for real-time use of a distributed hydrologic model. *Journal of Hydrology*, **1995**, 167, 307-326	6	26
5	A kinematic model of infiltration and runoff generation in layered and sloped soils. *Advances in Water Resources*, **1992**, 15, 311-324	4.7	51
4	Exploring drought vulnerability in Africa: an indicator based analysis to inform early warning systems		11
3	Bivariate return period based on copulas for hydrologic dam design: comparison of theoretical and empirical approach		7
2	Design flood hydrographs from the relationship between flood peak and volume		2
1	Country-level assessment of future risk of water scarcity in Europe. *Proceedings of the International Association of Hydrological Sciences*,379, 455-462		4