Salvatore Grimaldi

List of Publications by Year
in descending order

84 papers	5,333 citations	81900 39 h-index	88630 70 g-index

99 all docs	99 docs citations	99 times ranked	4752 citing authors

#	Article	IF	Citations
1	â€œPanta Rheiâ€”Everything Flowsâ€: Change in hydrology and societyâ€”The IAHS Scientific Decade 2013â€“2022. Hydrological Sciences Journal, 2013, 58, 1256-1275.	2.6	569
2	Twenty-three unsolved problems in hydrology (UPH) â€“ a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	2.6	474
3	Asymmetric copula in multivariate flood frequency analysis. Advances in Water Resources, 2006, 29, 1155-1167.	3.8	341
4	Multivariate return periods in hydrology: a critical and practical review focusing on synthetic design hydrograph estimation. Hydrology and Earth System Sciences, 2013, 17, 1281-1296.	4.9	226
5	Probabilistic characterization of drought properties through copulas. Physics and Chemistry of the Earth, 2009, 34, 596-605.	2.9	185
6	Measurements and Observations in the XXI century (MOXXI): innovation and multi-disciplinarity to sense the hydrological cycle. Hydrological Sciences Journal, 2018, 63, 169-196.	2.6	151
7	Investigating a floodplain scaling relation using a hydrogeomorphic delineation method. Water Resources Research, 2006, 42, .	4.2	148
8	Flood mapping in ungauged basins using fully continuous hydrologicâ€“hydraulic modeling. Journal of Hydrology, 2013, 487, 39-47.	5.4	137
9	Design hyetograph analysis with 3-copula function. Hydrological Sciences Journal, 2006, 51, 223-238.	2.6	131
10	Time of concentration: a paradox in modern hydrology. Hydrological Sciences Journal, 2012, 57, 217-228.	2.6	118
11	A parsimonious geomorphological unit hydrograph for rainfallâ€“runoff modelling in small ungauged basins. Hydrological Sciences Journal, 2012, 57, 73-83.	2.6	114
12	Investigation on the use of geomorphic approaches for the delineation of flood prone areas. Journal of Hydrology, 2014, 517, 863-876.	5.4	110
13	Greenâ€Ampt Curveâ€Number mixed procedure as an empirical tool for rainfallâ€“runoff modelling in small and ungauged basins. Hydrological Processes, 2013, 27, 1253-1264.	2.6	106
14	Hydrogeomorphic properties of simulated drainage patterns using digital elevation models: the flat area issue / PropriÃ©tÃ©s hydro-gÃ©omorphologiques de rÃ©seaux de drainage simulÃ©s Ã partir de modÃ¨les numÃ©riques de terrain: la question des zones planes. Hydrological Sciences Journal, 2008, 53, 1176-1193.	2.6	105
15	Fully Nested 3-Copula: Procedure and Application on Hydrological Data. Journal of Hydrologic Engineering - ASCE, 2007, 12, 420-430.	1.9	104
16	Surface flow measurements from drones. Journal of Hydrology, 2016, 540, 240-245.	5.4	99
17	A physically-based method for removing pits in digital elevation models. Advances in Water Resources, 2007, 30, 2151-2158.	3.8	98
18	GFPLAIN250m, a global high-resolution dataset of Earthâ€™s floodplains. Scientific Data, 2019, 6, 180309.	5.3	92

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19	Flow time estimation with spatially variable hillslope velocity in ungauged basins. Advances in Water Resources, 2010, 33, 1216-1223.	3.8	87
20	Do we still need the Rational Formula? An alternative empirical procedure for peak discharge estimation in small and ungauged basins. Hydrological Sciences Journal, 2015, 60, 67-77.	2.6	77
21	UAV-DEMs for Small-Scale Flood Hazard Mapping. Water (Switzerland), 2020, 12, 1717.	2.7	73
22	Pre-processing algorithms and landslide modelling on remotely sensed DEMs. Geomorphology, 2009, 113, 110-125.	2.6	71
23	Large-Scale Particle Image Velocimetry From an Unmanned Aerial Vehicle. IEEE/ASME Transactions on Mechatronics, 2015, 20, 3269-3275.	5.8	70
24	An Evaluation of Image Velocimetry Techniques under Low Flow Conditions and High Seeding Densities Using Unmanned Aerial Systems. Remote Sensing, 2020, 12, 232.	4.0	69
25	Streamflow Observations From Cameras: Largeâ€Scale Particle Image Velocimetry or Particle Tracking Velocimetry?. Water Resources Research, 2017, 53, 10374-10394.	4.2	63
26	Curveâ€Number/Greenâ€“Ampt mixed procedure for streamflow predictions in ungauged basins: Parameter sensitivity analysis. Hydrological Processes, 2013, 27, 1265-1275.	2.6	62
27	Design hydrograph estimation in small and ungauged watersheds: continuous simulation method versus eventâ€based approach. Hydrological Processes, 2012, 26, 3124-3134.	2.6	61
28	One hundred years of return period: Strengths and limitations. Water Resources Research, 2015, 51, 8570-8585.	4.2	61
29	Synthetic Design Hydrographs Based on Distribution Functions with Finite Support. Journal of Hydrologic Engineering - ASCE, 2011, 16, 434-446.	1.9	60
30	Orienting the camera and firing lasers to enhance large scale particle image velocimetry for streamflow monitoring. Water Resources Research, 2014, 50, 7470-7483.	4.2	60
31	Continuous hydrologic modelling for design simulation in small and ungauged basins: A step forward and some tests for its practical use. Journal of Hydrology, 2021, 595, 125664.	5.4	55
32	A continuous simulation model for design-hydrograph estimation in small and ungauged watersheds. Hydrological Sciences Journal, 2012, 57, 1035-1051.	2.6	53
33	Challenges, Opportunities, and Pitfalls for Global Coupled Hydrologicâ€Hydraulic Modeling of Floods. Water Resources Research, 2019, 55, 5277-5300.	4.2	52
34	Design hydrograph estimation in small and fully ungauged basins: a preliminary assessment of the <scp>EBA4SUB</scp> framework. Journal of Flood Risk Management, 2018, 11, .	3.3	50
35	Catchment compatibility via copulas: A non-parametric study of the dependence structures of hydrological responses. Advances in Water Resources, 2016, 90, 116-133.	3.8	49
36	Optical Tracking Velocimetry (OTV): Leveraging Optical Flow and Trajectory-Based Filtering for Surface Streamflow Observations. Remote Sensing, 2018, 10, 2010.	4.0	49

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37	Linear Parametric Models Applied to Daily Hydrological Series. Journal of Hydrologic Engineering - ASCE, 2004, 9, 383-391.	1.9	47
38	Effective Representation of River Geometry in Hydraulic Flood Forecast Models. Water Resources Research, 2018, 54, 1031-1057.	4.2	44
39	Towards harmonisation of image velocimetry techniques for river surface velocity observations. Earth System Science Data, 2020, 12, 1545-1559.	9.9	44
40	Fluorescent particle tracers in surface hydrology: a proof of concept in a semi-natural hillslope. Hydrology and Earth System Sciences, 2012, 16, 2973-2983.	4.9	39
41	Flow monitoring with a camera: a case study on a flood event in the Tiber River. Environmental Monitoring and Assessment, 2016, 188, 118.	2.7	38
42	PTV-Stream: A simplified particle tracking velocimetry framework for stream surface flow monitoring. Catena, 2019, 172, 378-386.	5.0	38
43	Fluorescent particle tracers for surface flow measurements: A proof of concept in a natural stream. Water Resources Research, 2012, 48, .	4.2	37
44	Sensitivity of a physically based method for terrain interpolation to initial conditions and its conditioning on stream location. Earth Surface Processes and Landforms, 2004, 29, 587-597.	2.5	34
45	A novel permanent gauge-cam station for surface-flow observations on the Tiber River. Geoscientific Instrumentation, Methods and Data Systems, 2016, 5, 241-251.	1.6	34
46	Citizens AND HYdrology (CANDHY): conceptualizing a transdisciplinary framework for citizen science addressing hydrological challenges. Hydrological Sciences Journal, 2022, 67, 2534-2551.	2.6	33
47	Statistical Hydrology. , 2011, , 479-517.		29
48	A software package for predicting design-flood hydrographs in small and ungauged basins. Journal of Agricultural Engineering, 2015, 46, 74.	1.5	28
49	Tracing of shallow water flows through buoyant fluorescent particles. Flow Measurement and Instrumentation, 2012, 26, 93-101.	2.0	26
50	Preserving first and second moments of the slope area relationship during the interpolation of digital elevation models. Advances in Water Resources, 2005, 28, 583-588.	3.8	25
51	Characterization of Buoyant Fluorescent Particles for Field Observations of Water Flows. Sensors, 2010, 10, 11512-11529.	3.8	25
52	Global-scale massive feature extraction from monthly hydroclimatic time series: Statistical characterizations, spatial patterns and hydrological similarity. Science of the Total Environment, 2021, 767, 144612.	8.0	25
53	Brief communication: Comparing hydrological and hydrogeomorphic paradigms for global flood hazard mapping. Natural Hazards and Earth System Sciences, 2020, 20, 1415-1419.	3.6	24
54	Hillslope Erosion Mitigation: An Experimental Proof of a Nature-Based Solution. Sustainability, 2021, 13, 6058.	3.2	23

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55	Human-flood interactions in Rome over the past 150 years. Advances in Geosciences, 0, 44, 9-13.	12.0	22
56	Ice dices for monitoring stream surface velocity. Journal of Hydro-Environment Research, 2017, 14, 143-149.	2.2	21
57	Optical sensing for stream flow observations: A review. Journal of Agricultural Engineering, 2018, 49, 199-206.	1.5	19
58	Description and preliminary results of a 100 square meter rain gauge. Journal of Hydrology, 2018, 556, 827-834.	5.4	18
59	Low-cost stage-camera system for continuous water-level monitoring in ephemeral streams. Hydrological Sciences Journal, 2022, 67, 1439-1448.	2.6	18
60	Unraveling Flow Patterns through Nonlinear Manifold Learning. PLoS ONE, 2014, 9, e91131.	2.5	17
61	Continuous hydrologic modelling for small and ungauged basins: A comparison of eight rainfall models for sub-daily runoff simulations. Journal of Hydrology, 2022, 610, 127866.	5.4	17
62	Curve-Number/Green-Ampt Mixed Procedure for Net Rainfall Estimation: A Case Study of the Mignone Watershed, IT. Procedia Environmental Sciences, 2013, 19, 113-121.	1.4	15
63	Fluorescent eco-particles for surface flow physics analysis. AIP Advances, 2013, 3, .	1.3	15
64	Enabling Image-Based Streamflow Monitoring at the Edge. Remote Sensing, 2020, 12, 2047.	4.0	15
65	Assessment of Fluorescent Particles for Surface Flow Analysis. Sensors, 2012, 12, 15827-15840.	3.8	13
66	Massive feature extraction for explaining and foretelling hydroclimatic time series forecastability at the global scale. Geoscience Frontiers, 2022, 13, 101349.	8.4	10
67	Characterization of eco-friendly fluorescent nanoparticle-doped tracers for environmental sensing. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	9
68	Towards a Transdisciplinary Theoretical Framework of Citizen Science: Results from a Meta-Review Analysis. Sustainability, 2021, 13, 7904.	3.2	9
69	Design discharge estimation in small and ungauged basins: EBA4SUB framework sensitivity analysis. Journal of Agricultural Engineering, 2020, 51, 107-118.	1.5	9
70	â€œCape Fearâ€â€”A Hybrid Hillslope Plot for Monitoring Hydrological Processes. Hydrology, 2017, 4, 35.	3.0	7
71	Field studies on the soil loss reduction effectiveness of three biodegradable geotextiles. Journal of Agricultural Engineering, 2018, 49, 117-123.	1.5	7
72	On the Deployment of Out-of-the-Box Embedded Devices for Self-Powered River Surface Flow Velocity Monitoring at the Edge. Applied Sciences (Switzerland), 2021, 11, 7027.	2.5	6

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73	Development and Testing of an Unmanned Aerial Vehicle for Large Scale Particle Image Velocimetry. , 2014, , .		5
74	An update on multivariate return periods in hydrology. Proceedings of the International Association of Hydrological Sciences, 0, 373, 175-178.	1.0	5
75	Optimized glcm-based texture features for improved SAR-based flood mapping. , 2017, , .		4
76	Riparian vegetation as a marker for bankfull and management discharge evaluation: The case study of Rio Torbido river basin (central Italy). Journal of Agricultural Engineering, 2021, 52, .	1.5	3
77	An evidence for enhancing the design hydrograph estimation for small and ungauged basins in Ethiopia. Journal of Hydrology: Regional Studies, 2022, 42, 101123.	2.4	3
78	Investigating runoff formation dynamics: field observations at Cape Fear experimental plot. Environmental Monitoring and Assessment, 2019, 191, 642.	2.7	2
79	The Use of Lamination Basins for Mitigation of the Urban Flooding Risk: The Case Study of Peschici. Lecture Notes in Civil Engineering, 2021, , 491-500.	0.4	2
80	Convolution of linear system using geomorphological watershed information. , 2012, , .		1
81	Fluorescent Particles for Non-intrusive Surface Flow Observations. Procedia Environmental Sciences, 2013, 19, 895-903.	1.4	1
82	The influence of the net rainfall mixed Curve Number â€“ Green Ampt procedure in flood hazard mapping: a case study in Central Italy. Journal of Agricultural Engineering, 2013, 44, .	1.5	1
83	A Topological Framework for Flow Characterization and Identification. , 2014, , .		1
84	The Benefit of Continuous Modelling for Design Hydrograph Estimation in Small and Ungauged Basins. Lecture Notes in Civil Engineering, 2020, , 133-139.	0.4	1