Claudio Paniconi

List of Publications by Year
in descending order

87 papers	4,066 citations	136950 32 h-index	123424 61 g-index
98 all docs	98 docs citations	98 times ranked	3751 citing authors

#	Article	IF	Citations
1	Surface–subsurface flow modeling with path–based runoff routing, boundary condition–based coupling, and assimilation of multisource observation data. Water Resources Research, 2010, 46, .	4.2	289
2	A comparison of Picard and Newton iteration in the numerical solution of multidimensional variably saturated flow problems. Water Resources Research, 1994, 30, 3357-3374.	4.2	279
3	Hillslope-storage Boussinesq model for subsurface flow and variable source areas along complex hillslopes: 1. Formulation and characteristic response. Water Resources Research, 2003, 39, .	4.2	233
4	Surface–subsurface model intercomparison: A first set of benchmark results to diagnose integrated hydrology and feedbacks. Water Resources Research, 2014, 50, 1531-1549.	4.2	222
5	Physically based modeling in catchment hydrology at 50: Survey and outlook. Water Resources Research, 2015, 51, 7090-7129.	4.2	193
6	Managing the effects of multiple stressors on aquatic ecosystems under water scarcity. The GLOBAQUA project. Science of the Total Environment, 2015, 503-504, 3-9.	8.0	161
7	Numerical evaluation of iterative and noniterative methods for the solution of the nonlinear Richards equation. Water Resources Research, 1991, 27, 1147-1163.	4.2	146
8	The importance of hydraulic groundwater theory in catchment hydrology: The legacy of Wilfried Brutsaert and Jean-Yves Parlange. Water Resources Research, 2013, 49, 5099-5116.	4.2	114
9	The integrated hydrologic model intercomparison project, <scp>IH–MIP2</scp>: A second set of benchmark results to diagnose integrated hydrology and feedbacks. Water Resources Research, 2017, 53, 867-890.	4.2	113
10	A comparison of two physics-based numerical models for simulating surface water–groundwater interactions. Advances in Water Resources, 2010, 33, 456-467.	3.8	108
11	A detailed model for simulation of catchment scale subsurface hydrologic processes. Water Resources Research, 1993, 29, 1601-1620.	4.2	101
12	Hillslope-storage Boussinesq model for subsurface flow and variable source areas along complex hillslopes: 2. Intercomparison with a three-dimensional Richards equation model. Water Resources Research, 2003, 39, .	4.2	94
13	Modeling and Analysis of Seawater Intrusion in the Coastal Aquifer of Eastern Cap-Bon, Tunisia. Transport in Porous Media, 2001, 43, 3-28.	2.6	88
14	Ensemble Kalman filter data assimilation for a process–based catchment scale model of surface and subsurface flow. Water Resources Research, 2009, 45, .	4.2	85
15	Assessment of climate change impacts at the catchment scale with a detailed hydrological model of surface–subsurface interactions and comparison with a land surface model. Water Resources Research, 2011, 47, .	4.2	85
16	Coupling water flow and solute transport into a physically-based surface–subsurface hydrological model. Advances in Water Resources, 2011, 34, 128-136.	3.8	70
17	An integrated modelling framework of catchment–scale ecohydrological processes: 1. Model description and tests over an energy–limited watershed. Ecohydrology, 2014, 7, 427-439.	2.4	68
18	A modelling study of seawater intrusion in the Korba coastal plain, Tunisia. Physics and Chemistry of the Earth, 2001, 26, 345-351.	0.3	64

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19	The hillslope-storage Boussinesq model for non-constant bedrock slope. Journal of Hydrology, 2004, 291, 160-173.	5.4	64
20	Hydrologic response to multimodel climate output using a physically based model of groundwater/surface water interactions. Water Resources Research, 2012, 48, .	4.2	62
21	Newtonian nudging for a Richards equation-based distributed hydrological model. Advances in Water Resources, 2003, 26, 161-178.	3.8	60
22	Evaluation of a distributed catchment scale water balance model. Water Resources Research, 1993, 29, 1805-1817.	4.2	59
23	Mapping basin scale variable source areas from multitemporal remotely sensed observations of soil moisture behavior. Water Resources Research, 1998, 34, 3235-3244.	4.2	56
24	Picard and Newton linearization for the coupled model for saltwater intrusion in aquifers. Advances in Water Resources, 1995, 18, 159-170.	3.8	53
25	Is climate change a threat for water uses in the Mediterranean region? Results from a survey at local scale. Science of the Total Environment, 2016, 543, 981-996.	8.0	51
26	Impact of grid resolution on the integrated and distributed response of a coupled surface€"subsurface hydrological model for the des Anglais catchment, Quebec. Hydrological Processes, 2011, 25, 1853-1865.	2.6	50
27	Storage-dependent drainable porosity for complex hillslopes. Water Resources Research, 2005, 41, .	4.2	47
28	Low-dimensional modeling of hillslope subsurface flow: Relationship between rainfall, recharge, and unsaturated storage dynamics. Water Resources Research, 2007, 43, .	4.2	45
29	A field and modeling study of nonlinear storage-discharge dynamics for an Alpine headwater catchment. Water Resources Research, 2014, 50, 806-822.	4.2	44
30	Modeling groundwater-surface water interactions including effects of morphogenetic depressions in the Chernobyl exclusion zone. Environmental Geology, 2002, 42, 162-177.	1.2	43
31	Algorithm for Delineating and Extracting Hillslopes and Hillslope Width Functions from Gridded Elevation Data. Journal of Hydrologic Engineering - ASCE, 2014, 19, 366-374.	1.9	35
32	Remote sensing for mapping soil moisture and drainage potential in semi-arid regions: Applications to the Campidano plain of Sardinia, Italy. Science of the Total Environment, 2016, 543, 862-876.	8.0	32
33	A modeling study of heterogeneity and surface water-groundwater interactions in the Thomas Brook catchment, Annapolis Valley (Nova Scotia, Canada). Hydrology and Earth System Sciences, 2009, 13, 1583-1596.	4.9	32
34	Assessment of adaptive and heuristic time stepping for variably saturated flow. International Journal for Numerical Methods in Fluids, 2007, 53, 1173-1193.	1.6	31
35	Analysis of the hydrological response of a distributed physically-based model using post-assimilation (EnKF) diagnostics of streamflow and in situ soil moisture observations. Journal of Hydrology, 2014, 514, 192-201.	5.4	30
36	Comparison of two modeling approaches for groundwater€"surface water interactions. Hydrological Processes, 2013, 27, 2258-2270.	2.6	29

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37	Incipient subsurface heterogeneity and its effect on overland flow generation – insight from a modeling study of the first experiment at the Biosphere 2 Landscape Evolution Observatory. Hydrology and Earth System Sciences, 2014, 18, 1873-1883.	4.9	29
38	Fill and Spill Hillslope Runoff Representation With a Richards Equation–Based Model. Water Resources Research, 2019, 55, 8445-8462.	4.2	28
39	Comparison of Data Assimilation Techniques for a Coupled Model of Surface and Subsurface Flow. Vadose Zone Journal, 2009, 8, 837-845.	2.2	26
40	Catchment–scale Richards equation–based modeling of evapotranspiration via boundary condition switching and root water uptake schemes. Water Resources Research, 2015, 51, 5756-5771.	4.2	26
41	Multimodel assessment of climate change-induced hydrologic impacts for a Mediterranean catchment. Hydrology and Earth System Sciences, 2018, 22, 4125-4143.	4.9	25
42	A low–dimensional hillslope–based catchment model for layered groundwater flow. Hydrological Processes, 2012, 26, 2814-2826.	2.6	24
43	Climate Variability and Durum Wheat Adaptation Using the AquaCrop Model in Southern Sardinia. Procedia Environmental Sciences, 2013, 19, 830-835.	1.4	24
44	A simulation/optimization study to assess seawater intrusion management strategies for the Gaza Strip coastal aquifer (Palestine). Hydrogeology Journal, 2015, 23, 249-264.	2.1	24
45	Machine Learning vs. Physics-Based Modeling for Real-Time Irrigation Management. Frontiers in Water, 2020, 2, .	2.3	24
46	Impact of sensor failure on the observability of flow dynamics at the Biosphere 2 LEO hillslopes. Advances in Water Resources, 2015, 86, 327-339.	3.8	21
47	Global evaluation and sensitivity analysis of a physically based flow and reactive transport model on a laboratory experiment. Environmental Modelling and Software, 2019, 113, 73-83.	4.5	21
48	An integrated modelling framework of catchment–scale ecohydrological processes: 2. The role of water subsidy by overland flow on vegetation dynamics in a semi–arid catchment. Ecohydrology, 2014, 7, 815-827.	2.4	20
49	Aquifer–peatland connectivity in southern Quebec (Canada). Hydrological Processes, 2015, 29, 2600-2612.	2.6	19
50	Integrating GIS and Data Visualization Tools for Distributed Hydrologic Modeling. Transactions in GIS, 1999, 3, 97-118.	2.3	18
51	Assessment of alternative land management practices using hydrological simulation and a decision support tool: Arborea agricultural region, Sardinia. Hydrology and Earth System Sciences, 2007, 11, 1811-1823.	4.9	18
52	A watershed-scale study of climate change impacts on groundwater recharge (Annapolis Valley, Nova) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.6	18
53	Multiresponse modeling of variably saturated flow and isotope tracer transport for a hillslope experiment at the Landscape Evolution Observatory. Hydrology and Earth System Sciences, 2016, 20, 4061-4078.	4.9	18
54	Local Contributions to Infiltration Excess Runoff for a Conceptual Catchment Scale Model. Water Resources Research, 1996, 32, 2003-2012.	4.2	17

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55	Examination of the seepage face boundary condition in subsurface and coupled surface/subsurface hydrological models. Water Resources Research, 2017, 53, 1799-1819.	4.2	17
56	Numerical investigation of leakage in sloping aquifers. Journal of Hydrology, 2011, 409, 49-61.	5.4	16
57	Comparison of solution approaches for the two-domain model of nonequilibrium transport in porous media. Advances in Water Resources, 1996, 19, 241-253.	3.8	15
58	Conjunctive Use of a Hydrological Model and a Multicriteria Decision Support System for a Case Study on the Caia Catchment, Portugal. Journal of Hydrologic Engineering - ASCE, 2009, 14, 141-152.	1.9	14
59	Analysis of coupling errors in a physically-based integrated surface water–groundwater model. Advances in Water Resources, 2012, 49, 86-96.	3.8	14
60	Time step and stability control for a coupled model of surface and subsurface flow. Developments in Water Science, 2004, 55, 1391-1402.	0.1	13
61	Mass-conservative reconstruction of Galerkin velocity fields for transport simulations. Advances in Water Resources, 2016, 94, 470-485.	3.8	13
62	Flow dynamics in hyper-saline aquifers: hydro-geophysical monitoring and modeling. Hydrology and Earth System Sciences, 2017, 21, 1439-1454.	4.9	13
63	Sobol Global Sensitivity Analysis of a Coupled Surface/Subsurface Water Flow and Reactive Solute Transfer Model on a Real Hillslope. Water (Switzerland), 2020, 12, 121.	2.7	13
64	Numerical assessment of a dynamical relaxation data assimilation scheme for a catchment hydrological model. Hydrological Processes, 2006, 20, 549-563.	2.6	12
65	Effect of surface and subsurface heterogeneity on the hydrological response of a grassed buffer zone. Journal of Hydrology, 2016, 542, 637-647.	5.4	11
66	Chemical and botanical indicators of groundwater inflow to Sphagnum -dominated peatlands. Ecological Indicators, 2016, 64, 142-151.	6.3	11
67	The role of hydrogeological setting in two Canadian peatlands investigated through 2D steady-state groundwater flow modelling. Hydrological Sciences Journal, 2017, 62, 2541-2557.	2.6	11
68	Simulation of Distributed Base Flow Contributions to Streamflow Using a Hillslope-Based Catchment Model Coupled to a Regional-Scale Groundwater Model. Journal of Hydrologic Engineering - ASCE, 2014, 19, 907-917.	1.9	10
69	An assessment of recharge estimates from stream and well data and from a coupled surface-water/groundwater model for the des Anglais catchment, Quebec (Canada). Hydrogeology Journal, 2015, 23, 1731-1743.	2.1	10
70	Model Calibration Based on Random Environmental Fluctuations. Journal of Environmental Engineering, ASCE, 1988, 114, 1136-1145.	1.4	9
71	Comment on "A combined Laplace transform and streamline upwind approach for nonideal transport of solutes in porous media" by Linlin Xu and Mark L. Brusseau. Water Resources Research, 1997, 33, 367-368.	4.2	5
72	Numerical dispersion of solute transport in an integrated surface–subsurface hydrological model. Advances in Water Resources, 2021, 158, 104060.	3.8	5

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73	The influence of a confining layer on saltwater intrusion under surface recharge and groundwater extraction conditions. Developments in Water Science, 2002, 47, 493-500.	0.1	4
74	Implementation of a Root Water Extraction Module in CATHY: Comparison of Four Empirical Root-density Distribution Models. Procedia Environmental Sciences, 2013, 19, 57-66.	1.4	4
75	Control of coupling mass balance error in a process‐based numerical model of surface‐subsurface flow interaction. Water Resources Research, 2015, 51, 5698-5716.	4.2	4
76	Numerical Tests of the Lookup Table Method in Solving Richards' Equation for Infiltration and Drainage in Heterogeneous Soils. Hydrology, 2017, 4, 33.	3.0	4
77	Hydrologic Impacts of Surface Elevation and Spatial Resolution in Statistical Correction Approaches: Case Study of Flumendosa Basin, Italy. Journal of Hydrologic Engineering - ASCE, 2020, 25, .	1.9	4
78	Finite Element Modeling of Saltwater Intrusion Problems with an Application to an Italian Aquifer. , 1995, , 65-84.		4
79	Investigating Parameter Transferability across Models and Events for a Semiarid Mediterranean Catchment. Water (Switzerland), 2019, 11, 2261.	2.7	2
80	Modeling Variably Saturated Flow Problems Using Newton-Type Linearization Methods. , 1995, , 45-64.		2
81	Quasi-Newton Methods for Richards' Equation. Water Science and Technology Library, 1994, , 99-106.	0.3	2
82	Implementation of a hydrological model of groundwater recharge for the Chiba catchment (Cap-Bon,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf		1
83	Agricultural Impacts on Groundwater: Processes, Modelling and Decision Support. , 2001, , 35-75.		1
84	Travel time distributions of subsurface flow along complex hillslopes with exponential width functions. Developments in Water Science, 2004, 55, 1465-1477.	0.1	0
85	Assessment of initial solution estimates and adaptive vs. heuristic time stepping for variably saturated flow. Developments in Water Science, 2004, , 545-556.	0.1	0
86	Empirical modelling to estimate surface soil moisture at field scale in Sardinia, Italy: Comparison between optical and SAR data. , 2014, , .		0
87	Newton-Type Linearization and Line Search Methods for Unsaturated Flow Models. , 1996, , 155-172.		0