Erkan Istanbulluoglu

List of Publications by Year
in descending order

64 papers	3,354 citations	126907 33 h-index	144013 57 g-index
65 all docs	65 docs citations	65 times ranked	4066 citing authors

#	Article	IF	Citations
1	Twenty-three unsolved problems in hydrology (UPH) â€“ a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	2.6	474
2	Vegetation-modulated landscape evolution: Effects of vegetation on landscape processes, drainage density, and topography. Journal of Geophysical Research, 2005, 110, .	3.3	229
3	Impact of climate change and human activities on runoff in the Weihe River Basin, China. Quaternary International, 2015, 380-381, 169-179.	1.5	182
4	Creative computing with Landlab: an open-source toolkit for building, coupling, and exploring two-dimensional numerical models of Earth-surface dynamics. Earth Surface Dynamics, 2017, 5, 21-46.	2.4	148
5	Interpretation of hydrologic trends from a water balance perspective: The role of groundwater storage in the Budyko hypothesis. Water Resources Research, 2012, 48, .	4.2	117
6	On the dynamics of soil moisture, vegetation, and erosion: Implications of climate variability and change. Water Resources Research, 2006, 42, .	4.2	112
7	Quantifying the impact of groundwater depth on evapotranspiration in a semi-arid grassland region. Hydrology and Earth System Sciences, 2011, 15, 787-806.	4.9	104
8	A physically-based method for removing pits in digital elevation models. Advances in Water Resources, 2007, 30, 2151-2158.	3.8	98
9	On the role of groundwater and soil texture in the regional water balance: An investigation of the Nebraska Sand Hills, USA. Water Resources Research, 2009, 45, .	4.2	98
10	Are climatic or land cover changes the dominant cause of runoff trends in the Upper Mississippi River Basin?. Geophysical Research Letters, 2013, 40, 1104-1110.	4.0	97
11	A probabilistic approach for channel initiation. Water Resources Research, 2002, 38, 61-1-61-14.	4.2	92
12	Improving the theoretical underpinnings of processâ€based hydrologic models. Water Resources Research, 2016, 52, 2350-2365.	4.2	80
13	Development of gullies on the landscape: A model of headcut retreat resulting from plunge pool erosion. Journal of Geophysical Research, 2006, 111, .	3.3	79
14	Ecoâ€geomorphic implications of hillslope aspect: Inferences from analysis of landscape morphology in central New Mexico. Geophysical Research Letters, 2008, 35, .	4.0	77
15	Modeling of the interactions between forest vegetation, disturbances, and sediment yields. Journal of Geophysical Research, 2004, 109, .	3.3	70
16	Which way do you lean? Using slope aspect variations to understand Critical Zone processes and feedbacks. Earth Surface Processes and Landforms, 2018, 43, 1133-1154.	2.5	70
17	Ecohydrologic role of solar radiation on landscape evolution. Water Resources Research, 2015, 51, 1127-1157.	4.2	63
18	The implications of geology, soils, and vegetation on landscape morphology: Inferences from semi-arid basins with complex vegetation patterns in Central New Mexico, USA. Geomorphology, 2010, 116, 246-263.	2.6	62

#	Article	IF	Citations
19	A sediment transport model for incision of gullies on steep topography. Water Resources Research, 2003, 39, .	4.2	61
20	Headwater channel dynamics in semiarid rangelands, Colorado high plains, USA. Bulletin of the Geological Society of America, 2006, 118, 959-974.	3.3	56
21	Short communication: LandlabÂv2.0: a software package for Earth surface dynamics. Earth Surface Dynamics, 2020, 8, 379-397.	2.4	56
22	Implications of bank failures and fluvial erosion for gully development: Field observations and modeling. Journal of Geophysical Research, 2005, 110, .	3.3	55
23	On the observed ecohydrologic dynamics of a semiarid basin with aspect-delimited ecosystems. Water Resources Research, 2013, 49, 8263-8284.	4.2	54
24	Glacier Recession and the Response of Summer Streamflow in the Pacific Northwest United States, 1960â€“2099. Water Resources Research, 2018, 54, 6202-6225.	4.2	48
25	On evapotranspiration and shallow groundwater fluctuations: A Fourierâ€based improvement to the White method. Water Resources Research, 2012, 48, .	4.2	46
26	Modeling the ecohydrological role of aspectâ€controlled radiation on treeâ€grassâ€shrub coexistence in a semiarid climate. Water Resources Research, 2013, 49, 2872-2895.	4.2	46
27	Evaluation of ecohydrologic model parsimony at local and regional scales in a semiarid grassland ecosystem. Ecohydrology, 2012, 5, 121-142.	2.4	42
28	Ecohydrological response to a geomorphically significant flood event in a semiarid catchment with contrasting ecosystems. Geophysical Research Letters, 2007, 34, .	4.0	41
29	The Landlab v1.0 OverlandFlow component: a Python tool for computing shallow-water flow across watersheds. Geoscientific Model Development, 2017, 10, 1645-1663.	3.6	40
30	Seasonal energy and water balance of a Phragmites australis-dominated wetland in the Republican River basin of south-central Nebraska (USA). Journal of Hydrology, 2011, 408, 19-34.	5.4	39
31	The role of vegetation on gully erosion stabilization at a severely degraded landscape: A case study from Calhoun Experimental Critical Zone Observatory. Geomorphology, 2018, 308, 25-39.	2.6	39
32	Mechanisms of shrub encroachment into Northern Chihuahuan Desert grasslands and impacts of climate change investigated using a cellular automata model. Advances in Water Resources, 2016, 91, 46-62.	3.8	38
33	tRIBS-Erosion: A parsimonious physically-based model for studying catchment hydro-geomorphic response. Catena, 2012, 92, 216-231.	5.0	34
34	Climate change and Ecotone boundaries: Insights from a cellular automata ecohydrology model in a Mediterranean catchment with topography controlled vegetation patterns. Advances in Water Resources, 2014, 73, 159-175.	3.8	32
35	Predicting glacioâ€hydrologic change in the headwaters of the <scp>Z</scp>ongo <scp>R</scp>iver, <scp>C</scp>ordillera <scp>R</scp>eal, <scp>B</scp>olivia. Water Resources Research, 2015, 51, 9029-9052.	4.2	28
36	River Bed Elevation Variability Reflects Sediment Supply, Rather Than Peak Flows, in the Uplands of Washington State. Water Resources Research, 2019, 55, 6795-6810.	4.2	28

#	Article	IF	Citations
37	Solar radiation as a global driver of hillslope asymmetry: Insights from an ecogeomorphic landscape evolution model. Water Resources Research, 2015, 51, 9843-9861.	4.2	24
38	Breaking Down the Computational Barriers to Realâ€Time Urban Flood Forecasting. Geophysical Research Letters, 2021, 48, e2021GL093585.	4.0	21
39	Implications of decadal to century scale glacioâ€hydrological change for water resources of the Hood River basin, OR, USA. Hydrological Processes, 2016, 30, 4314-4329.	2.6	20
40	A hydroclimatological approach to predicting regional landslide probability using Landlab. Earth Surface Dynamics, 2018, 6, 49-75.	2.4	20
41	Enabling Collaborative Numerical Modeling in Earth Sciences using Knowledge Infrastructure. Environmental Modelling and Software, 2019, 120, 104424.	4.5	19
42	A hydro-climatological lake classification model and its evaluation using global data. Journal of Hydrology, 2013, 486, 376-383.	5.4	17
43	Energy and water balance response of a vegetated wetland to herbicide treatment of invasive Phragmites australis. Journal of Hydrology, 2016, 539, 290-303.	5.4	17
44	Morphometrics of China's Loess Plateau: The spatial legacy of tectonics, climate, and loess deposition history. Geomorphology, 2020, 354, 107043.	2.6	16
45	A new approach to mapping landslide hazards: a probabilistic integration of empirical and physically based models in the North Cascades of Washington, USA. Natural Hazards and Earth System Sciences, 2019, 19, 2477-2495.	3.6	15
46	Ecohydrology Controls the Geomorphic Response to Climate Change. Geophysical Research Letters, 2019, 46, 8852-8861.	4.0	14
47	An Ecoâ€hydroâ€geomorphic Perspective to Modeling the Role of Climate in Catchment Evolution. Geography Compass, 2009, 3, 1151-1175.	2.7	13
48	A geomorphic perspective on terrainâ€modulated organization of vegetation productivity: analysis in two semiarid grassland ecosystems in Southwestern United States. Ecohydrology, 2014, 7, 242-257.	2.4	13
49	CellLab-CTS 2015: continuous-time stochastic cellular automaton modeling using Landlab. Geoscientific Model Development, 2016, 9, 823-839.	3.6	12
50	A Nullâ€Parameter Formula of Storageâ€Evapotranspiration Relationship at Catchment Scale and its Application for a New Hydrological Model. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2082-2097.	3.3	12
51	Modeling Catchment Evolution: From Decoding Geomorphic Processes Signatures toward Predicting Impacts of Climate Change. Geography Compass, 2009, 3, 1125-1150.	2.7	11
52	Is there a limit to bioretention effectiveness? Evaluation of stormwater bioretention treatment using a lumped urban ecohydrologic model and ecologically based design criteria. Hydrological Processes, 2018, 32, 2318-2334.	2.6	11
53	An Ecohydrological Cellular Automata Model Investigation of Juniper Tree Encroachment in a Western North American Landscape. Ecosystems, 2017, 20, 1104-1123.	3.4	9
54	Deterministic chaotic dynamics in soil moisture across Nebraska. Journal of Hydrology, 2019, 578, 124048.	5.4	9

#	Article	IF	Citations
55	Channel Conveyance Variability can Influence Flood Risk as Much as Streamflow Variability in Western Washington State. Water Resources Research, 2022, 58, .	4.2	9
56	Automated retrieval, preprocessing, and visualization of gridded hydrometeorology data products for spatial-temporal exploratory analysis and intercomparison. Environmental Modelling and Software, 2019, 116, 119-130.	4.5	8
57	Impacts of devegetation on the temporal evolution of soil saturated hydraulic conductivity in a vegetated sand dune area. Environmental Earth Sciences, 2015, 73, 7651-7660.	2.7	7
58	A New Hydrologic Sensitivity Framework for Unsteadyâ€State Responses to Climate Change and Its Application to Catchments With Croplands in Illinois. Water Resources Research, 2021, 57, e2020WR027762.	4.2	7
59	A Channel Network Model for Sediment Dynamics Over Watershed Management Time Scales. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001852.	3.8	6
60	Nutrient Loss Following Phragmites australis Removal in Controlled Soil Mesocosms. Water, Air, and Soil Pollution, 2012, 223, 3333-3344.	2.4	3
61	Short communication: Landlab v2.0: A software package for Earth surface dynamics. , 0, , .		2
62	Reply to comment by Jonathan J. Rhodes on â€œModeling of the interactions between forest vegetation, disturbances, and sediment yieldsâ€. Journal of Geophysical Research, 2005, 110, .	3.3	1
63	Landscape Evolution Models and Ecohydrologic Processes. , 2016, , 135-179.		1
64	FLOODING AND EROSION AFTER THE BUFFALO CREEK FIRE: A MODELING APPROACH USING LANDLAB. , 2016, , .		1