Andreas Hartmann

List of Publications by Year
in descending order

58	2,963	186265 28	168389 53
papers	citations	h-index	g-index

108	108	108	3214
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Karst water resources in a changing world: Review of hydrological modeling approaches. Reviews of Geophysics, 2014, 52, 218-242.	23.0	610
2	Hillslope Hydrology in Global Change Research and Earth System Modeling. Water Resources Research, 2019, 55, 1737-1772.	4.2	281
3	The Demographics of Water: A Review of Water Ages in the Critical Zone. Reviews of Geophysics, 2019, 57, 800-834.	23.0	197
4	Enhanced groundwater recharge rates and altered recharge sensitivity to climate variability through subsurface heterogeneity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2842-2847.	7.1	128
5	Progress in the hydrologic simulation of time variant recharge areas of karst systems â€“ Exemplified at a karst spring in Southern Spain. Advances in Water Resources, 2013, 54, 149-160.	3.8	93
6	A large-scale simulation model to assess karstic groundwater recharge over Europe and the Mediterranean. Geoscientific Model Development, 2015, 8, 1729-1746.	3.6	89
7	A new approach to model the spatial and temporal variability of recharge to karst aquifers. Hydrology and Earth System Sciences, 2012, 16, 2219-2231.	4.9	82
8	Modeling spatiotemporal impacts of hydroclimatic extremes on groundwater recharge at a Mediterranean karst aquifer. Water Resources Research, 2014, 50, 6507-6521.	4.2	82
9	Testing the realism of model structures to identify karst system processes using water quality and quantity signatures. Water Resources Research, 2013, 49, 3345-3358.	4.2	81
10	Global analysis reveals climatic controls on the oxygen isotope composition of cave drip water. Nature Communications, 2019, 10, 2984.	12.8	81
11	A multi-model approach for improved simulations of future water availability at a large Eastern Mediterranean karst spring. Journal of Hydrology, 2012, 468-469, 130-138.	5.4	76
12	Process-based karst modelling to relate hydrodynamic and hydrochemical characteristics to system properties. Hydrology and Earth System Sciences, 2013, 17, 3305-3321.	4.9	70
13	Streamflow sensitivity to water storage changes across Europe. Geophysical Research Letters, 2016, 43, 1980-1987.	4.0	59
14	Climate Change Impacts on Jordan River Flow: Downscaling Application from a Regional Climate Model. Journal of Hydrometeorology, 2010, 11, 860-879.	1.9	55
15	Risk of groundwater contamination widely underestimated because of fast flow into aquifers. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	53
16	Modelling karst vadose zone hydrology and its relevance for paleoclimate reconstruction. Earth-Science Reviews, 2017, 172, 178-192.	9.1	49
17	Dynamics of water fluxes and storages in an Alpine karst catchment under current and potential future climate conditions. Hydrology and Earth System Sciences, 2018, 22, 3807-3823.	4.9	46
18	Identification of a karst systemâ€™s intrinsic hydrodynamic parameters: upscaling from single springs to the whole aquifer. Environmental Earth Sciences, 2012, 65, 2377-2389.	2.7	45

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19	Global karst springs hydrograph dataset for research and management of the worldâ€™s fastest-flowing groundwater. Scientific Data, 2020, 7, 59.	5.3	45
20	Model-aided quantification of dissolved carbon and nitrogen release after windthrow disturbance in an Austrian karst system. Biogeosciences, 2016, 13, 159-174.	3.3	44
21	GMD perspective: The quest to improve the evaluation of groundwater representation in continental- to global-scale models. Geoscientific Model Development, 2021, 14, 7545-7571.	3.6	38
22	Combining Experimental Methods and Modeling to Quantify the Complex Recharge Behavior of Karst Aquifers. Water Resources Research, 2019, 55, 1384-1404.	4.2	37
23	The relevance of sewer deterioration modelling to support asset management strategies. Urban Water Journal, 2017, 14, 1007-1015.	2.1	34
24	V2Karst V1.1: a parsimonious large-scale integrated vegetationâ€“recharge model to simulate the impact of climate and land cover change in karst regions. Geoscientific Model Development, 2018, 11, 4933-4964.	3.6	34
25	Optimal hydrograph separation filter to evaluate transport routines of hydrological models. Journal of Hydrology, 2014, 514, 249-257.	5.4	33
26	What is the hydrologically effective area of a catchment?. Environmental Research Letters, 2020, 15, 104024.	5.2	33
27	Karst modelling challenge 1: Results of hydrological modelling. Journal of Hydrology, 2021, 600, 126508.	5.4	31
28	A new approach to evaluate spatiotemporal dynamics of controlling parameters in distributed environmental models. Environmental Modelling and Software, 2017, 87, 1-16.	4.5	28
29	On the value of water quality data and informative flow states in karst modelling. Hydrology and Earth System Sciences, 2017, 21, 5971-5985.	4.9	28
30	Groundwater Pumping Impacts on Real Stream Networks: Testing the Performance of Simple Management Tools. Water Resources Research, 2018, 54, 5471-5486.	4.2	26
31	On doing hydrology with dragons: Realizing the value of perceptual models and knowledge accumulation. Wiley Interdisciplinary Reviews: Water, 2021, 8, e1550.	6.5	26
32	Model signatures and aridity indices enhance the accuracy of water balance estimations in a data-scarce Eastern Mediterranean catchment. Journal of Hydrology: Regional Studies, 2015, 4, 487-501.	2.4	25
33	The Properties of Annually Laminated Stalagmitesâ€A Global Synthesis. Reviews of Geophysics, 2021, 59, e2020RG000722.	23.0	23
34	Process-based modelling to evaluate simulated groundwater levels and frequencies in aÂChalk catchment in south-western England. Natural Hazards and Earth System Sciences, 2018, 18, 445-461.	3.6	22
35	Simplified Conceptual Structures and Analytical Solutions for Groundwater Discharge Using Reservoir Equations. , 0, , .		19
36	How can we model subsurface stormflow at the catchment scale if we cannot measure it?. Hydrological Processes, 2019, 33, 1378-1385.	2.6	19

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37	Rainfall recharge thresholds in a subtropical climate determined using a regional cave drip water monitoring network. Journal of Hydrology, 2020, 587, 125001.	5.4	19
38	Moving beyond the catchment scale: Value and opportunities in largeâ€scale hydrology to understand our changing world. Hydrological Processes, 2020, 34, 2292-2298.	2.6	19
39	A step-wise semi-distributed simulation approach to characterize a karst aquifer and to support dam construction in a data-scarce environment. Journal of Hydrology, 2017, 554, 470-481.	5.4	17
40	A soil moisture monitoring network to characterize karstic recharge and evapotranspiration at five representative sites across the globe. Geoscientific Instrumentation, Methods and Data Systems, 2020, 9, 11-23.	1.6	17
41	Putting the cat in the box: why our models should consider subsurface heterogeneity at all scales. Wiley Interdisciplinary Reviews: Water, 2016, 3, 478-486.	6.5	16
42	Identifying More Realistic Model Structures by Electrical Conductivity Observations of the Karst Spring. Water Resources Research, 2021, 57, e2020WR028587.	4.2	15
43	Integrating field work and large-scale modeling to improve assessment of karst water resources. Hydrogeology Journal, 2021, 29, 315-329.	2.1	14
44	Assessing Streamflow Sensitivity to Precipitation Variability in Karstâ€Influenced Catchments With Unclosed Water Balances. Water Resources Research, 2021, 57, e2020WR028598.	4.2	13
45	Informationâ€Based Machine Learning for Tracer Signature Prediction in Karstic Environments. Water Resources Research, 2020, 56, e2018WR024558.	4.2	12
46	Characterization, modeling, and remediation of karst in a changing environment. Environmental Earth Sciences, 2018, 77, 1.	2.7	10
47	Improved Assessment of Groundwater Recharge in a Mediterranean Karst Region: Andalusia, Spain. Advances in Karst Science, 2017, , 117-125.	0.3	9
48	Quantifying temporal variability and spatial heterogeneity in rainfall recharge thresholds in a montane karst environment. Journal of Hydrology, 2021, 594, 125965.	5.4	9
49	A tracerâ€based simulation approach to quantify seasonal dynamics of surfaceâ€groundwater interactions in the Pantanal wetland. Hydrological Processes, 2016, 30, 2590-2602.	2.6	8
50	Experiences in calibrating and evaluating lumped karst hydrological models. Geological Society Special Publication, 2018, 466, 331-340.	1.3	8
51	The Shallow Subsurface of Karst Systems: Review and Directions. Advances in Karst Science, 2020, , 61-68.	0.3	6
52	An integrated hydrogeological approach to evaluate the leakage potential from a complex and fractured karst aquifer, example of Abolabbas Dam (Iran). Environmental Earth Sciences, 2020, 79, 1.	2.7	5
53	Understanding and predicting large-scale hydrological variability in a changing environment. Proceedings of the International Association of Hydrological Sciences, 0, 383, 141-149.	1.0	3
54	The Hydrology of Groundwater Systems - From Recharge to Discharge. , 2022, , 324-330.		3

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55	Long- and Short-Term Inorganic Nitrogen Runoff from a Karst Catchment in Austria. Forests, 2020, 11, 1112.	2.1	2
56	Hydrological Modeling of an Alpine Dolomite Karst System. Environmental Earth Sciences, 2010, , 223-229.	0.2	2
57	Simplified VarKarst Semi-distributed Model Applied to Joint Simulations of Discharge and Piezometric Variations in Villanueva Del Rosario Karst System (Malaga, Southern Spain). Advances in Karst Science, 2020, , 145-150.	0.3	1
58	Using soil moisture observations to characterize groundwater recharge processes at five contrasting climate regions. , 0, , .		0