

Anders WÃ¶rman

List of Publications by Year in descending order

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95
papers

3,261
citations

201674

27
h-index

161849

54
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107
all docs

107
docs citations

107
times ranked

3031
citing authors

#	ARTICLE	IF	CITATIONS
1	Hyporheic flow and transport processes: Mechanisms, models, and biogeochemical implications. <i>Reviews of Geophysics</i> , 2014, 52, 603-679.	23.0	642
2	How old is streamwater? Open questions in catchment transit time conceptualization, modelling and analysis. <i>Hydrological Processes</i> , 2010, 24, 1745-1754.	2.6	276
3	Effect of flow-induced exchange in hyporheic zones on longitudinal transport of solutes in streams and rivers. <i>Water Resources Research</i> , 2002, 38, 2-1-2-15.	4.2	197
4	A multiscale model for integrating hyporheic exchange from ripples to meanders. <i>Water Resources Research</i> , 2010, 46, .	4.2	168
5	Fractal topography and subsurface water flows from fluvial bedforms to the continental shield. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	140
6	Is the Hyporheic Zone Relevant beyond the Scientific Community?. <i>Water (Switzerland)</i> , 2019, 11, 2230.	2.7	113
7	Exact three-dimensional spectral solution to surface-groundwater interactions with arbitrary surface topography. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	98
8	Spatial variations in denitrification activity in wetland sediments explained by hydrology and denitrifying community structure. <i>Water Research</i> , 2007, 41, 4710-4720.	11.3	92
9	Comparison of models for transient storage of solutes in small streams. <i>Water Resources Research</i> , 2000, 36, 455-468.	4.2	75
10	Comparison of transient storage in vegetated and unvegetated reaches of a small agricultural stream in Sweden: seasonal variation and anthropogenic manipulation. <i>Advances in Water Resources</i> , 2003, 26, 951-964.	3.8	69
11	Analytical solution and timescale for transport of reacting solutes in rivers and streams. <i>Water Resources Research</i> , 1998, 34, 2703-2716.	4.2	65
12	Effect of pond shape and vegetation heterogeneity on flow and treatment performance of constructed wetlands. <i>Journal of Hydrology</i> , 2005, 301, 123-138.	5.4	64
13	Controlling factors for water residence time and flow patterns in Ekeby treatment wetland, Sweden. <i>Advances in Water Resources</i> , 2007, 30, 838-850.	3.8	54
14	Reach scale and evaluation methods as limitations for transient storage properties in streams and rivers. <i>Water Resources Research</i> , 2007, 43, .	4.2	45
15	Radar techniques for indicating internal erosion in embankment dams. <i>Journal of Applied Geophysics</i> , 1995, 33, 143-156.	2.1	43
16	Erosion in a granular medium interface. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1992, 30, 639-655.	1.7	42
17	Evaluating the fate of six common pharmaceuticals using a reactive transport model: Insights from a stream tracer test. <i>Science of the Total Environment</i> , 2013, 458-460, 344-354.	8.0	37
18	Hyporheic exchange of reactive and conservative solutes in streams—tracer methodology and model interpretation. <i>Journal of Hydrology</i> , 2003, 278, 153-171.	5.4	36

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19	Riprap Protection without Filter Layers. <i>Journal of Hydraulic Engineering</i> , 1989, 115, 1615-1630.	1.5	35
20	Implications of sorption kinetics to radionuclide migration in fractured rock. <i>Water Resources Research</i> , 1999, 35, 3429-3440.	4.2	35
21	Impact of Dynamically Changing Discharge on Hyporheic Exchange Processes Under Gaining and Losing Groundwater Conditions. <i>Water Resources Research</i> , 2018, 54, 10,076.	4.2	32
22	Seepage-induced Mass Wasting in Coarse Soil Slopes. <i>Journal of Hydraulic Engineering</i> , 1993, 119, 1155-1168.	1.5	31
23	Modeling Retention of Sorbing Solutes in Streams Based on Tracer Experiment Using ^{51}Cr . <i>Journal of Environmental Engineering, ASCE</i> , 1998, 124, 122-130.	1.4	31
24	Spectral scaling of heat fluxes in streambed sediments. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	31
25	A utilização de soluções exactas baseadas em análise espectral na caracterização do escoamento subterrâneo controlado pela topografia. <i>Hydrogeology Journal</i> , 2011, 19, 1531-1543.	2.1	30
26	Groundwater flow systems theory: research challenges beyond the specified-head top boundary condition. <i>Hydrogeology Journal</i> , 2016, 24, 1087-1090.	2.1	30
27	Sorption Behavior and Long-Term Retention of Reactive Solutes in the Hyporheic Zone of Streams. <i>Journal of Environmental Engineering, ASCE</i> , 2004, 130, 573-584.	1.4	28
28	Spatially differentiated regulation: Can it save the Baltic Sea from excessive N-loads?. <i>Ambio</i> , 2019, 48, 1278-1289.	5.5	27
29	Hydrological modelling of Ethiopian catchments using limited data. <i>Hydrological Processes</i> , 2009, 23, 3401-3408.	2.6	26
30	An analytical study on artesian flow conditions in unconfined aquifer drainage basins. <i>Water Resources Research</i> , 2015, 51, 8658-8667.	4.2	25
31	Impact of Flow Alteration and Temperature Variability on Hyporheic Exchange. <i>Water Resources Research</i> , 2020, 56, e2019WR026225.	4.2	25
32	Human impacts and their interactions in the Baltic Sea region. <i>Earth System Dynamics</i> , 2022, 13, 1-80.	7.1	25
33	Heterogeneous matrix diffusion in crystalline rock – implications for geosphere retardation of migrating radionuclides. <i>Journal of Contaminant Hydrology</i> , 2001, 47, 365-378.	3.3	24
34	On the use of late-time peaks of residence time distributions for the characterization of hierarchically nested groundwater flow systems. <i>Journal of Hydrology</i> , 2016, 543, 47-58.	5.4	24
35	Retention of conservative and sorptive solutes in streams – simultaneous tracer experiments. <i>Science of the Total Environment</i> , 2001, 266, 229-238.	8.0	22
36	Hydraulic Conductivity of Coarse Rockfill used in Hydraulic Structures. <i>Transport in Porous Media</i> , 2015, 108, 367-391.	2.6	22

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37	Response functions for in-stream solute transport in river networks. <i>Water Resources Research</i> , 2011, 47, .	4.2	21
38	Climate Change Impact on Agricultural Water Resources Variability in the Northern Highlands of Ethiopia. , 2011, , 241-265.		21
39	Drifting runoff periodicity during the 20th century due to changing surface water volume. <i>Hydrological Processes</i> , 2010, 24, 3772-3784.	2.6	20
40	Fragmentation of the Hyporheic Zone Due to Regional Groundwater Circulation. <i>Water Resources Research</i> , 2019, 55, 1242-1262.	4.2	20
41	Mechanism of the progressive failure of non-cohesive natural dam slopes. <i>Geomorphology</i> , 2020, 363, 107198.	2.6	20
42	Biological Wastewater Treatment Systems. , 2011, , 275-290.		19
43	Design of Remediation Actions for Nutrient Mitigation in the Hyporheic Zone. <i>Water Resources Research</i> , 2017, 53, 8872-8899.	4.2	19
44	Desorption and diffusion of episodic pollutants in sediments: a 3-phase model applied to Chernobyl 137Cs. <i>Applied Geochemistry</i> , 1996, 11, 311-316.	3.0	18
45	Voronoi Tessellation Captures Very Early Clustering of Single Primary Cells as Induced by Interactions in Nascent Biofilms. <i>PLoS ONE</i> , 2011, 6, e26368.	2.5	17
46	Effects of Successive Peak Flow Events on Hyporheic Exchange and Residence Times. <i>Water Resources Research</i> , 2020, 56, e2020WR027113.	4.2	17
47	Criteria for resolution-scales and parameterisation of compartmental models of hydrological and ecological mass flows. <i>Journal of Hydrology</i> , 2007, 335, 364-373.	5.4	16
48	The Effect of Stream Discharge on Hyporheic Exchange. <i>Water (Switzerland)</i> , 2019, 11, 1436.	2.7	16
49	Effect of sorption kinetics on the transport of solutes in streams. <i>Science of the Total Environment</i> , 2001, 266, 239-247.	8.0	14
50	Spatiotemporal decomposition of solute dispersion in watersheds. <i>Water Resources Research</i> , 2015, 51, 2377-2392.	4.2	13
51	The power of runoff. <i>Journal of Hydrology</i> , 2017, 548, 784-793.	5.4	13
52	Virtual energy storage gain resulting from the spatio-temporal coordination of hydropower over Europe. <i>Applied Energy</i> , 2020, 272, 115249.	10.1	13
53	Kinematic analysis of solute mass flows in rock fractures with spatially random parameters. <i>Journal of Contaminant Hydrology</i> , 2003, 60, 163-191.	3.3	12
54	Trade-Offs between Phosphorous Discharge and Hydropower Production Using Reservoir Regulation. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2017, 143, .	2.6	12

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55	Long-term phosphorus sorption and leaching in sand filters for onsite treatment systems. <i>Science of the Total Environment</i> , 2022, 833, 155254.	8.0	12
56	Injection of CO ₂ -saturated brine in geological reservoir: A way to enhanced storage safety. <i>International Journal of Greenhouse Gas Control</i> , 2016, 54, 129-144.	4.6	11
57	Impact of Landscape Topography and Quaternary Overburden on the Performance of a Geological Repository of Nuclear Waste. <i>Nuclear Technology</i> , 2008, 163, 165-179.	1.2	10
58	Reactive transport modeling of leaking CO ₂ -saturated brine along a fractured pathway. <i>International Journal of Greenhouse Gas Control</i> , 2015, 42, 672-689.	4.6	10
59	Incipient Motion during Static Armoring. <i>Journal of Hydraulic Engineering</i> , 1992, 118, 496-501.	1.5	9
60	The influence of spatially variable stream hydraulics on reach scale transient storage modeling. <i>Water Resources Research</i> , 2014, 50, 9287-9299.	4.2	9
61	Hydraulic response in flooded stream networks. <i>Water Resources Research</i> , 2015, 51, 213-240.	4.2	8
62	Hydrograph variances over different timescales in hydropower production networks. <i>Water Resources Research</i> , 2016, 52, 5829-5846.	4.2	8
63	The role of advection and dispersion in the rock matrix on the transport of leaking CO ₂ -saturated brine along a fractured zone. <i>Advances in Water Resources</i> , 2016, 98, 132-146.	3.8	8
64	Modelling Phosphorus Sorption Kinetics and the Longevity of Reactive Filter Materials Used for On-Site Wastewater Treatment. <i>Water (Switzerland)</i> , 2019, 11, 811.	2.7	8
65	Radar techniques for indicating internal erosion in embankment dams. <i>Journal of Applied Geophysics</i> , 1995, 33, 143-156.	2.1	8
66	Stage-dependent hydraulic and hydromorphologic properties in stream networks translated into response functions of compartmental models. <i>Journal of Hydrology</i> , 2012, 420-421, 25-36.	5.4	7
67	Role of the Bio- and Geosphere Interface on Migration Pathways for ¹³⁵ Cs and Ecological Effects. <i>Nuclear Technology</i> , 2004, 148, 194-204.	1.2	6
68	Biological Wastewater Treatment Systems. , 2008, , 426-441.		6
69	Spectral decomposition of regulatory thresholds for climate-driven fluctuations in hydro- and wind power availability. <i>Water Resources Research</i> , 2017, 53, 7296-7315.	4.2	6
70	System Heterogeneity as Variable for Solute Transport in Streams. <i>Journal of Hydraulic Engineering</i> , 1995, 121, 782-791.	1.5	5
71	Correction to "Effect of flow-induced exchange in hyporheic zones on longitudinal transport of solutes in streams and rivers" by Anders Wärrman et al.. <i>Water Resources Research</i> , 2002, 38, 6-1-6-1.	4.2	5
72	Impact of repository depth on residence times for leaking radionuclides in land-based surface water. <i>Acta Geophysica</i> , 2007, 55, 73-84.	2.0	5

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73	Incorporating Hydrologic Routing into Reservoir Operation Models: Implications for Hydropower Production Planning. <i>Water Resources Management</i> , 2016, 30, 623-640.	3.9	5
74	Spectral Analysis of River Resistance and Aquifer Diffusivity in a River-Confined Aquifer System. <i>Water Resources Research</i> , 2019, 55, 8046-8060.	4.2	5
75	How daily groundwater table drawdown affects the diel rhythm of hyporheic exchange. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 1905-1921.	4.9	5
76	Performance of a tidal flow constructed wetland used for post-treatment of on-site wastewater in cold climate. <i>Journal of Water Process Engineering</i> , 2022, 47, 102679.	5.6	5
77	Change in streamflow response in unregulated catchments in Sweden over the last century. <i>Water Resources Research</i> , 2016, 52, 5847-5867.	4.2	4
78	Coupled hydrological and biogeochemical model for aqueous contaminant transport. <i>Marine and Freshwater Research</i> , 1995, 46, 197.	1.3	4
79	Cross-Validating Hydromechanical Models and Tracer Test Assessments of Hyporheic Exchange Flow in Streams With Different Hydromorphological Characteristics. <i>Water Resources Research</i> , 2021, 57, .	4.2	4
80	Influence of Hyporheic Exchange on Solute Transport in a Highly Hydropower Regulated River. , 2005, , 185-213.		3
81	A deep rock laboratory in the Dellen impact crater. <i>Gff</i> , 2010, 132, 45-54.	1.2	3
82	Potential for high transient doses due to accumulation and chemical zonation of long-lived radionuclides across the geosphere-biosphere interface. <i>Radioprotection</i> , 2011, 46, S453-S459.	1.0	3
83	Discussion and Closure: Design Relationship for Filters in Bed Protection. <i>Journal of Hydraulic Engineering</i> , 1996, 122, 177-178.	1.5	2
84	Modeling the Effect of Sorption Kinetics on Radionuclide Migration in Crystalline Rock. <i>Materials Research Society Symposia Proceedings</i> , 1997, 506, 1089.	0.1	2
85	Stochastic Analysis of Internal Erosion in Soil Structures—Implications for Risk Assessments. <i>Journal of Hydraulic Engineering</i> , 2001, 127, 419-428.	1.5	2
86	Effects of compartmental model structure and long-term inflow pollutograph on model predictions. <i>Radioprotection</i> , 2005, 40, S477-S483.	1.0	2
87	Isolating parameter sensitivity in reach scale transient storage modeling. <i>Advances in Water Resources</i> , 2016, 89, 24-31.	3.8	2
88	Deformation of Dupuit's parabola in a dam with sheet piling. <i>Flow, Turbulence and Combustion</i> , 1994, 52, 173-185.	0.2	1
89	Parameterizing vertical mixing depth in bed sediments in analyses of horizontal transport in aquatic systems. <i>Physics and Chemistry of the Earth</i> , 1995, 20, 155-162.	0.3	1
90	Modelling the desorption and diffusion of Chernobyl ¹³⁷ Cs in sediments—a reply to the comment by J. T. Smith. <i>Applied Geochemistry</i> , 1997, 12, 861-866.	3.0	1

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91	A Study of K Variability and Its Effect on Solute Transport in Subsurface-Flow Sand Filters by Measurement and Modelling. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2005, 40, 1123-1132.	1.7	1
92	Evidence of Heterogeneous Matrix Diffusion in Fractured Crystalline Rock in Laboratory Migration Experiments. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	0
93	Analysis of Radionuclide Migration in Rock Fractures with Heterogeneous Matrix Diffusion. Quantitative Geology and Geostatistics, 2001, , 263-274.	0.1	0
94	Prediction of concentration and model validation. Radioprotection, 2009, 44, 701-706.	1.0	0
95	Nuclear Techniques for Monitoring Sediment Dynamics in the Coastal Zone. , 2014, , 151-155.		0