David Hyndman

List of Publications by Year
in descending order

114 papers	4,079 citations	101384 36 h-index	133063 59 g-index
120 all docs	120 docs citations	120 times ranked	4908 citing authors

#	Article	IF	Citations
1	Sustainable hydropower in the 21st century. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11891-11898.	3.3	378
2	A Review of the Integrated Effects of Changing Climate, Land Use, and Dams on Mekong River Hydrology. Water (Switzerland), 2018, 10, 266.	1.2	155
3	Water Level Declines in the High Plains Aquifer: Predevelopment to Resource Senescence. Ground Water, 2016, 54, 231-242.	0.7	130
4	Identifying Relationships between Baseflow Geochemistry and Land Use with Synoptic Sampling and Râ€Mode Factor Analysis. Journal of Environmental Quality, 2003, 32, 180-190.	1.0	116
5	Impacts of the 2004 tsunami on groundwater resources in Sri Lanka. Water Resources Research, 2006, 42, .	1.7	115
6	Mapping three decades of annual irrigation across the US High Plains Aquifer using Landsat and Google Earth Engine. Remote Sensing of Environment, 2019, 233, 111400.	4.6	109
7	Linking fecal bacteria in rivers to landscape, geochemical, and hydrologic factors and sources at the basin scale. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10419-10424.	3.3	108
8	Estimating Lithologic and Transport Properties in Three Dimensions Using Seismic and Tracer Data: The Kesterson aquifer. Water Resources Research, 1996, 32, 2659-2670.	1.7	104
9	Coupled seismic and tracer test inversion for aquifer property characterization. Water Resources Research, 1994, 30, 1965-1977.	1.7	101
10	Annual Irrigation Dynamics in the U.S. Northern High Plains Derived from Landsat Satellite Data. Geophysical Research Letters, 2017, 44, 9350-9360.	1.5	101
11	Complex water management in modern agriculture: Trends in the water-energy-food nexus over the High Plains Aquifer. Science of the Total Environment, 2016, 566-567, 988-1001.	3.9	96
12	Spatial and temporal changes in microbial community structure associated with recharge-influenced chemical gradients in a contaminated aquifer. Environmental Microbiology, 2004, 6, 438-448.	1.8	79
13	Evaluating Behavior of Oxygen, Nitrate, and Sulfate during Recharge and Quantifying Reduction Rates in a Contaminated Aquifer. Environmental Science & Technology, 2002, 36, 2693-2700.	4.6	78
14	Effects of Irrigation on Summer Precipitation over the United States. Journal of Climate, 2016, 29, 3541-3558.	1.2	75
15	Subsurface imaging of vegetation, climate, and rootâ€zone moisture interactions. Geophysical Research Letters, 2008, 35, .	1.5	71
16	Natural free convection in porous media: First field documentation in groundwater. Geophysical Research Letters, 2009, 36, .	1.5	71
17	Identifying Potential Land Useâ€Derived Solute Sources to Stream Baseflow Using Ground Water Models and GIS. Ground Water, 2001, 39, 24-34.	0.7	68
18	A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin. Hydrobiologia, 2010, 657, 243-262.	1.0	67

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19	A new method for highâ€resolution characterization of hydraulic conductivity. Water Resources Research, 2009, 45, .	1.7	65
20	Geostatistical analysis of centimeterâ€scale hydraulic conductivity variations at the MADE site. Water Resources Research, 2012, 48, .	1.7	63
21	Development, Operation, and Long-Term Performance of a Full-Scale Biocurtain Utilizing Bioaugmentation. Environmental Science & Technology, 2002, 36, 3635-3644.	4.6	62
22	Inferring the relation between seismic slowness and hydraulic conductivity in heterogeneous aquifers. Water Resources Research, 2000, 36, 2121-2132.	1.7	60
23	Groundwater depletion and climate change: future prospects of crop production in the Central High Plains Aquifer. Climatic Change, 2018, 146, 187-200.	1.7	60
24	Quantifying irrigation adaptation strategies in response to stakeholder-driven groundwater management in the US High Plains Aquifer. Environmental Research Letters, 2019, 14, 044014.	2.2	58
25	Improved methods for satelliteâ€based groundwater storage estimates: A decade of monitoring the high plains aquifer from space and ground observations. Geophysical Research Letters, 2014, 41, 6167-6173.	1.5	54
26	Hydrological consequences of land-cover change: Quantifying the influence of plants on soil moisture with time-lapse electrical resistivity. Geophysics, 2010, 75, WA43-WA50.	1.4	51
27	Hydraulic Characterization and Design of a Full-Scale Biocurtain. Ground Water, 2000, 38, 462-474.	0.7	48
28	Temporal variations in parameters reflecting terminal-electron-accepting processes in an aquifer contaminated with waste fuel and chlorinated solvents. Chemical Geology, 2000, 169, 471-485.	1.4	48
29	Evaluating spatial patterns in precipitation trends across the Amazon basin driven by land cover and global scale forcings. Theoretical and Applied Climatology, 2020, 140, 411-427.	1.3	47
30	WRF Model Sensitivity to Land Surface Model and Cumulus Parameterization under Short-Term Climate Extremes over the Southern Great Plains of the United States. Journal of Climate, 2014, 27, 7703-7724.	1.2	45
31	Groundwater Depletion: A Significant Unreported Source of Atmospheric Carbon Dioxide. Earth's Future, 2017, 5, 1133-1135.	2.4	44
32	Can Impacts of Climate Change and Agricultural Adaptation Strategies Be Accurately Quantified if Crop Models Are Annually Re-Initialized?. PLoS ONE, 2015, 10, e0127333.	1.1	44
33	Urban water sustainability: framework and application. Ecology and Society, 2016, 21, .	1.0	42
34	Spatially Distinct Seasonal Patterns and Forcings of the U.S. Warming Hole. Geophysical Research Letters, 2018, 45, 2055-2063.	1.5	42
35	Nitrogen transport and retention in a headwater catchment with dense distributions of lowland ponds. Science of the Total Environment, 2019, 683, 37-48.	3.9	42
36	Using Backcast Land-Use Change and Groundwater Travel-Time Models to Generate Land-Use Legacy Maps for Watershed Management. Ecology and Society, 2007, 12, .	1.0	38

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37	The land-use legacy effect: Towards a mechanistic understanding of time-lagged water quality responses to land use/cover. Science of the Total Environment, 2017, 579, 1794-1803.	3.9	38
38	Examining the influence of heterogeneous porosity fields on conservative solute transport. Journal of Contaminant Hydrology, 2009, 108, 77-88.	1.6	36
39	Soil Organic Carbon and Nitrogen Feedbacks on Crop Yields under Climate Change. Agricultural and Environmental Letters, 2018, 3, 180026.	0.8	36
40	Predicting flow and transport in highly heterogeneous alluvial aquifers. Geophysical Research Letters, 2014, 41, 7560-7565.	1.5	35
41	Hydraulic conductivity fields: Gaussian or not?. Water Resources Research, 2013, 49, 4730-4737.	1.7	34
42	The future of agriculture over the Ogallala Aquifer: Solutions to grow crops more efficiently with limited water. Earth's Future, 2013, 1, 39-41.	2.4	34
43	Elimination of the Reaction Rate â€œScale Effectâ€: Application of the Lagrangian Reactive Particleâ€Tracking Method to Simulate Mixingâ€Limited, Fieldâ€Scale Biodegradation at the Schoolcraft (MI,) Tj ETQq1 1 0.784314 rgB	[illegible]	33
44	Traveltime inversion for the geometry of aquifer lithologies. Geophysics, 1996, 61, 1728-1737.	1.4	32
45	Identifying Relationships between Baseflow Geochemistry and Land Use with Synoptic Sampling and R-Mode Factor Analysis. Journal of Environmental Quality, 2003, 32, 180.	1.0	32
46	Hydrostratigraphic analysis of the MADE site with full-resolution GPR and direct-push hydraulic profiling. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	31
47	Simulation of microbial transport and carbon tetrachloride biodegradation in intermittently-fed aquifer columns. Water Resources Research, 2002, 38, 4-1-4-13.	1.7	30
48	Analysis of Recharge-Induced Geochemical Change in a Contaminated Aquifer. Ground Water, 2005, 43, 518-530.	0.7	30
49	Coupling land use and groundwater models to map land use legacies: Assessment of model uncertainties relevant to land use planning. Applied Geography, 2012, 34, 356-370.	1.7	30
50	Trends in Water Use, Energy Consumption, and Carbon Emissions from Irrigation: Role of Shifting Technologies and Energy Sources. Environmental Science & Technology, 2020, 54, 15329-15337.	4.6	29
51	A three-dimensional model of microbial transport and biodegradation at the Schoolcraft, Michigan, site. Water Resources Research, 2005, 41, .	1.7	28
52	The landâ€use legacy effect: Adding temporal context to lake chemistry. Limnology and Oceanography, 2011, 56, 2362-2370.	1.6	27
53	Modeling phosphorus sources and transport in a headwater catchment with rapid agricultural expansion. Environmental Pollution, 2019, 255, 113273.	3.7	27
54	Geophysics conquering new territories: The rise of â€œagrogeophysicsâ€: Vadose Zone Journal, 2021, 20, e20115.	1.3	26

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55	Addressing Challenges for Mapping Irrigated Fields in Subhumid Temperate Regions by Integrating Remote Sensing and Hydroclimatic Data. Remote Sensing, 2019, 11, 370.	1.8	22
56	High resolution spatially explicit nutrient source models for the Lower Peninsula of Michigan. Journal of Great Lakes Research, 2015, 41, 618-629.	0.8	20
57	Mid-20th century warming hole boosts US maize yields. Environmental Research Letters, 2019, 14, 114008.	2.2	20
58	Quantifying Landscape Nutrient Inputs With Spatially Explicit Nutrient Source Estimate Maps. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005134.	1.3	20
59	Electrical imaging and fluid modeling of convective fingering in a shallow water-table aquifer. Water Resources Research, 2014, 50, 954-968.	1.7	19
60	Modelling the impact of historical land uses on surface-water quality using groundwater flow and solute-transport models. Lakes and Reservoirs: Research and Management, 2002, 7, 189-199.	0.6	18
61	Groundwater: a call to action. Nature, 2019, 576, 213-213.	13.7	18
62	Agricultural implications of providing soil-based constraints on urban expansion: Land use forecasts to 2050. Journal of Environmental Management, 2018, 217, 677-689.	3.8	17
63	Heterogeneity of chlorinated hydrocarbon sorption properties in a sandy aquifer. Journal of Contaminant Hydrology, 2005, 78, 327-342.	1.6	16
64	Impacts of projected climate change on sediment yield and dredging costs. Hydrological Processes, 2018, 32, 1223-1234.	1.1	16
65	Regional Variations of Bovine and Porcine Fecal Pollution as a Function of Landscape, Nutrient, and Hydrological Factors. Journal of Environmental Quality, 2018, 47, 1024-1032.	1.0	16
66	Trends in streamflow, evapotranspiration, and groundwater storage across the Amazon Basin linked to changing precipitation and land cover. Journal of Hydrology: Regional Studies, 2020, 32, 100755.	1.0	16
67	Regional-scale assessment of a sequence-bounding paleosol on fluvial fans using ground-penetrating radar, eastern San Joaquin Valley, California. Bulletin of the Geological Society of America, 2006, 118, 724-732.	1.6	15
68	Evaluating the influence of land cover on seasonal water budgets using Next Generation Radar (NEXRAD) rainfall and streamflow data. Water Resources Research, 2007, 43, .	1.7	15
69	Introduction to special section on Modeling highly heterogeneous aquifers: Lessons learned in the last 30 years from the <scp>MADE</scp> experiments and others. Water Resources Research, 2017, 53, 2581-2584.	1.7	15
70	Effects of shifting snowmelt regimes on the hydrology of non-alpine temperate landscapes. Journal of Hydrology, 2020, 590, 125517.	2.3	15
71	The land use legacy effect: looking back to see a path forward to improve management. Environmental Research Letters, 2021, 16, 035005.	2.2	15
72	Combining Remote Sensing and Crop Models to Assess the Sustainability of Stakeholderâ€Driven Groundwater Management in the US High Plains Aquifer. Water Resources Research, 2021, 57, e2020WR027756.	1.7	15

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73	Hydrogeophysical Case Studies at the Local Scale: The Saturated Zone. , 2005, , 391-412.		15
74	A spatially explicit statistical model to quantify nutrient sources, pathways, and delivery at the regional scale. Biogeochemistry, 2017, 133, 37-57.	1.7	14
75	Interactions between sorption and biodegradation: Exploring bioavailability and pulsed nutrient injection efficiency. Water Resources Research, 2003, 39, .	1.7	13
76	Quantifying beaver dam dynamics and sediment retention using aerial imagery, habitat characteristics, and economic drivers. Landscape Ecology, 2015, 30, 1129-1144.	1.9	13
77	Quantifying changes in water use and groundwater availability in a megacity using novel integrated systems modeling. Geophysical Research Letters, 2017, 44, 8359-8368.	1.5	13
78	Quantifying Soil Water and Root Dynamics Using a Coupled Hydrogeophysical Inversion. Vadose Zone Journal, 2018, 17, 1-13.	1.3	13
79	Accounting for tomographic resolution in estimating hydrologic properties from geophysical data. Geophysical Monograph Series, 2007, , 227-241.	0.1	12
80	Connecting microbial, nutrient, physiochemical, and land use variables for the evaluation of water quality within mixed use watersheds. Water Research, 2022, 219, 118526.	5.3	12
81	Evaluating temporal and spatial variations in recharge and streamflow using the Integrated Landscape Hydrology Model (ILHM). Geophysical Monograph Series, 2007, , 121-141.	0.1	11
82	Effects of management areas, drought, and commodity prices on groundwater decline patterns across the High Plains Aquifer. Agricultural Water Management, 2019, 218, 259-273.	2.4	11
83	Cross-scale evaluation of dynamic crop growth in WRF and Noah-MP-Crop. Agricultural and Forest Meteorology, 2021, 296, 108217.	1.9	11
84	Water quality trends under rapid agricultural expansion and enhanced in-stream interception in a hilly watershed of Eastern China. Environmental Research Letters, 2020, 15, 084030.	2.2	11
85	Snowpacks decrease and streamflows shift across the eastern US as winters warm. Science of the Total Environment, 2021, 793, 148483.	3.9	10
86	Increased Dependence on Irrigated Crop Production Across the CONUS (1945â€“2015). Water (Switzerland), 2019, 11, 1458.	1.2	9
87	Sustainable irrigation through local collaborative governance: Evidence for a structural fix in Kansas. Environmental Science and Policy, 2021, 124, 517-526.	2.4	9
88	INTEGRATION OF SEDIMENTOLOGIC AND HYDROGEOLOGIC PROPERTIES FOR IMPROVED TRANSPORT SIMULATIONS. , 2004, , 3-13.		8
89	Quantity and quality of water percolating below the root zone of three biofuel feedstock crop systems. Agricultural Water Management, 2019, 221, 109-119.	2.4	7
90	Subsurface Hydrology: Data Integration for Properties and Processes. Geophysical Monograph Series, 2007, , .	0.1	7

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91	Paleoflood Hydrology of the Paria River, Southern Utah and Northern Arizona, USA. Water Science and Application, 2013, , 295-310.	0.3	6
92	Cellulosic biofuel crops alter evapotranspiration and drainage fluxes: Direct quantification using automated equilibrium tension lysimeters. GCB Bioenergy, 2019, 11, 505-516.	2.5	6
93	Linking Agricultural Nutrient Pollution to the Value of Freshwater Ecosystem Services. Land Economics, 2020, 96, 493-509.	0.5	6
94	Tracer/Timeâ€Łapse Radar Imaging Test at the Boise Hydrogeophysical Research Site. , 2003, , .		6
95	Examining Relationships Between Groundwater Nitrate Concentrations in Drinking Water and Landscape Characteristics to Understand Health Risks. GeoHealth, 2022, 6, e2021GH000524.	1.9	6
96	Quantifying the Impact of Lagged Hydrological Responses on the Effectiveness of Groundwater Conservation. Water Resources Research, 2022, 58, .	1.7	5
97	Examining watershed processes using spectral analysis methods including the scaled-windowed fourier transform. Geophysical Monograph Series, 2007, , 183-200.	0.1	4
98	Introduction to Special Section: The Quest for Sustainability of Heavily Stressed Aquifers at Regional to Global Scales. Water Resources Research, 2021, 57, e2021WR030446.	1.7	4
99	A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin. , 2010, , 243-262.		4
100	Biocurtain Design Using Reactive Transport Models. Ground Water Monitoring and Remediation, 2002, 22, 113-123.	0.6	3
101	Impacts of Projected Changes in Climate on Hydrology. , 2014, , 211-220.		3
102	Solar array placement, electricity generation, and cropland displacement across California's Central Valley. Science of the Total Environment, 2022, 835, 155240.	3.9	3
103	Detangling Seasonal Relationships of Fecal Contamination Sources and Correlates with Indicators in Michigan Watersheds. Microbiology Spectrum, 2022, 10, .	1.2	3
104	Integrating statistical rock physics and sedimentology for quantitative seismic interpretation. Geophysical Monograph Series, 2007, , 45-60.	0.1	2
105	Root water uptake of biofuel crops revealed by coupled electrical resistivity and soil water content measurements. Vadose Zone Journal, 2021, 20, e20124.	1.3	2
106	Integrating hydrologic and geophysical data to constrain coastal surficial aquifer processes at multiple spatial and temporal scales. Geophysical Monograph Series, 2007, , 161-182.	0.1	1
107	Electrical Resistivity tomography to image convective flow in groundwater: Examples from the United Arab Emirates Sabkha. , 2017, , .		1
108	Quantifying linkages between watershed factors and coastal wetland plant invasion in the US Great Lakes. Landscape Ecology, 2020, 35, 2843-2861.	1.9	1

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109	Climate and hydrologic ensembling lead to differing streamflow and sediment yield predictions. Climatic Change, 2021, 165, 1.	1.7	1
110	Electrical Resistivity Imaging and Fluid Modeling of Free Convection in a Coastal Sabkha. , 2012, , .		1
111	Sea Level Rise Cut in Half?. Ground Water, 2018, 56, 845-845.	0.7	0
112	Geophysical and Tracer Characterization Methods. , 2006, , 15-1-15-30.		0
113	Impacts of The 2004 Tsunami and Subsequent Water Restorations Actions in Sri Lanka. NATO Science for Peace and Security Series C: Environmental Security, 2009, , 3-28.	0.1	0
114	Climate Changes on Natural Hazards and Water Resources. NATO Science for Peace and Security Series C: Environmental Security, 2009, , 63-80.	0.1	0