

# Richard I Acworth

## List of Publications by Year in descending order

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Version: 2024-02-01

66  
papers

3,045  
citations

201674

27  
h-index

161849

54  
g-index

67  
all docs

67  
docs citations

67  
times ranked

2749  
citing authors

#	ARTICLE	IF	CITATIONS
1	A comparison of smooth and blocky inversion methods in 2D electrical imaging surveys. <i>Exploration Geophysics</i> , 2003, 34, 182-187.	1.1	703
2	The development of crystalline basement aquifers in a tropical environment. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 1987, 20, 265-272.	1.4	187
3	Heat as a tracer to quantify water flow in near-surface sediments. <i>Earth-Science Reviews</i> , 2014, 129, 40-58.	9.1	161
4	Mechanisms of water adsorption into partially saturated fractured shales: An experimental study. <i>Fuel</i> , 2015, 159, 628-637.	6.4	139
5	Experimental investigation of the thermal dispersivity term and its significance in the heat transport equation for flow in sediments. <i>Water Resources Research</i> , 2012, 48, .	4.2	128
6	Analytical methods that use natural heat as a tracer to quantify surface water-groundwater exchange, evaluated using field temperature records. <i>Hydrogeology Journal</i> , 2010, 18, 1093-1110.	2.1	116
7	Investigations of soil cracking and preferential flow in a weighing lysimeter filled with cracking clay soil. <i>Journal of Hydrology</i> , 2010, 393, 105-113.	5.4	109
8	A 1D analytical method for estimating surface water-groundwater interactions and effective thermal diffusivity using temperature time series. <i>Water Resources Research</i> , 2012, 48, .	4.2	84
9	Drip water isotopes in semi-arid karst: Implications for speleothem paleoclimatology. <i>Earth and Planetary Science Letters</i> , 2014, 395, 194-204.	4.4	66
10	River-aquifer interactions in a semi-arid environment stressed by groundwater abstraction. <i>Hydrological Processes</i> , 2013, 27, 1072-1085.	2.6	63
11	Understanding and quantifying focused, indirect groundwater recharge from ephemeral streams using water table fluctuations. <i>Water Resources Research</i> , 2016, 52, 827-840.	4.2	61
12	Stream-aquifer interactions in the Maules Creek catchment, Namoi Valley, New South Wales, Australia. <i>Hydrogeology Journal</i> , 2009, 17, 2005-2021.	2.1	58
13	Mapping of the hyporheic zone around a tidal creek using a combination of borehole logging, borehole electrical tomography and cross-creek electrical imaging, New South Wales, Australia. <i>Hydrogeology Journal</i> , 2003, 11, 368-377.	2.1	57
14	Propagation of pressure change through thick clay sequences: an example from Liverpool Plains, NSW, Australia. <i>Hydrogeology Journal</i> , 2005, 13, 858-870.	2.1	53
15	Investigation of the kinetics of water uptake into partially saturated shales. <i>Water Resources Research</i> , 2016, 52, 2420-2438.	4.2	50
16	Use of heat as tracer to quantify vertical streambed flow in a two-dimensional flow field. <i>Water Resources Research</i> , 2012, 48, .	4.2	38
17	River-aquifer interactions in a semiarid environment investigated using point and reach measurements. <i>Water Resources Research</i> , 2014, 50, 2815-2829.	4.2	37
18	Characterising the dynamics of surface water-groundwater interactions in intermittent and ephemeral streams using streambed thermal signatures. <i>Advances in Water Resources</i> , 2017, 107, 354-369.	3.8	37

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19	Experimental investigation of the thermal time-series method for surface water-groundwater interactions. <i>Water Resources Research</i> , 2012, 48, .	4.2	36
20	Calculation of barometric efficiency in shallow piezometers using water levels, atmospheric and earth tide data. <i>Hydrogeology Journal</i> , 2008, 16, 1469-1481.	2.1	34
21	Retention of the Gram-negative bacterium SW8 on surfaces under conditions relevant to the subsurface environment: Effects of conditioning films and substratum nature. <i>FEMS Microbiology Ecology</i> , 1994, 14, 243-254.	2.7	33
22	Field Measurements of Beachface Salinity Structure using Cross-Borehole Resistivity Imaging. <i>Journal of Coastal Research</i> , 2004, 203, 753-760.	0.3	33
23	Spatially dense drip hydrological monitoring and infiltration behaviour at the Wellington Caves, South East Australia. <i>International Journal of Speleology</i> , 2012, 41, 283-296.	1.0	33
24	Detection of subsurface soil cracks by vertical anisotropy profiles of apparent electrical resistivity. <i>Geophysics</i> , 2010, 75, WA85-WA93.	2.6	32
25	Integration of multi-channel piezometry and electrical tomography to better define chemical heterogeneity in a landfill leachate plume within a sand aquifer. <i>Journal of Contaminant Hydrology</i> , 2006, 83, 200-220.	3.3	31
26	Controls on cave drip water temperature and implications for speleothem-based paleoclimate reconstructions. <i>Quaternary Science Reviews</i> , 2015, 127, 19-36.	3.0	31
27	An objective frequency domain method for quantifying confined aquifer compressible storage using Earth and atmospheric tides. <i>Geophysical Research Letters</i> , 2016, 43, 11,671.	4.0	30
28	Investigation of dryland salinity using the electrical image method. <i>Soil Research</i> , 1999, 37, 623.	1.1	29
29	Evaporative cooling of speleothem drip water. <i>Scientific Reports</i> , 2014, 4, 5162.	3.3	29
30	Salt source for dryland salinity - evidence from an upland catchment on the Southern Tablelands of New South Wales. <i>Soil Research</i> , 2001, 39, 39.	1.1	28
31	Monitoring the transition from preferential to matrix flow in cracking clay soil through changes in electrical anisotropy. <i>Geoderma</i> , 2012, 179-180, 46-52.	5.1	25
32	Hydrogeology Journal, 2016, 24, 905-921.		
33	Aquifer heterogeneity and response time: the challenge for groundwater management. <i>Crop and Pasture Science</i> , 2013, 64, 1141.	1.5	24
34	Vertical groundwater storage properties and changes in confinement determined using hydraulic head response to atmospheric tides. <i>Water Resources Research</i> , 2017, 53, 2983-2997.	4.2	24
35	3D Cross-hole resistivity tomography to monitor water percolation during irrigation on cracking soil. <i>Soil Research</i> , 2011, 49, 661.	1.1	23
36	Long-term spatio-temporal precipitation variability in arid-zone Australia and implications for groundwater recharge. <i>Hydrogeology Journal</i> , 2016, 24, 905-921.	2.1	23

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37	Comprensi3n de los procesos de agua subterr3nea mediante la representaci3n de la heterogeneidad del acu3fero en la cuenca del arroyo Maules, Namoi Valley (Nueva Gales del Sur, Australia). <i>Hydrogeology Journal</i> , 2012, 20, 1027-1044.	2.1	22
38	Hydrogeological investigation of mud-mound springs developed over a weathered basalt aquifer on the Liverpool Plains, New South Wales, Australia. <i>Hydrogeology Journal</i> , 2003, 11, 659-672.	2.1	19
39	Evidence for connected water processes through smectite-dominated clays at Breeza, New South Wales. <i>Australian Journal of Earth Sciences</i> , 2009, 56, 81-96.	1.0	19
40	Local thermal non-equilibrium in sediments: Implications for temperature dynamics and the use of heat as a tracer. <i>Advances in Water Resources</i> , 2014, 73, 176-184.	3.8	19
41	A reassessment of the Lower Namoi Catchment aquifer architecture and hydraulic connectivity with reference to climate drivers. <i>Australian Journal of Earth Sciences</i> , 2014, 61, 501-511.	1.0	19
42	Effect of solid3fluid thermal expansion on thermo-osmotic tests: An experimental and analytical study. <i>Journal of Petroleum Science and Engineering</i> , 2015, 126, 222-230.	4.2	19
43	Quantifying Compressible Groundwater Storage by Combining Cross3Hole Seismic Surveys and Head Response to Atmospheric Tides. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 1910-1930.	2.8	19
44	The Electrical Image Method Compared with Resistivity Sounding and Electromagnetic Profiling for Investigation in Areas of Complex Geology: A Case Study from Groundwater Investigation in a Weathered Crystalline Rock Environment. <i>Exploration Geophysics</i> , 2001, 32, 119-128.	1.1	18
45	Better placement of soil moisture point measurements guided by 2D resistivity tomography for improved irrigation scheduling. <i>Soil Research</i> , 2011, 49, 504.	1.1	18
46	Improved spatial delineation of streambed properties and water fluxes using distributed temperature sensing. <i>Hydrological Processes</i> , 2016, 30, 2686-2702.	2.6	16
47	Future-proofing hydrogeology by revising groundwater monitoring practice. <i>Hydrogeology Journal</i> , 2020, 28, 2963-2969.	2.1	14
48	Technical note: Disentangling the groundwater response to Earth and atmospheric tides to improve subsurface characterisation. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 6033-6046.	4.9	14
49	Shallow groundwater dynamics in smectite dominated clay on the Liverpool Plains of New South Wales. <i>Soil Research</i> , 2001, 39, 203.	1.1	13
50	Determination of physicochemical parameters of solids covered with conditioning films from groundwaters using contact angles. Comparative analysis of different thermodynamic approaches utilizing a range of diagnostic liquids. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1997, 126, 1-23.	4.7	12
51	Physical and chemical properties of a DNAPL contaminated zone in a sand aquifer. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 2001, 34, 85-98.	1.4	12
52	Modification of substratum physicochemistry by material adsorbed from groundwater3analysis by contact angles and relevance to microbial adhesion. <i>Geomicrobiology Journal</i> , 1997, 14, 151-172.	2.0	11
53	The Relationship Between Bulk Electrical Conductivity and Dryland Salinity in the Narrabri Formation at Breeza, Liverpool Plains, New South Wales, Australia. <i>Hydrogeology Journal</i> , 1997, 5, 109-123.	2.1	11
54	Electrical conductivity of partially saturated porous media containing clay: An improved formulation. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 3297-3303.	3.4	11

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55	A New Method for Estimating Recharge to Unconfined Aquifers Using Differential River Gauging. <i>Ground Water</i> , 2014, 52, 291-297.	1.3	11
56	Runoff and focused groundwater-recharge response to flooding rains in the arid zone of Australia. <i>Hydrogeology Journal</i> , 2021, 29, 737-764.	2.1	11
57	A radioisotope tracer investigation to determine the direction of groundwater movement adjacent to a tidal creek during spring and neap tides. <i>Hydrogeology Journal</i> , 2007, 15, 281-296.	2.1	10
58	Measurement of vertical environmental-head profiles in unconfined sand aquifers using a multi-channel manometer board. <i>Hydrogeology Journal</i> , 2007, 15, 1279-1289.	2.1	10
59	Origin, lithology and weathering characteristics of Upper Tertiary & Quaternary clay aquitard units on the Lower Murrumbidgee alluvial fan. <i>Australian Journal of Earth Sciences</i> , 2002, 49, 525-537.	1.0	9
60	The Influence of Syndepositional Macropores on the Hydraulic Integrity of Thick Alluvial Clay Aquitards. <i>Water Resources Research</i> , 2018, 54, 3122-3138.	4.2	8
61	An aeolian component in Pleistocene and Holocene valley aggradation: evidence from Dicks Creek catchment, Yass, New South Wales. <i>Soil Research</i> , 2001, 39, 13.	1.1	8
62	Monitoring soil moisture status in a Black Vertosol on the Liverpool Plains, NSW, using a combination of neutron scattering and electrical image methods. <i>Soil Research</i> , 2005, 43, 105.	1.1	7
63	Accelerated gravity testing of aquitard core permeability and implications at formation and regional scale. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 39-54.	4.9	5
64	Surface water and groundwater: understanding the importance of their connections. <i>Australian Journal of Earth Sciences</i> , 2009, 56, 1-2.	1.0	3
65	Intrinsic Negative Chargeability of Soft Clays. <i>ASEG Extended Abstracts</i> , 2003, 2003, 1-4.	0.1	1
66	An investigation of the spatial and temporal variability of the saline interface in a sandy aquifer subject to storm wave runup and rainfall recharge. <i>Hydrogeology Journal</i> , 2020, 28, 1695-1719.	2.1	1