

# Fred D Day-Lewis

## List of Publications by Year in descending order

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84  
papers

3,062  
citations

159358

30  
h-index

168136

53  
g-index

86  
all docs

86  
docs citations

86  
times ranked

2632  
citing authors

#	ARTICLE	IF	CITATIONS
1	Applying petrophysical models to radar travel time and electrical resistivity tomograms: Resolution-dependent limitations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	256
2	Advancing process-based watershed hydrological research using near-surface geophysics: a vision for, and review of, electrical and magnetic geophysical methods. <i>Hydrological Processes</i> , 2008, 22, 3604-3635.	1.1	228
3	Improved hydrogeophysical characterization and monitoring through parallel modeling and inversion of time-domain resistivity and induced-polarization data. <i>Geophysics</i> , 2010, 75, WA27-WA41.	1.4	159
4	Time-lapse imaging of saline-tracer transport in fractured rock using difference-attenuation radar tomography. <i>Water Resources Research</i> , 2003, 39, .	1.7	132
5	A physical explanation for the development of redox microzones in hyporheic flow. <i>Geophysical Research Letters</i> , 2015, 42, 4402-4410.	1.5	129
6	Origin and Extent of Fresh Paleowaters on the Atlantic Continental Shelf, USA. <i>Ground Water</i> , 2010, 48, 143-158.	0.7	116
7	Use of electrical imaging and distributed temperature sensing methods to characterize surface water-groundwater exchange regulating uranium transport at the Hanford 300 Area, Washington. <i>Water Resources Research</i> , 2010, 46, .	1.7	102
8	Advances in interpretation of subsurface processes with time-lapse electrical imaging. <i>Hydrological Processes</i> , 2015, 29, 1549-1576.	1.1	102
9	Continuous resistivity profiling to delineate submarine groundwater discharge examples and limitations. <i>The Leading Edge</i> , 2006, 25, 724-728.	0.4	93
10	Marine electrical resistivity imaging of submarine groundwater discharge: sensitivity analysis and application in Waquoit Bay, Massachusetts, USA. <i>Hydrogeology Journal</i> , 2010, 18, 173-185.	0.9	92
11	Monitoring groundwater-surface water interaction using time-series and time-frequency analysis of transient three-dimensional electrical resistivity changes. <i>Water Resources Research</i> , 2012, 48, .	1.7	82
12	Assessing the resolution-dependent utility of tomograms for geostatistics. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	81
13	Investigation of aquifer-estuary interaction using wavelet analysis of fiber-optic temperature data. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	79
14	Identifying fracture-zone geometry using simulated annealing and hydraulic-connection data. <i>Water Resources Research</i> , 2000, 36, 1707-1721.	1.7	66
15	An overview of geophysical technologies appropriate for characterization and monitoring at fractured-rock sites. <i>Journal of Environmental Management</i> , 2017, 204, 709-720.	3.8	65
16	Combined interpretation of radar, hydraulic, and tracer data from a fractured-rock aquifer near Mirror Lake, New Hampshire, USA. <i>Hydrogeology Journal</i> , 2006, 14, 1-14.	0.9	63
17	Geoelectrical evidence of bicontinuum transport in groundwater. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	58
18	New permafrost is forming around shrinking Arctic lakes, but will it last?. <i>Geophysical Research Letters</i> , 2014, 41, 1585-1592.	1.5	57

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19	Understanding Water Column and Streambed Thermal Refugia for Endangered Mussels in the Delaware River. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11423-11431.	4.6	53
20	Inversion of multi-frequency electromagnetic induction data for 3D characterization of hydraulic conductivity. <i>Journal of Applied Geophysics</i> , 2011, 73, 323-335.	0.9	44
21	<sc>1DTempPro V2</sc>: New Features for Inferring Groundwater/Surfaceâ€Water Exchange. <i>Ground Water</i> , 2016, 54, 434-439.	0.7	44
22	Geoelectrical inference of mass transfer parameters using temporal moments. <i>Water Resources Research</i> , 2008, 44, .	1.7	43
23	Moment inference from tomograms. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	41
24	Electrical characterization of nonâ€Fickian transport in groundwater and hyporheic systems. <i>Water Resources Research</i> , 2008, 44, .	1.7	41
25	A Computer Program for Flowâ€Log Analysis of Single Holes (FLASH). <i>Ground Water</i> , 2011, 49, 926-931.	0.7	41
26	Direct geoelectrical evidence of mass transfer at the laboratory scale. <i>Water Resources Research</i> , 2012, 48, .	1.7	34
27	Geophysical Monitoring of a Field-Scale Biostimulation Pilot Project. <i>Ground Water</i> , 2006, 44, 430-443.	0.7	33
28	Anomalous solute transport in saturated porous media: Relating transport model parameters to electrical and nuclear magnetic resonance properties. <i>Water Resources Research</i> , 2015, 51, 1264-1283.	1.7	33
29	Implications of Rateâ€Limited Mass Transfer for Aquifer Storage and Recovery. <i>Ground Water</i> , 2008, 46, 591-605.	0.7	32
30	1DTempPro: Analyzing Temperature Profiles for Groundwater/Surfaceâ€Water Exchange. <i>Ground Water</i> , 2014, 52, 298-302.	0.7	32
31	Surface Geophysical Methods for Characterising Frozen Ground in Transitional Permafrost Landscapes. <i>Permafrost and Periglacial Processes</i> , 2017, 28, 52-65.	1.5	30
32	Object-Based Inversion of Crosswell Radar Tomography Data to Monitor Vegetable Oil Injection Experiments. <i>Journal of Environmental and Engineering Geophysics</i> , 2004, 9, 63-77.	1.0	29
33	Imaging Pathways in Fractured Rock Using Threeâ€Dimensional Electrical Resistivity Tomography. <i>Ground Water</i> , 2016, 54, 186-201.	0.7	28
34	Spatially variable stageâ€driven groundwaterâ€surface water interaction inferred from timeâ€frequency analysis of distributed temperature sensing data. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	27
35	A distribution-based parametrization for improved tomographic imaging of solute plumes. <i>Geophysical Journal International</i> , 2011, 187, 214-224.	1.0	26
36	Quantifying solute transport processes: Are chemically â€conservativeâ€ tracers electrically conservative?. <i>Geophysics</i> , 2011, 76, F53-F63.	1.4	26

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37	Dual-domain mass transfer parameters from electrical hysteresis: Theory and analytical approach applied to laboratory, synthetic streambed, and groundwater experiments. <i>Water Resources Research</i> , 2014, 50, 8281-8299.	1.7	26
38	Pore network modeling of the electrical signature of solute transport in dual-domain media. <i>Geophysical Research Letters</i> , 2017, 44, 4908-4916.	1.5	25
39	Direct Observations of Hydrologic Exchange Occurring With Less-Mobile Porosity and the Development of Anoxic Microzones in Sandy Lakebed Sediments. <i>Water Resources Research</i> , 2018, 54, 4714-4729.	1.7	25
40	Integrated multi-scale characterization of ground-water flow and chemical transport in fractured crystalline rock at the Mirror Lake Site, New Hampshire. <i>Geophysical Monograph Series</i> , 2007, , 201-225.	0.1	24
41	Return flows from beaver ponds enhance floodplain-to-river metals exchange in alluvial mountain catchments. <i>Science of the Total Environment</i> , 2019, 685, 357-369.	3.9	24
42	Time-Lapse Electrical Geophysical Monitoring of Amendment-Based Biostimulation. <i>Ground Water</i> , 2015, 53, 920-932.	0.7	22
43	Experimental shifts of hydrologic residence time in a sandy urban stream sediment-water interface alter nitrate removal and nitrous oxide fluxes. <i>Biogeochemistry</i> , 2020, 149, 195-219.	1.7	22
44	Residence Time Controls on the Fate of Nitrogen in Flow-Through Lakebed Sediments. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 689-707.	1.3	20
45	Simultaneous estimation of local-scale and flow path-scale dual-domain mass transfer parameters using geoelectrical monitoring. <i>Water Resources Research</i> , 2013, 49, 5615-5630.	1.7	18
46	Formation Criteria for Hyporheic Anoxic Microzones: Assessing Interactions of Hydraulics, Nutrients, and Biofilms. <i>Water Resources Research</i> , 2020, 56, no.	1.7	17
47	Integrating geophysical, hydrochemical, and hydrologic data to understand the freshwater resources on Nantucket Island, Massachusetts. <i>Geophysical Monograph Series</i> , 2007, , 143-159.	0.1	16
48	<title>Attenuation-difference radar tomography: results of a multiplane experiment at the U.S. Geological Survey Fractured-Rock Research Site, Mirror Lake, New Hampshire</title>. , 2000, , .		15
49	Evaluating long-term patterns of decreasing groundwater discharge through a lake-bottom permeable reactive barrier. <i>Journal of Environmental Management</i> , 2018, 220, 233-245.	3.8	15
50	Development of a new semi-analytical model for cross-borehole flow experiments in fractured media. <i>Advances in Water Resources</i> , 2015, 76, 97-108.	1.7	13
51	Fusion of active and passive hydrologic and geophysical tomographic surveys: The future of subsurface characterization. <i>Geophysical Monograph Series</i> , 2007, , 109-120.	0.1	12
52	Accounting for tomographic resolution in estimating hydrologic properties from geophysical data. <i>Geophysical Monograph Series</i> , 2007, , 227-241.	0.1	12
53	Multi-scale preferential flow processes in an urban streambed under variable hydraulic conditions. <i>Journal of Hydrology</i> , 2019, 573, 168-179.	2.3	11
54	SOLUTE TRANSPORT PROCESSES. , 2006, , 117-159.		11

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55	Geoelectrical measurement and modeling of biogeochemical breakthrough behavior during microbial activity. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	10
56	Simulation of lessâ€mobile porosity dynamics in contrasting sediment water interface porous media. <i>Hydrological Processes</i> , 2018, 32, 2030-2043.	1.1	10
57	Application of Recursive Estimation to Heat Tracing for Groundwater/Surfaceâ€Water Exchange. <i>Water Resources Research</i> , 2022, 58, .	1.7	10
58	An On-Campus Well Field for Hydrogeophysics Education and Undergraduate Research. <i>Journal of Geoscience Education</i> , 2006, 54, 480-486.	0.8	9
59	Statistical mapping of zones of focused groundwater/surface-water exchange using fiber-optic distributed temperature sensing. <i>Water Resources Research</i> , 2013, 49, 6979-6984.	1.7	9
60	A Fractured Rock Geophysical Toolbox Method Selection Tool. <i>Ground Water</i> , 2016, 54, 315-316.	0.7	7
61	DTSGUI: A Python Program to Process and Visualize Fiberâ€Optic Distributed Temperature Sensing Data. <i>Ground Water</i> , 2020, 58, 799-804.	0.7	7
62	MoisturEC: A New R Program for Moisture Content Estimation from Electrical Conductivity Data. <i>Ground Water</i> , 2018, 56, 823-831.	0.7	6
63	Estimating and Forecasting Timeâ€Varying Groundwater Recharge in Fractured Rock: A Stateâ€Space Formulation With Preferential and Diffuse Flow to the Water Table. <i>Water Resources Research</i> , 2021, 57, e2020WR029110.	1.7	6
64	<scp>GW</scp>/<scp>SWâ€MST</scp>: A Groundwater/<scp>Surfaceâ€Water</scp> Method Selection Tool. <i>Ground Water</i> , 2022, 60, 784-791.	0.7	6
65	Reframing groundwater hydrology as a <scp>dataâ€driven</scp> science. <i>Ground Water</i> , 2022, 60, 455-456.	0.7	6
66	The Dualâ€Domain Porosity Apparatus: Characterizing Dual Porosity at the Sediment/Water Interface. <i>Ground Water</i> , 2019, 57, 640-646.	0.7	5
67	Characterizing Physical Properties of Streambed Interface Sediments Using In Situ Complex Electrical Conductivity Measurements. <i>Water Resources Research</i> , 2021, 57, e2020WR027995.	1.7	5
68	The role of field camp in an evolving geoscience curriculum in the United States. <i>Hydrogeology Journal</i> , 2003, 11, 203-204.	0.9	4
69	Examining watershed processes using spectral analysis methods including the scaled-windowed fourier transform. <i>Geophysical Monograph Series</i> , 2007, , 183-200.	0.1	4
70	Scenario Evaluator for Electrical Resistivity Survey Pre-modeling Tool. <i>Ground Water</i> , 2017, 55, 885-890.	0.7	4
71	Evaluation of riverbed magnetic susceptibility for mapping biogeochemical hot spots in groundwaterâ€impacted rivers. <i>Hydrological Processes</i> , 2021, 35, e14184.	1.1	4
72	Post-remediation geophysical assessment: Investigating long-term electrical geophysical signatures resulting from bioremediation at a chlorinated solvent contaminated site. <i>Journal of Environmental Management</i> , 2022, 302, 113944.	3.8	4

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73	Incorporating Snowmelt into Daily Estimates of Recharge Using a <sc>Stateâ€šspace</sc> Model of Infiltration. <i>Ground Water</i> , 2022, 60, 721-746.	0.7	4
74	Monitoring engineered remediation with borehole radar. <i>The Leading Edge</i> , 2007, 26, 1032-1035.	0.4	3
75	Geophysical mapping of plume discharge to surface water at a crude oil spill site: Inversion versus machine learning. <i>Geophysics</i> , 2019, 84, EN67-EN80.	1.4	3
76	APPLICATION OF FREQUENCY- AND TIME-DOMAIN ELECTROMAGNETIC SURVEYS TO CHARACTERIZE THE HYDROSTRATIGRAPHY AND LANDFILL CONSTRUCTION CHARACTERISTICS AT THE AMARGOSA DESERT RESEARCH SITE, BEATTY, NEVADA. , 2016, , .		2
77	A New R Program for Flowâ€šLog Analysis of Single Holes (FLASHâ€šR). <i>Ground Water</i> , 2020, 58, 987-992.	0.7	2
78	Exploring Environmental Factors That Drive Diel Variations in Tree Water Storage Using Wavelet Analysis. <i>Frontiers in Water</i> , 2021, 3, .	1.0	2
79	Integrating hydrologic and geophysical data to constrain coastal surficial aquifer processes at multiple spatial and temporal scales. <i>Geophysical Monograph Series</i> , 2007, , 161-182.	0.1	1
80	GEOELECTRICAL MONITORING OF SOLUTE TRANSPORT IN DUAL-DOMAIN MEDIA: A REVIEW. , 2017, , .		1
81	Geophysical Tomography: The Current State of Research, Challenges, and Path Forward. , 2018, , .		1
82	Monitoring Tracers with Time-Lapse Electrical Methods: Issues with Reactions and Surface Conductance. , 2012, , .		1
83	Nuclear magnetic resonance logs of fractured bedrock at the Hidden Lane Landfill site, Culpeper Basin, Virginia. , 2021, , .		0
84	Geostatistical mapping of salinity conditioned on borehole logs, Montebello Oil Field, California. <i>Ground Water</i> , 2021, , .	0.7	0