

Scott B Jones

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4217644/publications.pdf>

Version: 2024-02-01

123
papers

5,264
citations

101543

36
h-index

91884

69
g-index

129
all docs

129
docs citations

129
times ranked

5323
citing authors

#	ARTICLE	IF	CITATIONS
1	Dielectric Measurement of Agricultural Grain Moisture—Theory and Applications. <i>Sensors</i> , 2022, 22, 2083.	3.8	13
2	The feasibility of shortwave infrared imaging and inverse numerical modeling for rapid estimation of soil hydraulic properties. <i>Vadose Zone Journal</i> , 2021, 20, e20089.	2.2	3
3	Information depth of NIR/SWIR soil reflectance spectroscopy. <i>Remote Sensing of Environment</i> , 2021, 256, 112315.	11.0	18
4	Towards new soil water flow equations using physics-constrained machine learning. <i>Vadose Zone Journal</i> , 2021, 20, e20136.	2.2	5
5	Dielectrically Relaxing and Electrically Conducting Suspensions for Testing Water Content Sensors. , 2021, , .		0
6	Standardizing Heat Pulse Probe measurements for thermal property determination using ice and water. <i>Agricultural and Forest Meteorology</i> , 2021, 308-309, 108610.	4.8	1
7	A review of time domain reflectometry (TDR) applications in porous media. <i>Advances in Agronomy</i> , 2021, 168, 83-155.	5.2	38
8	Global Estimates of Land Surface Water Fluxes from SMOS and SMAP Satellite Soil Moisture Data. <i>Journal of Hydrometeorology</i> , 2020, 21, 241-253.	1.9	27
9	Dielectric Spectroscopy and Application of Mixing Models Describing Dielectric Dispersion in Clay Minerals and Clayey Soils. <i>Sensors</i> , 2020, 20, 6678.	3.8	17
10	A new mathematical formulation for remote sensing of soil moisture based on the Red-NIR space. <i>International Journal of Remote Sensing</i> , 2020, 41, 8034-8047.	2.9	5
11	Stone Content Influence on Land Surface Model Simulation of Soil Moisture and Evapotranspiration at Reynolds Creek Watershed. <i>Journal of Hydrometeorology</i> , 2020, 21, 1889-1904.	1.9	4
12	Impact of soil salinity, texture and measurement frequency on the relations between soil moisture and 20–3 GHz dielectric permittivity spectrum for soils of medium texture. <i>Journal of Hydrology</i> , 2019, 579, 124155.	5.4	29
13	In-situ estimation of unsaturated hydraulic conductivity in freezing soil using improved field data and inverse numerical modeling. <i>Agricultural and Forest Meteorology</i> , 2019, 279, 107746.	4.8	6
14	Global environmental changes impact soil hydraulic functions through biophysical feedbacks. <i>Global Change Biology</i> , 2019, 25, 1895-1904.	9.5	60
15	Ground, Proximal, and Satellite Remote Sensing of Soil Moisture. <i>Reviews of Geophysics</i> , 2019, 57, 530-616.	23.0	307
16	A New Optical Remote Sensing Technique for High-Resolution Mapping of Soil Moisture. <i>Frontiers in Big Data</i> , 2019, 2, 37.	2.9	26
17	An analytical model for estimation of land surface net water flux from near-surface soil moisture observations. <i>Journal of Hydrology</i> , 2019, 570, 26-37.	5.4	35
18	Estimating actual evapotranspiration from stony-soils in montane ecosystems. <i>Agricultural and Forest Meteorology</i> , 2019, 265, 183-194.	4.8	21

#	ARTICLE	IF	CITATIONS
19	Mapping soil moisture with the OPTical TRAppezoid Model (OPTRAM) based on long-term MODIS observations. Remote Sensing of Environment, 2018, 211, 425-440.	11.0	105
20	Particle size effects on soil reflectance explained by an analytical radiative transfer model. Remote Sensing of Environment, 2018, 210, 375-386.	11.0	37
21	Impact of elevated tropospheric ozone on soil C, N and microbial dynamics of winter wheat. Agriculture, Ecosystems and Environment, 2018, 253, 166-176.	5.3	26
22	Effect of Soil Texture on Estimates of Soilâ€œColumn Carbon Dioxide Flux Comparing Chamber and Gradient Methods. Vadose Zone Journal, 2018, 17, 1-9.	2.2	8
23	A Novel Shortwave Infrared Proximal Sensing Approach to Quantify the Water Stability of Soil Aggregates. Soil Science Society of America Journal, 2018, 82, 1358-1366.	2.2	6
24	Correction of anisotropy effects on penta-needle heat-pulse probe sap-flux density and thermal property measurements. Agricultural and Forest Meteorology, 2018, 263, 399-408.	4.8	0
25	The Grape Remote Sensing Atmospheric Profile and Evapotranspiration Experiment. Bulletin of the American Meteorological Society, 2018, 99, 1791-1812.	3.3	88
26	Modeling temperature and moisture dependent emissions of carbon dioxide and methane from drying dairy cow manure. Frontiers of Agricultural Science and Engineering, 2018, .	1.4	2
27	A TDR Array Probe for Monitoring Nearâ€œSurface Soil Moisture Distribution. Vadose Zone Journal, 2017, 16, 1-8.	2.2	25
28	A smart-vision algorithm for counting whiteflies and thrips on sticky traps using two-dimensional Fourier transform spectrum. Biosystems Engineering, 2017, 153, 82-88.	4.3	30
29	A binary mixing model for characterizing stony-soil water retention. Agricultural and Forest Meteorology, 2017, 244-245, 1-8.	4.8	35
30	The optical trapezoid model: A novel approach to remote sensing of soil moisture applied to Sentinel-2 and Landsat-8 observations. Remote Sensing of Environment, 2017, 198, 52-68.	11.0	251
31	Hydraulic conductivity of stratified unsaturated soils: Effects of random variability and layering. Journal of Hydrology, 2017, 546, 81-89.	5.4	13
32	Designing and Implementing a Network for Sensing Water Quality and Hydrology across Mountain to Urban Transitions. Journal of the American Water Resources Association, 2017, 53, 1095-1120.	2.4	19
33	Advancing NASAâ€™s AirMOSS P-Band Radar Root Zone Soil Moisture Retrieval Algorithm via Incorporation of Richardsâ€™ Equation. Remote Sensing, 2017, 9, 17.	4.0	41
34	Retrieval of AirMOSS root-zone soil moisture profile with a richards' equation-based approach. , 2017, , .		1
35	Highâ€œResolution Shortwave Infrared Imaging of Water Infiltration into Dry Soil. Vadose Zone Journal, 2017, 16, 1-10.	2.2	5
36	Electromagnetic induction mapping at varied soil moisture reveals field-scale soil textural patterns and gravel lenses. Frontiers of Agricultural Science and Engineering, 2017, 4, 135.	1.4	14

#	ARTICLE	IF	CITATIONS
37	Soil water depletion and recharge under different land cover in China's Loess Plateau. <i>Ecohydrology</i> , 2016, 9, 396-406.	2.4	47
38	Experimental evidence for drought induced alternative stable states of soil moisture. <i>Scientific Reports</i> , 2016, 6, 20018.	3.3	49
39	Monitoring tomato root zone water content variation and partitioning evapotranspiration with a novel horizontally-oriented mobile dielectric sensor. <i>Agricultural and Forest Meteorology</i> , 2016, 228-229, 85-94.	4.8	15
40	A critical evaluation of the Miller and Miller similar media theory for application to natural soils. <i>Water Resources Research</i> , 2016, 52, 3829-3846.	4.2	13
41	Contrasting soil nitrogen dynamics across a montane meadow and urban lawn in a semi-arid watershed. <i>Urban Ecosystems</i> , 2016, 19, 1083-1101.	2.4	10
42	A Multi-Functional Penta-Needle Thermo-Dielectric Sensor for Porous Media Sensing. <i>IEEE Sensors Journal</i> , 2016, 16, 3670-3678.	4.7	9
43	Reply to comments on "Column-scale unsaturated hydraulic conductivity estimates in coarse-textured homogeneous and layered soils derived under steady-state evaporation from a water table" [J. Hydrol. 519 (2014), 1238-1248]. <i>Journal of Hydrology</i> , 2015, 529, 1277-1281.	5.4	5
44	Microgravity Oxygen Diffusion and Water Retention Measurements in Unsaturated Porous Media aboard the International Space Station. <i>Vadose Zone Journal</i> , 2015, 14, 1-19.	2.2	8
45	A linear physically-based model for remote sensing of soil moisture using short wave infrared bands. <i>Remote Sensing of Environment</i> , 2015, 164, 66-76.	11.0	173
46	Physical and Thermal Characteristics of Dairy Cattle Manure. <i>Journal of Environmental Quality</i> , 2014, 43, 2115-2129.	2.0	9
47	Measured and Modeled Soil Moisture Compared with Cosmic-Ray Neutron Probe Estimates in a Mixed Forest. <i>Vadose Zone Journal</i> , 2014, 13, 1-13.	2.2	48
48	Column-scale unsaturated hydraulic conductivity estimates in coarse-textured homogeneous and layered soils derived under steady-state evaporation from a water table. <i>Journal of Hydrology</i> , 2014, 519, 1238-1248.	5.4	38
49	Modeling gravity effects on water retention and gas transport characteristics in plant growth substrates. <i>Advances in Space Research</i> , 2014, 54, 797-808.	2.6	7
50	Methods and Techniques for Measuring Gas Emissions from Agricultural and Animal Feeding Operations. <i>Critical Reviews in Analytical Chemistry</i> , 2014, 44, 200-219.	3.5	22
51	In situ measured and simulated seasonal freeze-thaw cycle: A 2-year comparative study between layered and homogeneous field soil profiles. <i>Journal of Hydrology</i> , 2014, 519, 1466-1473.	5.4	23
52	Soil Surface Wetting Effects on Gradient-Based Estimates of Soil Carbon Dioxide Efflux. <i>Vadose Zone Journal</i> , 2014, 13, 1-12.	2.2	10
53	Horizontal monitoring of soil water content using a novel automated and mobile electromagnetic access-tube sensor. <i>Journal of Hydrology</i> , 2014, 516, 50-55.	5.4	18
54	On the Value of Soil Resources in the Context of Natural Capital and Ecosystem Service Delivery. <i>Soil Science Society of America Journal</i> , 2014, 78, 685-700.	2.2	91

#	ARTICLE	IF	CITATIONS
55	Electromagnetic induction for mapping textural contrasts of mine tailing deposits. <i>Journal of Applied Geophysics</i> , 2013, 89, 11-20.	2.1	11
56	Evaluation of Standard Calibration Functions for Eight Electromagnetic Soil Moisture Sensors. <i>Vadose Zone Journal</i> , 2013, 12, 1-16.	2.2	148
57	Inverse method for simultaneous determination of soil water flux density and thermal properties with a penta-needle heat pulse probe. <i>Water Resources Research</i> , 2013, 49, 5851-5864.	4.2	18
58	Measurement Accuracy of a Multiplexed Portable FTIR - Surface Chamber System for Estimating Gas Emissions. , 2013, , .		0
59	Diffusion Aspects of Designing Porous Growth Media for Earth and Space. <i>Soil Science Society of America Journal</i> , 2012, 76, 1564-1578.	2.2	15
60	Scaled Solutions to Coupled Soil-Water Flow and Solute Transport during the Redistribution Process. <i>Vadose Zone Journal</i> , 2012, 11, vj2012.0023.	2.2	9
61	Beyond Earth: Designing Root Zone Environments for Reduced Gravity Conditions. <i>Vadose Zone Journal</i> , 2012, 11, .	2.2	19
62	Effects of precipitation pulses on water and carbon dioxide fluxes in two semiarid ecosystems: measurement and modeling. <i>Environmental Earth Sciences</i> , 2012, 67, 2315-2324.	2.7	20
63	A novel analytical solution to steady-state evaporation from porous media. <i>Water Resources Research</i> , 2012, 48, .	4.2	34
64	Determining in-situ soil freeze-thaw cycle dynamics using an access tube-based dielectric sensor. <i>Geoderma</i> , 2012, 189-190, 321-327.	5.1	24
65	Estimation of Soil Clay Content from Hygroscopic Water Content Measurements. <i>Soil Science Society of America Journal</i> , 2012, 76, 1529-1535.	2.2	56
66	Imaging of hill-slope soil moisture wetting patterns in a semi-arid oak savanna catchment using time-lapse electromagnetic induction. <i>Journal of Hydrology</i> , 2012, 416-417, 39-49.	5.4	87
67	Numerical evaluation of subsurface soil water evaporation derived from sensible heat balance. <i>Water Resources Research</i> , 2011, 47, .	4.2	43
68	Improved Dielectric and Electrical Conductivity Anisotropy Measurements Using TDR in Unsaturated Mica. <i>Vadose Zone Journal</i> , 2011, 10, 1097-1104.	2.2	6
69	Comparison of three soil-like substrate production techniques for a bioregenerative life support system. <i>Advances in Space Research</i> , 2010, 46, 1156-1161.	2.6	20
70	Soil Water Repellency: A Method of Soil Moisture Sequestration in Pinyon-Juniper Woodland. <i>Soil Science Society of America Journal</i> , 2010, 74, 624-634.	2.2	54
71	Toward sustainable soil and water resources use in China's highly erodible semi-arid loess plateau. <i>Geoderma</i> , 2010, 155, 93-100.	5.1	57
72	Novel Mobile Soil Water Content Sensing Techniques. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
73	Frequency Domain Soil Moisture Determination Using Bilinear Analysis with an Open-Ended Dielectric Probe. , 2009, , .		2
74	Liquid Behavior in Partially Saturated Porous Media under Variable Gravity. Soil Science Society of America Journal, 2009, 73, 341-350.	2.2	17
75	The Dielectric Response of the Tropical Hawaiian Mars Soil Simulant JSC Mars ¹ . Soil Science Society of America Journal, 2009, 73, 1113-1118.	2.2	10
76	Porous Plant Growth Media Design Considerations for Lunar and Martian Habitats. SAE International Journal of Aerospace, 2009, 4, 55-62.	4.0	2
77	INV-WATFLX, a code for simultaneous estimation of soil properties and planar vector water flux from fully or partly functioning needles of a penta-needle heat-pulse probe. Computers and Geosciences, 2009, 35, 2250-2258.	4.2	16
78	Numerical modeling of the development of a preferentially leached layer on feldspar surfaces. Environmental Geology, 2009, 57, 1639.	1.2	9
79	Soil Moisture Measurement for Ecological and Hydrological Watershed-Scale Observatories: A Review. Vadose Zone Journal, 2008, 7, 358-389.	2.2	811
80	Eco-Geophysical Imaging of Watershed-Scale Soil Patterns Links with Plant Community Spatial Patterns. Vadose Zone Journal, 2008, 7, 1132-1138.	2.2	40
81	Subsurface measurement needs for ecological, hydrological and agricultural applications. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
82	Modeling the permittivity of two-phase media containing monodisperse spheres: Effects of microstructure and multiple scattering. Physical Review B, 2007, 76, .	3.2	20
83	Comparing Bulk Soil Electrical Conductivity Determination Using the DUALEM-1S and EM38-EDD Electromagnetic Induction Instruments. Soil Science Society of America Journal, 2007, 71, 189-196.	2.2	92
84	Measurements and Modeling of Variable Gravity Effects on Water Distribution and Flow in Unsaturated Porous Media. Vadose Zone Journal, 2007, 6, 713-724.	2.2	22
85	Precise irrigation scheduling for turfgrass using a subsurface electromagnetic soil moisture sensor. Agricultural Water Management, 2006, 84, 153-165.	5.6	103
86	An Axenic Plant Culture System for Optimal Growth in Long-Term Studies. Journal of Environmental Quality, 2006, 35, 590-598.	2.0	13
87	Standardizing Characterization of Electromagnetic Water Content Sensors: Part 1. Methodology. Vadose Zone Journal, 2005, 4, 1048-1058.	2.2	99
88	POROUS MEDIA MATRIC POTENTIAL AND WATER CONTENT MEASUREMENTS DURING PARABOLIC FLIGHT. Habitation, 2005, 10, 117-126.	0.2	7
89	A Physically Derived Water Content/Permittivity Calibration Model for Coarse-Textured, Layered Soils. Soil Science Society of America Journal, 2005, 69, 1372-1378.	2.2	56
90	Spatially characterizing apparent electrical conductivity and water content of surface soils with time domain reflectometry. Computers and Electronics in Agriculture, 2005, 46, 239-261.	7.7	60

#	ARTICLE	IF	CITATIONS
91	Continuous Soil Carbon Dioxide and Oxygen Measurements and Estimation of Gradient-Based Gaseous Flux. Vadose Zone Journal, 2005, 4, 1161-1169.	2.2	77
92	Thermal and Geometrical Effects on Bulk Permittivity of Porous Mixtures Containing Bound Water. , 2005, , 71-92.		4
93	Standardizing Characterization of Electromagnetic Water Content Sensors: Part 2. Evaluation of Seven Sensing Systems. Vadose Zone Journal, 2005, 4, 1059-1069.	2.2	154
94	A time domain transmission sensor with TDR performance characteristics. Journal of Hydrology, 2005, 314, 235-245.	5.4	85
95	On the effective measurement frequency of time domain reflectometry in dispersive and nonconductive dielectric materials. Water Resources Research, 2005, 41, .	4.2	55
96	Physical and Hydraulic Properties of Baked Ceramic Aggregates Used for Plant Growth Medium. Journal of the American Society for Horticultural Science, 2005, 130, 767-774.	1.0	21
97	A Time Domain Reflectometry Coaxial Cell for Manipulation and Monitoring of Water Content and Electrical Conductivity in Variably Saturated Porous Media. Vadose Zone Journal, 2005, 4, 977-982.	2.2	14
98	Automated Systems for Oxygen Diffusion Measurements in Porous Media at 1g and 0g. , 2004, , 368.		0
99	Frequency Domain Analysis for Extending Time Domain Reflectometry Water Content Measurement in Highly Saline Soils. Soil Science Society of America Journal, 2004, 68, 1568-1577.	2.2	54
100	Geometrical Factors Affecting the Bulk Electrical Properties of Soils and Rocks: Measurements and Continuum Mean Field Computations. , 2004, , 81-82.		0
101	Modeled effects on permittivity measurements of water content in high surface area porous media. Physica B: Condensed Matter, 2003, 338, 284-290.	2.7	32
102	Gas Diffusion Measurement and Modeling in Coarse-Textured Porous Media. Vadose Zone Journal, 2003, 2, 602-610.	2.2	34
103	Gas Diffusion Measurement and Modeling in Coarse-Textured Porous Media. Vadose Zone Journal, 2003, 2, 602-610.	2.2	3
104	A Review of Advances in Dielectric and Electrical Conductivity Measurement in Soils Using Time Domain Reflectometry. Vadose Zone Journal, 2003, 2, 444.	2.2	54
105	Surface area, geometrical and configurational effects on permittivity of porous media. Journal of Non-Crystalline Solids, 2002, 305, 247-254.	3.1	36
106	Time domain reflectometry measurement principles and applications. Hydrological Processes, 2002, 16, 141-153.	2.6	278
107	Measurement and approximate critical path analysis of the pore-scale-induced anisotropy factor of an unsaturated porous medium. Water Resources Research, 2001, 37, 2929-2942.	4.2	36
108	MICROGRAVITY EFFECTS ON WATER SUPPLY AND SUBSTRATE PROPERTIES IN POROUS MATRIX ROOT SUPPORT SYSTEMS. Acta Astronautica, 2000, 47, 839-848.	3.2	27

#	ARTICLE	IF	CITATIONS
109	Particle shape effects on the effective permittivity of anisotropic or isotropic media consisting of aligned or randomly oriented ellipsoidal particles. <i>Water Resources Research</i> , 2000, 36, 2821-2833.	4.2	191
110	The effect of vegetation on infiltration in shallow soils underlain by fissured bedrock. <i>Journal of Hydrology</i> , 1999, 218, 169-190.	5.4	24
111	Microgravity effects on water flow and distribution in unsaturated porous media: Analyses of flight experiments. <i>Water Resources Research</i> , 1999, 35, 929-942.	4.2	56
112	A capillary-driven root module for plant growth in microgravity. <i>Advances in Space Research</i> , 1998, 22, 1407-1412.	2.6	10
113	Particulated growth media for optimal liquid and gaseous fluxes to plant roots in microgravity. <i>Advances in Space Research</i> , 1998, 22, 1413-1418.	2.6	4
114	Design of Porous Media for Optimal Gas and Liquid Fluxes to Plant Roots. <i>Soil Science Society of America Journal</i> , 1998, 62, 563-573.	2.2	37
115	Porous Substrate Water Relations Observed During the Greenhouse-2 Flight Experiment. , 0, , .		14
116	ORZS: Optimization of Root Zone Substrates for Microgravity. , 0, , .		6
117	Flow and Distribution of Fluid Phases through Porous Plant Growth Media in Microgravity: Progress to Date. , 0, , .		5
118	An Automated Oxygen Diffusion Measurement System for Porous Media in Microgravity. , 0, , .		2
119	Measurement of Porous Media Hydraulic Properties During Parabolic Flight Induced Microgravity. , 0, , .		6
120	Challenges to Understanding Fluid Behavior in Plant Growth Media Under Microgravity. , 0, , .		5
121	Modeling and Design of Optimal Growth Media from Plant - Based Gas and Liquid Fluxes. , 0, , .		8
122	Integration of Heat Capacity and Electrical Conductivity Sensors for Root Module Water and Nutrient Assessment. , 0, , .		1
123	Providing Optimal Root-Zone Fluid Fluxes: Effects of Hysteresis on Capillary-Dominated Water Distributions in Reduced Gravity. , 0, , .		4