

Tyson E Ochsner

List of Publications by Year in descending order

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101
papers

4,592
citations

126708

33
h-index

106150

65
g-index

101
all docs

101
docs citations

101
times ranked

5034
citing authors

#	ARTICLE	IF	CITATIONS
1	Tillage and soil carbon sequestration—What do we really know?. <i>Agriculture, Ecosystems and Environment</i> , 2007, 118, 1-5.	2.5	971
2	State of the Art in Large-Scale Soil Moisture Monitoring. <i>Soil Science Society of America Journal</i> , 2013, 77, 1888-1919.	1.2	335
3	Canopeo: A Powerful New Tool for Measuring Fractional Green Canopy Cover. <i>Agronomy Journal</i> , 2015, 107, 2312-2320.	0.9	312
4	A New Perspective on Soil Thermal Properties. <i>Soil Science Society of America Journal</i> , 2001, 65, 1641-1647.	1.2	289
5	Winter Rye Cover Crop Management Influences on Soil Water, Soil Nitrate, and Corn Development. <i>Agronomy Journal</i> , 2011, 103, 316-323.	0.9	118
6	Soil Heat Storage Measurements in Energy Balance Studies. <i>Agronomy Journal</i> , 2007, 99, 311-319.	0.9	102
7	Urea Decreases Nitrous Oxide Emissions Compared with Anhydrous Ammonia in a Minnesota Corn Cropping System. <i>Soil Science Society of America Journal</i> , 2010, 74, 407-418.	1.2	92
8	Yield Gap and Production Gap of Rainfed Winter Wheat in the Southern Great Plains. <i>Agronomy Journal</i> , 2014, 106, 1329-1339.	0.9	88
9	Meteorological limits to winter wheat productivity in the U.S. southern Great Plains. <i>Field Crops Research</i> , 2017, 203, 212-226.	2.3	87
10	Heat-Pulse Method for Soil Water Content Measurement. <i>Soil Science Society of America Journal</i> , 2003, 67, 1631-1634.	1.2	81
11	Soil Moisture Affects Growing-Season Wildfire Size in the Southern Great Plains. <i>Soil Science Society of America Journal</i> , 2015, 79, 1567-1576.	1.2	78
12	Development of Time Domain Reflectometry for Vadose Zone Measurements. <i>Vadose Zone Journal</i> , 2003, 2, 544-551.	1.3	73
13	Field Tests of the Soil Heat Flux Plate Method and Some Alternatives. <i>Agronomy Journal</i> , 2006, 98, 1005-1014.	0.9	71
14	Calibration and Validation of the COSMOS Rover for Surface Soil Moisture Measurement. <i>Vadose Zone Journal</i> , 2014, 13, 1-8.	1.3	66
15	Nutrient Removal as a Function of Corn Stover Cutting Height and Cob Harvest. <i>Bioenergy Research</i> , 2010, 3, 342-352.	2.2	64
16	Comparison of Drought Probability Assessments Based on Atmospheric Water Deficit and Soil Water Deficit. <i>Agronomy Journal</i> , 2013, 105, 428-436.	0.9	55
17	The Soil Moisture Active Passive Marena, Oklahoma, In Situ Sensor Testbed (SMAP-MOISST): Testbed Design and Evaluation of In Situ Sensors. <i>Vadose Zone Journal</i> , 2016, 15, 1-11.	1.3	55
18	New Soil Property Database Improves Oklahoma Mesonet Soil Moisture Estimates*. <i>Journal of Atmospheric and Oceanic Technology</i> , 2013, 30, 2585-2595.	0.5	54

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19	Use of the Dual-Probe Heat-Pulse Technique to Monitor Soil Water Content in the Vadose Zone. Vadose Zone Journal, 2003, 2, 572-579.	1.3	53
20	Simultaneous Water Content, Air-Filled Porosity, and Bulk Density Measurements with Time Domain Reflectometry. Soil Science Society of America Journal, 2001, 65, 1618-1622.	1.2	51
21	Water Balance and Nitrate Leaching under Corn in Kura Clover Living Mulch. Agronomy Journal, 2010, 102, 1169-1178.	0.9	51
22	Validation of GPS-IR Soil Moisture Retrievals: Comparison of Different Algorithms to Remove Vegetation Effects. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 4759-4770.	2.3	51
23	Coupling landscape water storage and supplemental irrigation to increase productivity and improve environmental stewardship in the U.S. Midwest. Water Resources Research, 2012, 48, .	1.7	50
24	Errors in Heat Flux Measurement by Flux Plates of Contrasting Design and Thermal Conductivity. Vadose Zone Journal, 2003, 2, 580-588.	1.3	50
25	Soil Texture Often Exerts a Stronger Influence Than Precipitation on Mesoscale Soil Moisture Patterns. Water Resources Research, 2018, 54, 2199-2211.	1.7	48
26	Concurrent and antecedent soil moisture relate positively or negatively to probability of large wildfires depending on season. International Journal of Wildland Fire, 2016, 25, 657.	1.0	45
27	Vertical Distribution of Corn Stover Dry Mass Grown at Several US Locations. Bioenergy Research, 2011, 4, 11-21.	2.2	43
28	Evapotranspiration partitioning and water use efficiency of switchgrass and biomass sorghum managed for biofuel. Agricultural Water Management, 2015, 155, 40-47.	2.4	43
29	Performance Assessment of Five Different Soil Moisture Sensors under Irrigated Field Conditions in Oklahoma. Sensors, 2018, 18, 3786.	2.1	42
30	In Situ Monitoring of Soil Thermal Properties and Heat Flux during Freezing and Thawing. Soil Science Society of America Journal, 2008, 72, 1025-1032.	1.2	41
31	Evaluation of the Heat Pulse Ratio Method for Measuring Soil Water Flux. Soil Science Society of America Journal, 2005, 69, 757-765.	1.2	40
32	Effects of eastern redcedar encroachment on soil hydraulic properties along Oklahoma's grassland-forest ecotone. Hydrological Processes, 2012, 26, 1720-1728.	1.1	39
33	Rye-Corn Silage Double-Cropping Reduces Corn Yield but Improves Environmental Impacts. Agronomy Journal, 2012, 104, 888-896.	0.9	37
34	An Improved Approach for Measurement of Coupled Heat and Water Transfer in Soil Cells. Soil Science Society of America Journal, 2007, 71, 872-880.	1.2	35
35	Determining soil moisture and soil properties in vegetated areas by assimilating soil temperatures. Water Resources Research, 2016, 52, 4280-4300.	1.7	32
36	Soil Heat Flux Plates: Heat Flow Distortion and Thermal Contact Resistance. Agronomy Journal, 2007, 99, 304-310.	0.9	31

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37	Soil organic carbon more strongly related to soil moisture than soil temperature in temperate grasslands. <i>Soil Science Society of America Journal</i> , 2020, 84, 587-596.	1.2	30
38	Improved Analysis of Heat Pulse Signals for Soil Water Flux Determination. <i>Soil Science Society of America Journal</i> , 2007, 71, 53-55.	1.2	29
39	Woody plant encroachment alters soil hydrological properties and reduces downward flux of water in tallgrass prairie. <i>Plant and Soil</i> , 2017, 414, 379-391.	1.8	28
40	Sorption of a Hydrophilic Pesticide. <i>Soil Science Society of America Journal</i> , 2006, 70, 1991-1997.	1.2	26
41	Soil Structure and Physical Properties under Rye-Corn Silage Double-Cropping Systems. <i>Soil Science Society of America Journal</i> , 2011, 75, 1307-1314.	1.2	25
42	Soil Water Dynamics and Evapotranspiration under Annual and Perennial Bioenergy Crops. <i>Soil Science Society of America Journal</i> , 2014, 78, 1584-1593.	1.2	25
43	Determining soil moisture by assimilating soil temperature measurements using the Ensemble Kalman Filter. <i>Advances in Water Resources</i> , 2015, 86, 340-353.	1.7	25
44	From Field Experiments to Regional Forecasts: Upscaling Wheat Grain and Forage Yield Response to Acidic Soils. <i>Agronomy Journal</i> , 2019, 111, 287-302.	0.9	23
45	Measured Soil Moisture is a Better Predictor of Large Growing-Season Wildfires than the Keetch-Byram Drought Index. <i>Soil Science Society of America Journal</i> , 2017, 81, 490-502.	1.2	23
46	Mathematical analysis of heat pulse signals for soil water flux determination. <i>Water Resources Research</i> , 2002, 38, 27-1-27-7.	1.7	22
47	Deep drainage sensitivity to climate, edaphic factors, and woody encroachment, Oklahoma, USA. <i>Hydrological Processes</i> , 2015, 29, 3779-3789.	1.1	22
48	Prediction of Plant Available Water at Sowing for Winter Wheat in the Southern Great Plains. <i>Agronomy Journal</i> , 2016, 108, 745-757.	0.9	22
49	Estimating soil moisture and soil thermal and hydraulic properties by assimilating soil temperatures using a particle batch smoother. <i>Advances in Water Resources</i> , 2016, 91, 104-116.	1.7	22
50	Method for Maintaining One-Dimensional Temperature Gradients in Unsaturated, Closed Soil Cells. <i>Soil Science Society of America Journal</i> , 2006, 70, 1303-1309.	1.2	21
51	Mesoscale Soil Moisture Patterns Revealed Using a Sparse In Situ Network and Regression Kriging. <i>Water Resources Research</i> , 2019, 55, 4785-4800.	1.7	21
52	Soil Water Dynamics of Conventional and No-Till Wheat in the Southern Great Plains. <i>Soil Science Society of America Journal</i> , 2012, 76, 1768-1775.	1.2	20
53	Nondestructive Estimation of Standing Crop and Fuel Moisture Content in Tallgrass Prairie. <i>Rangeland Ecology and Management</i> , 2018, 71, 356-362.	1.1	20
54	Development and Evaluation of Soil Moisture-Based Indices for Agricultural Drought Monitoring. <i>Agronomy Journal</i> , 2019, 111, 1392-1406.	0.9	19

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55	Correction to "Mathematical analysis of heat pulse signals for soil water flux determination" by Quanjiu Wang, Tyson E. Ochsner, and Robert Horton. <i>Water Resources Research</i> , 2002, 38, 24-1-24-1.	1.7	18
56	Useful Drainage Estimates Obtained from a Large-Scale Soil Moisture Monitoring Network by Applying the Unit-Gradient Assumption. <i>Vadose Zone Journal</i> , 2017, 16, 1-15.	1.3	18
57	Soil Water Dynamics and Nitrate Leaching Under Corn-Soybean Rotation, Continuous Corn, and Kura Clover. <i>Vadose Zone Journal</i> , 2018, 17, 1-11.	1.3	17
58	A Partial Cylindrical Thermo-Time Domain Reflectometry Sensor. <i>Soil Science Society of America Journal</i> , 2008, 72, 571-577.	1.2	16
59	Mapping high-resolution soil moisture and properties using distributed temperature sensing data and an adaptive particle batch smoother. <i>Water Resources Research</i> , 2016, 52, 7690-7710.	1.7	16
60	Comparison of Three Methods for Vertical Extrapolation of Soil Moisture in Oklahoma. <i>Vadose Zone Journal</i> , 2017, 16, 1-19.	1.3	16
61	Soil moisture as an indicator of growing-season herbaceous fuel moisture and curing rate in grasslands. <i>International Journal of Wildland Fire</i> , 2021, 30, 57.	1.0	16
62	Pyric herbivory, scales of heterogeneity and drought. <i>Functional Ecology</i> , 2018, 32, 1599-1608.	1.7	15
63	Nitrate leaching in soybean rotations without nitrogen fertilizer. <i>Plant and Soil</i> , 2018, 423, 27-40.	1.8	15
64	Estimating Deep Drainage Using Deep Soil Moisture Data under Young Irrigated Cropland in a Desert-Oasis Ecotone, Northwest China. <i>Vadose Zone Journal</i> , 2019, 18, 1-10.	1.3	14
65	In-situ soil moisture data improve seasonal streamflow forecast accuracy in rainfall-dominated watersheds. <i>Journal of Hydrology</i> , 2020, 590, 125404.	2.3	14
66	Comparing Ambient Temperature Effects on Heat Pulse and Time Domain Reflectometry Soil Water Content Measurements. <i>Vadose Zone Journal</i> , 2006, 5, 751-756.	1.3	13
67	Human factors were dominant drivers of record low streamflow to a surface water irrigation district in the US southern Great Plains. <i>Agricultural Water Management</i> , 2017, 185, 93-104.	2.4	13
68	Developing a strategy for the national coordinated soil moisture monitoring network. <i>Vadose Zone Journal</i> , 2021, 20, e20139.	1.3	13
69	Growth Stage Influences Forage Yield and Quality of Winter Rye. <i>Forage and Grazinglands</i> , 2011, 9, 1-7.	0.2	11
70	Recalibration of Sensors in One of The World's Longest Running Automated Soil Moisture Monitoring Networks. <i>Soil Science Society of America Journal</i> , 2019, 83, 1003-1011.	1.2	11
71	Development of Thermo-Time Domain Reflectometry for Vadose Zone Measurements. <i>Vadose Zone Journal</i> , 2003, 2, 544.	1.3	11
72	Modeling transient soil moisture dichotomies in landscapes with intermixed land covers. <i>Journal of Hydrology</i> , 2018, 566, 783-794.	2.3	10

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73	Grassland productivity estimates informed by soil moisture measurements: Statistical and mechanistic approaches. <i>Agronomy Journal</i> , 2021, 113, 3498-3517.	0.9	10
74	Use of the Dual-Probe Heat-Pulse Technique to Monitor Soil Water Content in the Vadose Zone. <i>Vadose Zone Journal</i> , 2003, 2, 572.	1.3	10
75	On-farm environmental assessment of corn silage production systems receiving liquid dairy manure. <i>Journal of Soils and Water Conservation</i> , 2013, 68, 438-449.	0.8	9
76	Estimating root zone soil moisture across diverse land cover types by integrating in-situ and remotely sensed data. <i>Agricultural and Forest Meteorology</i> , 2021, 307, 108471.	1.9	9
77	Development of Thermo-Time Domain Reflectometry for Vadose Zone Measurements. <i>Vadose Zone Journal</i> , 2003, 2, 544-551.	1.3	8
78	Errors in Heat Flux Measurement by Flux Plates of Contrasting Design and Thermal Conductivity. <i>Vadose Zone Journal</i> , 2003, 2, 580-588.	1.3	8
79	Measurement of soil surface heat flux with a multi-needle heat pulse probe. <i>European Journal of Soil Science</i> , 2017, 68, 336-344.	1.8	8
80	Growth Stage at Harvest of a Winter Rye Cover Crop Influences Soil Moisture and Nitrogen. <i>Crop Management</i> , 2010, 9, 1-12.	0.3	7
81	The SMAP in situ soil moisture sensor testbed: Comparing in situ sensors for satellite validation. , 2010, , .		7
82	A Novel Lithium Foil Cosmic-Ray Neutron Detector for Measuring Field-Scale Soil Moisture. <i>Frontiers in Water</i> , 2021, 3, .	1.0	7
83	Hydrologic cost-effectiveness ratio favors switchgrass production on marginal croplands over existing grasslands. <i>PLoS ONE</i> , 2017, 12, e0181924.	1.1	7
84	Calibration and validation of soil water reflectometers. <i>Vadose Zone Journal</i> , 2022, 21, .	1.3	7
85	Sorption of Isoxaflutole Diketonitrile Degradate (DKN) and Dicamba in Unsaturated Soil. <i>Journal of Environmental Science and Health - Part B Pesticides, Food Contaminants, and Agricultural Wastes</i> , 2006, 41, 1071-1083.	0.7	5
86	No-till Diversified Cropping Systems for Efficient Allocation of Precipitation in the Southern Great Plains. , 2019, 2, 1-8.		5
87	Constructing retrospective gridded daily weather data for agro-hydrological applications in Oklahoma. , 2020, 3, e20072.		4
88	Rating Fire Danger from the Ground Up. <i>Eos</i> , 2019, 100, .	0.1	4
89	Use of the Dual-Probe Heat-Pulse Technique to Monitor Soil Water Content in the Vadose Zone. <i>Vadose Zone Journal</i> , 2003, 2, 572-579.	1.3	4
90	Vertical Distribution of Structural Components in Corn Stover. <i>Agriculture (Switzerland)</i> , 2014, 4, 274-287.	1.4	3

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91	MesoSoil v2.0: An updated soil physical property database for the Oklahoma Mesonet. <i>Vadose Zone Journal</i> , 2021, 20, e20134.	1.3	3
92	Building a One-Stop Shop for Soil Moisture Information. <i>Eos</i> , 2019, 100, .	0.1	3
93	Response of sediment concentration and load to removal of juniper woodland and subsequent establishment of grasslands – A paired experimental watershed study. <i>Catena</i> , 2022, 209, 105816.	2.2	3
94	SURFACE AND SUBSURFACE SOLUTE TRANSPORT PROPERTIES AT ROW AND INTERROW POSITIONS. <i>Soil Science</i> , 2007, 172, 419-431.	0.9	2
95	Weighing Lysimeter Data Confirm the Accuracy and Precision of the Heat-Pulse Technique for Measuring Daily Soil Evaporation. <i>Soil Science Society of America Journal</i> , 2017, 81, 1074-1078.	1.2	2
96	From Standard Weather Stations to Virtual Micro-Meteorological Towers in Ungauged Sites: Modeling Tool for Surface Energy Fluxes, Evapotranspiration, Soil Temperature, and Soil Moisture Estimations. <i>Remote Sensing</i> , 2021, 13, 1271.	1.8	2
97	Sampling probes affect bulk density and soil organic carbon measurements. <i>Agricultural and Environmental Letters</i> , 2020, 5, e20005.	0.8	1
98	Reply to Comment by Jakobi et al. (2020) on “Soil Texture Often Exerts a Stronger Influence Than Precipitation on Mesoscale Soil Moisture Patterns”. <i>Water Resources Research</i> , 2021, 57, e2020WR028756.	1.7	1
99	A Comparison between Evapotranspiration Estimates Based on Remotely Sensed Surface Energy Balance and Ground-Based Soil Water Balance Analyses. , 2015, , .		0
100	Measuring Soil Temperature. , 2015, , 235-251.		0
101	Using Soil Moisture Information to Better Understand and Predict Wildfire Danger. <i>CSA News</i> , 2021, 66, 26.	0.1	0