Zhenhai Li

List of Publications by Year
in descending order

78 papers	3,820 citations	126708 33 h-index	128067 60 g-index
82 all docs	82 docs citations	82 times ranked	3128 citing authors

#	Article	IF	Citations
1	Unmanned Aerial Vehicle Remote Sensing for Field-Based Crop Phenotyping: Current Status and Perspectives. Frontiers in Plant Science, 2017, 8, 1111.	1.7	448
2	A review of data assimilation of remote sensing and crop models. European Journal of Agronomy, 2018, 92, 141-152.	1.9	325
3	Modeling maize above-ground biomass based on machine learning approaches using UAV remote-sensing data. Plant Methods, 2019, 15, 10.	1.9	250
4	Estimation of Winter Wheat Above-Ground Biomass Using Unmanned Aerial Vehicle-Based Snapshot Hyperspectral Sensor and Crop Height Improved Models. Remote Sensing, 2017, 9, 708.	1.8	236
5	High-Throughput Estimation of Crop Traits: A Review of Ground and Aerial Phenotyping Platforms. IEEE Geoscience and Remote Sensing Magazine, 2021, 9, 200-231.	4.9	141
6	A Comparison of Regression Techniques for Estimation of Above-Ground Winter Wheat Biomass Using Near-Surface Spectroscopy. Remote Sensing, 2018, 10, 66.	1.8	130
7	A Comparison of Crop Parameters Estimation Using Images from UAV-Mounted Snapshot Hyperspectral Sensor and High-Definition Digital Camera. Remote Sensing, 2018, 10, 1138.	1.8	118
8	Combined Multi-Temporal Optical and Radar Parameters for Estimating LAI and Biomass in Winter Wheat Using HJ and RADARSAR-2 Data. Remote Sensing, 2015, 7, 13251-13272.	1.8	115
9	Winter wheat yield estimation based on multi-source medium resolution optical and radar imaging data and the AquaCrop model using the particle swarm optimization algorithm. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 126, 24-37.	4.9	108
10	Estimation of Crop Growth Parameters Using UAV-Based Hyperspectral Remote Sensing Data. Sensors, 2020, 20, 1296.	2.1	101
11	Deep neural network algorithm for estimating maize biomass based on simulated Sentinel 2A vegetation indices and leaf area index. Crop Journal, 2020, 8, 87-97.	2.3	79
12	Clustering Field-Based Maize Phenotyping of Plant-Height Growth and Canopy Spectral Dynamics Using a UAV Remote-Sensing Approach. Frontiers in Plant Science, 2018, 9, 1638.	1.7	76
13	Estimating Wheat Yield in China at the Field and District Scale from the Assimilation of Satellite Data into the Aquacrop and Simple Algorithm for Yield (SAFY) Models. Remote Sensing, 2017, 9, 509.	1.8	72
14	Estimation of Winter Wheat Biomass and Yield by Combining the AquaCrop Model and Field Hyperspectral Data. Remote Sensing, 2016, 8, 972.	1.8	71
15	An overview of crop nitrogen status assessment using hyperspectral remote sensing: Current status and perspectives. European Journal of Agronomy, 2021, 124, 126241.	1.9	69
16	Assessment of the AquaCrop Model for Use in Simulation of Irrigated Winter Wheat Canopy Cover, Biomass, and Grain Yield in the North China Plain. PLoS ONE, 2014, 9, e86938.	1.1	59
17	Multi-LUTs method for canopy nitrogen density estimation in winter wheat by field and UAV hyperspectral. Computers and Electronics in Agriculture, 2019, 162, 174-182.	3.7	55
18	Estimation of maize yield by assimilating biomass and canopy cover derived from hyperspectral data into the AquaCrop model. Agricultural Water Management, 2020, 227, 105846.	2.4	55

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19	Extracting apple tree crown information from remote imagery using deep learning. Computers and Electronics in Agriculture, 2020, 174, 105504.	3.7	55
20	Assimilation of Two Variables Derived from Hyperspectral Data into the DSSAT-CERES Model for Grain Yield and Quality Estimation. Remote Sensing, 2015, 7, 12400-12418.	1.8	51
21	Estimating genetic parameters of DSSAT-CERES model with the GLUE method for winter wheat (Triticum aestivum L.) production. Computers and Electronics in Agriculture, 2018, 154, 213-221.	3.7	50
22	Leaf nitrogen spectral reflectance model of winter wheat (Triticum aestivum) based on PROSPECT: simulation and inversion. Journal of Applied Remote Sensing, 2015, 9, 095976.	0.6	47
23	Winter Wheat Nitrogen Status Estimation Using UAV-Based RGB Imagery and Gaussian Processes Regression. Remote Sensing, 2020, 12, 3778.	1.8	46
24	Estimating winter wheat (Triticum aestivum) LAI and leaf chlorophyll content from canopy reflectance data by integrating agronomic prior knowledge with the PROSAIL model. International Journal of Remote Sensing, 2015, 36, 2634-2653.	1.3	45
25	Estimation of Leaf Water Content in Winter Wheat Using Grey Relational Analysisâ€“Partial Least Squares Modeling with Hyperspectral Data. Agronomy Journal, 2013, 105, 1385-1392.	0.9	43
26	Comparison of spectral indices and wavelet transform for estimating chlorophyll content of maize from hyperspectral reflectance. Journal of Applied Remote Sensing, 2013, 7, 073575.	0.6	42
27	Estimating wheat yield and quality by coupling the DSSAT-CERES model and proximal remote sensing. European Journal of Agronomy, 2015, 71, 53-62.	1.9	42
28	Estimation and Mapping of Winter Oilseed Rape LAI from High Spatial Resolution Satellite Data Based on a Hybrid Method. Remote Sensing, 2017, 9, 488.	1.8	42
29	Comparison and transferability of thermal, temporal and phenological-based in-season predictions of above-ground biomass in wheat crops from proximal crop reflectance data. Remote Sensing of Environment, 2022, 273, 112967.	4.6	41
30	Remote-sensing estimation of potato above-ground biomass based on spectral and spatial features extracted from high-definition digital camera images. Computers and Electronics in Agriculture, 2022, 198, 107089.	3.7	41
31	A hierarchical interannual wheat yield and grain protein prediction model using spectral vegetative indices and meteorological data. Field Crops Research, 2020, 248, 107711.	2.3	40
32	Quantitative Identification of Maize Lodging-Causing Feature Factors Using Unmanned Aerial Vehicle Images and a Nomogram Computation. Remote Sensing, 2018, 10, 1528.	1.8	38
33	Remote Sensing of Leaf and Canopy Nitrogen Status in Winter Wheat (Triticum aestivum L.) Based on N-PROSAIL Model. Remote Sensing, 2018, 10, 1463.	1.8	38
34	Estimation of water productivity in winter wheat using the AquaCrop model with field hyperspectral data. Precision Agriculture, 2018, 19, 1-17.	3.1	36
35	Parameter sensitivity analysis of the AquaCrop model based on extended fourier amplitude sensitivity under different agro-meteorological conditions and application. Field Crops Research, 2018, 226, 1-15.	2.3	36
36	Estimating total leaf nitrogen concentration in winter wheat by canopy hyperspectral data and nitrogen vertical distribution. Journal of Integrative Agriculture, 2019, 18, 1562-1570.	1.7	34

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37	Global sensitivity analysis of the AquaCrop model for winter wheat under different water treatments based on the extended Fourier amplitude sensitivity test. Journal of Integrative Agriculture, 2017, 16, 2444-2458.	1.7	33
38	Monitoring of Nitrogen and Grain Protein Content in Winter Wheat Based on Sentinel-2A Data. Remote Sensing, 2019, 11, 1724.	1.8	33
39	Newly Combined Spectral Indices to Improve Estimation of Total Leaf Chlorophyll Content in Cotton. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 4589-4600.	2.3	32
40	Estimating Leaf Nitrogen Content in Corn Based on Information Fusion of Multiple-Sensor Imagery from UAV. Remote Sensing, 2021, 13, 340.	1.8	32
41	A comprehensive yield evaluation indicator based on an improved fuzzy comprehensive evaluation method and hyperspectral data. Field Crops Research, 2021, 270, 108204.	2.3	32
42	Effect of Leaf Occlusion on Leaf Area Index Inversion of Maize Using UAVâ€“LiDAR Data. Remote Sensing, 2019, 11, 1067.	1.8	31
43	Quantitative analysis and hyperspectral remote sensing of the nitrogen nutrition index in winter wheat. International Journal of Remote Sensing, 2020, 41, 858-881.	1.3	28
44	An explainable XGBoost model improved by SMOTE-ENN technique for maize lodging detection based on multi-source unmanned aerial vehicle images. Computers and Electronics in Agriculture, 2022, 194, 106804.	3.7	28
45	Mapping winter-wheat biomass and grain yield based on a crop model and UAV remote sensing. International Journal of Remote Sensing, 2021, 42, 1577-1601.	1.3	27
46	Progress of hyperspectral data processing and modelling for cereal crop nitrogen monitoring. Computers and Electronics in Agriculture, 2020, 172, 105321.	3.7	26
47	Estimation of maize above-ground biomass based on stem-leaf separation strategy integrated with LiDAR and optical remote sensing data. PeerJ, 2019, 7, e7593.	0.9	24
48	Prediction of Wheat Grain Protein by Coupling Multisource Remote Sensing Imagery and ECMWF Data. Remote Sensing, 2020, 12, 1349.	1.8	22
49	Global sensitivity analysis of wheat grain yield and quality and the related process variables from the DSSAT-CERES model based on the extended Fourier Amplitude Sensitivity Test method. Journal of Integrative Agriculture, 2019, 18, 1547-1561.	1.7	20
50	Fuzzy Clustering of Maize Plant-Height Patterns Using Time Series of UAV Remote-Sensing Images and Variety Traits. Frontiers in Plant Science, 2019, 10, 926.	1.7	18
51	Comparison of Machine-Learning and CASA Models for Predicting Apple Fruit Yields from Time-Series Planet Imageries. Remote Sensing, 2021, 13, 3073.	1.8	14
52	Monitoring ratio of carbon to nitrogen (C/N) in wheat and barley leaves by using spectral slope features with branch-and-bound algorithm. Scientific Reports, 2018, 8, 10034.	1.6	13
53	A Modified Critical Nitrogen Dilution Curve for Winter Wheat to Diagnose Nitrogen Status Under Different Nitrogen and Irrigation Rates. Frontiers in Plant Science, 2020, 11, 549636.	1.7	13
54	Multi-temporal yield pattern analysis method for deriving yield zones in crop production systems. Precision Agriculture, 2020, 21, 1263-1290.	3.1	13

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55	Validation of two Huanjing-1A/B satellite-based FAO-56 models for estimating winter wheat crop evapotranspiration during mid-season. Agricultural Water Management, 2017, 189, 27-38.	2.4	12
56	Leaf pigment retrieval using the PROSAIL model: Influence of uncertainty in prior canopy-structure information. Crop Journal, 2022, 10, 1251-1263.	2.3	11
57	Combining self-organizing maps and biplot analysis to preselect maize phenotypic components based on UAV high-throughput phenotyping platform. Plant Methods, 2019, 15, 57.	1.9	10
58	A Comparison of Moment-Independent and Variance-Based Global Sensitivity Analysis Approaches for Wheat Yield Estimation with the Aquacrop-OS Model. Agronomy, 2020, 10, 607.	1.3	9
59	A comparative review of the state and advancement of Site-Specific Crop Management in the UK and China. Frontiers of Agricultural Science and Engineering, 2019, 6, 116.	0.9	9
60	Narrowing Yield Gaps and Enhancing Nitrogen Utilization for Summer Maize (Zea mays L) by Combining the Effects of Varying Nitrogen Fertilizer Input and Planting Density in DSSAT Simulations. Frontiers in Plant Science, 2020, 11, 560466.	1.7	7
61	Editorial for the Special Issue â€œEstimation of Crop Phenotyping Traits using Unmanned Ground Vehicle and Unmanned Aerial Vehicle Imageryâ€• Remote Sensing, 2020, 12, 940.	1.8	7
62	Sinoâ€“EU Earth Observation Data to Support the Monitoring and Management of Agricultural Resources. Remote Sensing, 2021, 13, 2889.	1.8	6
63	Predicting leaf chlorophyll content and its nonuniform vertical distribution of summer maize by using a radiation transfer model. Journal of Applied Remote Sensing, 2019, 13, 1.	0.6	6
64	Estimating the vertical distribution of chlorophyll in winter wheat based on multi-angle hyperspectral data. Remote Sensing Letters, 2020, 11, 1032-1041.	0.6	4
65	Hyperspectral Estimation of Apple Canopy Chlorophyll Content Using an Ensemble Learning Approach. Applied Engineering in Agriculture, 2021, 37, 505-511.	0.3	4
66	Spatial heterogeneity of county-level grain protein content in winter wheat in the Huang-Huai-Hai region of China. European Journal of Agronomy, 2022, 134, 126466.	1.9	4
67	Estimation of leaf chlorophyll content in winter wheat using variable importance for projection (VIP) with hyperspectral data. , 2015, , .		3
68	Noise-Resistant Spectral Features for Retrieving Foliar Chemical Parameters. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 5369-5380.	2.3	2
69	Estimation of Leaf Nitrogen Concentration of Winter Wheat Using UAV-Based RGB Imagery. IFIP Advances in Information and Communication Technology, 2019, , 139-153.	0.5	2
70	A nitrogen spectral response model and nitrogen estimation of summer maize during the entire growth period. International Journal of Remote Sensing, 2020, 41, 1867-1883.	1.3	2
71	Retrieval of LAI and leaf chlorophyll content from remote sensing data by agronomy mechanism knowledge to solve the ill-posed inverse problem. , 2014, , .		1
72	Simulation of Winter Wheat Phenology in Beijing Area with DSSAT-CERES Model. IFIP Advances in Information and Communication Technology, 2016, , 259-268.	0.5	1

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73	Predicting Grain Protein Content in Winter Wheat Using Hyperspectral and Meteorological Factor. , 2018, , .		1
74	Recommendations for Nitrogen Fertilizer in Winter wheat Based on Nitrogen Nutrition Index. , 2019, , .		1
75	Simulation and Verification of Vertical Heterogeneity Spectral Response of Winter Wheat Based on the mSCOPE Model. Sensors, 2020, 20, 4570.	2.1	1
76	Monitoring of Winter Wheat Biomass Using UAV Hyperspectral Texture Features. IFIP Advances in Information and Communication Technology, 2019, , 241-250.	0.5	1
77	Estimation of leaf nitrogen content of maize based on Akaike's information criterion in Beijing. , 2017, , .		0
78	Estimation of winter wheat canopy nitrogen density at different growth stages based on Multi-LUT approach. , 2017, , .		0