Bangyou Zheng

List of Publications by Year
in descending order

147726

138417

64 papers	3,604 citations	31 h-index	58 g-index
65 all docs	65 docs citations	65 times ranked	3431 citing authors

#	Article	IF	Citations
1	Breeding for the future: what are the potential impacts of future frost and heat events on sowing and flowering time requirements for <scp>A</scp>ustralian bread wheat (<i><scp>T</scp>riticum) Tj ETQq1 1 0.784314 rg BT /Overlock	4.2	240
2	Pheno-Copter: A Low-Altitude, Autonomous Remote-Sensing Robotic Helicopter for High-Throughput Field-Based Phenotyping. Agronomy, 2014, 4, 279-301.	1.3	233
3	The shifting influence of drought and heat stress for crops in northeast Australia. Global Change Biology, 2015, 21, 4115-4127.	4.2	230
4	Dynamic monitoring of NDVI in wheat agronomy and breeding trials using an unmanned aerial vehicle. Field Crops Research, 2017, 210, 71-80.	2.3	217
5	APSIM Next Generation: Overcoming challenges in modernising a farming systems model. Environmental Modelling and Software, 2018, 103, 43-51.	1.9	174
6	Crop design for specific adaptation in variable dryland production environments. Crop and Pasture Science, 2014, 65, 614.	0.7	152
7	Quantification of the effects of VRN1 and Ppd-D1 to predict spring wheat (Triticum aestivum) heading time across diverse environments. Journal of Experimental Botany, 2013, 64, 3747-3761.	2.4	141
8	Frost trends and their estimated impact on yield in the Australian wheatbelt. Journal of Experimental Botany, 2015, 66, 3611-3623.	2.4	131
9	Global Wheat Head Detection (GWHD) Dataset: A Large and Diverse Dataset of High-Resolution RGB-Labelled Images to Develop and Benchmark Wheat Head Detection Methods. Plant Phenomics, 2020, 2020, 3521852.	2.5	128
10	Estimation of plant height using a high throughput phenotyping platform based on unmanned aerial vehicle and self-calibration: Example for sorghum breeding. European Journal of Agronomy, 2018, 95, 24-32.	1.9	122
11	A Weakly Supervised Deep Learning Framework for Sorghum Head Detection and Counting. Plant Phenomics, 2019, 2019, 1525874.	2.5	114
12	Dynamic quantification of canopy structure to characterize early plant vigour in wheat genotypes. Journal of Experimental Botany, 2016, 67, 4523-4534.	2.4	98
13	Comparison of ground cover estimates from experiment plots in cotton, sorghum and sugarcane based on images and ortho-mosaics captured by UAV. Functional Plant Biology, 2017, 44, 169.	1.1	98
14	Accuracy assessment of plant height using an unmanned aerial vehicle for quantitative genomic analysis in bread wheat. Plant Methods, 2019, 15, 37.	1.9	86
15	Assessment of the Potential Impacts of Wheat Plant Traits across Environments by Combining Crop Modeling and Global Sensitivity Analysis. PLoS ONE, 2016, 11, e0146385.	1.1	86
16	Recent changes in southern Australian frost occurrence: implications for wheat production risk. Crop and Pasture Science, 2016, 67, 801.	0.7	80
17	Designing crops for adaptation to the drought and highâ€temperature risks anticipated in future climates. Crop Science, 2020, 60, 605-621.	0.8	80
18	Aerial Imagery Analysis â€" Quantifying Appearance and Number of Sorghum Heads for Applications in Breeding and Agronomy. Frontiers in Plant Science, 2018, 9, 1544.	1.7	74

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19	Comparison of architecture among different cultivars of hybrid rice using a spatial light model based on 3-D digitising. Functional Plant Biology, 2008, 35, 900.	1.1	73
20	Combining Crop Growth Modeling and Statistical Genetic Modeling to Evaluate Phenotyping Strategies. Frontiers in Plant Science, 2019, 10, 1491.	1.7	65
21	Do maize models capture the impacts of heat and drought stresses on yield? Using algorithm ensembles to identify successful approaches. Global Change Biology, 2016, 22, 3112-3126.	4.2	63
22	Global Wheat Head Detection 2021: An Improved Dataset for Benchmarking Wheat Head Detection Methods. Plant Phenomics, 2021, 2021, 9846158.	2.5	60
23	Modelling maize phenology, biomass growth and yield under contrasting temperature conditions. Agricultural and Forest Meteorology, 2018, 250-251, 319-329.	1.9	56
24	Velocity of temperature and flowering time in wheat â€“ assisting breeders to keep pace with climate change. Global Change Biology, 2016, 22, 921-933.	4.2	53
25	Identification of Earliness Per Se Flowering Time Locus in Spring Wheat through a Genomeâ€Wide Association Study. Crop Science, 2016, 56, 2962-2672.	0.8	53
26	EasyPCC: Benchmark Datasets and Tools for High-Throughput Measurement of the Plant Canopy Coverage Ratio under Field Conditions. Sensors, 2017, 17, 798.	2.1	52
27	Effects of climate change on the extension of the potential double cropping region and crop water requirements in Northern China. Agricultural and Forest Meteorology, 2019, 268, 146-155.	1.9	52
28	Modelling impact of early vigour on wheat yield in dryland regions. Journal of Experimental Botany, 2019, 70, 2535-2548.	2.4	51
29	Projected impact of future climate on water-stress patterns across the Australian wheatbelt. Journal of Experimental Botany, 2017, 68, 5907-5921.	2.4	49
30	Improving process-based crop models to better capture genotypeÃ—environmentÃ—management interactions. Journal of Experimental Botany, 2019, 70, 2389-2401.	2.4	46
31	Pixel size of aerial imagery constrains the applications of unmanned aerial vehicle in crop breeding. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 154, 1-9.	4.9	41
32	From QTLs to Adaptation Landscapes: Using Genotype-To-Phenotype Models to Characterize GÃ—E Over Time. Frontiers in Plant Science, 2019, 10, 1540.	1.7	33
33	Do wheat breeders have suitable genetic variation to overcome short coleoptiles and poor establishment in the warmer soils of future climates?. Functional Plant Biology, 2016, 43, 961.	1.1	32
34	A field-based high-throughput method for acquiring canopy architecture using unmanned aerial vehicle images. Agricultural and Forest Meteorology, 2021, 296, 108231.	1.9	31
35	The value of adapting to climate change in Australian wheat farm systems: farm to cross-regional scale. Agriculture, Ecosystems and Environment, 2015, 211, 112-125.	2.5	25
36	Quantifying high temperature risks and their potential effects on sorghum production in Australia. Field Crops Research, 2017, 211, 77-88.	2.3	23

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37	Optimizing soil-coring strategies to quantify root-length-density distribution in field-grown maize: virtual coring trials using 3-D root architecture models. Annals of Botany, 2018, 121, 809-819.	1.4	21
38	The Value of Tactical Adaptation to El NiÃ±oâ€“Southern Oscillation for East Australian Wheat. Climate, 2018, 6, 77.	1.2	21
39	Linking genetic maps and simulation to optimize breeding for wheat flowering time in current and future climates. Crop Science, 2020, 60, 678-699.	0.8	20
40	Coupling of machine learning methods to improve estimation of ground coverage from unmanned aerial vehicle (UAV) imagery for high-throughput phenotyping of crops. Functional Plant Biology, 2021, 48, 766-779.	1.1	18
41	Integrating crop growth models with remote sensing for predicting biomass yield of sorghum. In Silico Plants, 2021, 3, .	0.8	18
42	A generic approach to modelling, allocation and redistribution of biomass to and from plant organs. In Silico Plants, 2019, 1, .	0.8	14
43	Assessment of the influence of global dimming on the photosynthetic production of rice based on three-dimensional modeling. Science China Earth Sciences, 2011, 54, 290-297.	2.3	13
44	Direct and Indirect Costs of Frost in the Australian Wheatbelt. Ecological Economics, 2018, 150, 122-136.	2.9	13
45	Economic assessment of wheat breeding options for potential improved levels of post head-emergence frost tolerance. Field Crops Research, 2017, 213, 75-88.	2.3	11
46	Unsupervised Plot-Scale LAI Phenotyping via UAV-Based Imaging, Modelling, and Machine Learning. Plant Phenomics, 2022, 2022, .	2.5	11
47	Quantitative evaluation of influence of PROSTRATE GROWTH 1 gene on rice canopy structure based on three-dimensional structure model. Field Crops Research, 2016, 194, 65-74.	2.3	10
48	McGET: A rapid image-based method to determine the morphological characteristics of gravels on the Gobi desert surface. Geomorphology, 2018, 304, 89-98.	1.1	10
49	Detecting Sorghum Plant and Head Features from Multispectral UAV Imagery. Plant Phenomics, 2021, 2021, 9874650.	2.5	10
50	Does precipitation keep pace with temperature in the marginal double-cropping area of northern China?. European Journal of Agronomy, 2020, 120, 126126.	1.9	9
51	A reducedâ€tillering trait shows small but important yield gains in dryland wheat production. Global Change Biology, 2020, 26, 4056-4067.	4.2	8
52	Genotype-specific P-spline response surfaces assist interpretation of regional wheat adaptation to climate change. In Silico Plants, 2021, 3, .	0.8	8
53	Comparison of Modelling Strategies to Estimate Phenotypic Values from an Unmanned Aerial Vehicle with Spectral and Temporal Vegetation Indexes. Remote Sensing, 2021, 13, 2827.	1.8	8
54	Using a gene-based phenology model to identify optimal flowering periods of spring wheat in irrigated mega-environments. Journal of Experimental Botany, 2021, 72, 7203-7218.	2.4	7

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55	Applications of a Hyperspectral Imaging System Used to Estimate Wheat Grain Protein: A Review. Frontiers in Plant Science, 2022, 13, 837200.	1.7	7
56	Simplification of leaf surfaces from scanned data: Effects of two algorithms on leaf morphology. Computers and Electronics in Agriculture, 2016, 121, 393-403.	3.7	5
57	A new probabilistic forecasting model for canopy temperature with consideration of periodicity and parameter variation. Agricultural and Forest Meteorology, 2019, 265, 88-98.	1.9	5
58	Phenological optimization of late reproductive phase for raising wheat yield potential in irrigated mega-environments. Journal of Experimental Botany, 2022, 73, 4236-4249.	2.4	4
59	Assessment of the Effects of Leaf Angle Combinations on Potential Photosynthesis Capacity of Rice with 3-D Models Using High Performance Computing. , 2009, , .		3
60	Integrating a crop growth model and radiative transfer model to improve estimation of crop traits based on deep learning. Journal of Experimental Botany, 2022, 73, 6558-6574.	2.4	3
61	Projected Impact of Future Climate on Drought Patterns in Complex Rainfed Environments. Procedia Environmental Sciences, 2015, 29, 190-191.	1.3	2
62	A standardized workflow to utilise a grid-computing system through advanced message queuing protocols. Environmental Modelling and Software, 2016, 84, 304-310.	1.9	2
63	Assessment of light capture and carbon gain of two wheat canopies with 3-D modelling. , 2011, , .		0
64	Understanding the Effects of Growing Seasons, Genotypes, and Their Interactions on the Anthesis Date of Wheat Sown in North China. Biology, 2021, 10, 955.	1.3	0