Daniel Wallach

List of Publications by Year
in descending order

118 papers	10,553 citations	76294 40 h-index	33869 99 g-index
127 all docs	127 docs citations	127 times ranked	8894 citing authors

#	Article	IF	Citations
1	Temperature increase reduces global yields of major crops in four independent estimates. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9326-9331.	3.3	1,708
2	Rising temperatures reduce global wheatÂproduction. Nature Climate Change, 2015, 5, 143-147.	8.1	1,544
3	Uncertainty in simulating wheat yields under climate change. Nature Climate Change, 2013, 3, 827-832.	8.1	1,021
4	The Agricultural Model Intercomparison and Improvement Project (AgMIP): Protocols and pilot studies. Agricultural and Forest Meteorology, 2013, 170, 166-182.	1.9	715
5	Multimodel ensembles of wheat growth: many models are better than one. Global Change Biology, 2015, 21, 911-925.	4.2	387
6	Similar estimates of temperature impacts on global wheat yield by three independent methods. Nature Climate Change, 2016, 6, 1130-1136.	8.1	352
7	Effect of Internal Rotation on Angular Correlation Functions. Journal of Chemical Physics, 1967, 47, 5258-5268.	1.2	342
8	Climate change impact and adaptation for wheat protein. Global Change Biology, 2019, 25, 155-173.	4.2	312
9	Mean squared error of prediction as a criterion for evaluating and comparing system models. Ecological Modelling, 1989, 44, 299-306.	1.2	231
10	Crop modelling for integrated assessment of risk to food production from climate change. Environmental Modelling and Software, 2015, 72, 287-303.	1.9	230
11	Diverging importance of drought stress for maize and winter wheat in Europe. Nature Communications, 2018, 9, 4249.	5.8	230
12	The uncertainty of crop yield projections is reduced by improved temperature response functions. Nature Plants, 2017, 3, 17102.	4.7	170
13	Using a Bayesian approach to parameter estimation; comparison of the GLUE and MCMC methods. Agronomy for Sustainable Development, 2002, 22, 191-203.	0.8	124
14	Improving the use of crop models for risk assessment and climate change adaptation. Agricultural Systems, 2018, 159, 296-306.	3.2	122
15	Towards improved calibration of crop models â€“ Where are we now and where should we go?. European Journal of Agronomy, 2018, 94, 25-35.	1.9	113
16	Predicting Maize Phenology: Intercomparison of Functions for Developmental Response to Temperature. Agronomy Journal, 2014, 106, 2087-2097.	0.9	112
17	Multimodel ensembles improve predictions of cropâ€“environmentâ€“management interactions. Global Change Biology, 2018, 24, 5072-5083.	4.2	111
18	Crop model improvement reduces the uncertainty of the response to temperature of multi-model ensembles. Field Crops Research, 2017, 202, 5-20.	2.3	109

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19	Parameter Estimation for Crop Models. Agronomy Journal, 2001, 93, 757-766.	0.9	108
20	Global wheat production with 1.5 and 2.0Â°C above preâ€industrial warming. Global Change Biology, 2019, 25, 1428-1444.	4.2	107
21	Anisotropic Molecular Rotation in Liquid N,Nâ€Dimethylformamide by Nuclear Magnetic Resonance. Journal of Chemical Physics, 1969, 50, 1219-1227.	1.2	100
22	Using a cropping system model at regional scale: Low-data approaches for crop management information and model calibration. Agriculture, Ecosystems and Environment, 2011, 142, 85-94.	2.5	90
23	An open platform to build, evaluate and simulate integrated models of farming and agro-ecosystems. Environmental Modelling and Software, 2013, 39, 39-49.	1.9	87
24	Impact of Spatial Soil and Climate Input Data Aggregation on Regional Yield Simulations. PLoS ONE, 2016, 11, e0151782.	1.1	78
25	Spatialising crop models. Agronomy for Sustainable Development, 2004, 24, 205-217.	0.8	78
26	MODERATO: an object-oriented decision tool for designing maize irrigation schedules. Ecological Modelling, 2001, 137, 43-60.	1.2	69
27	A SIMPLE crop model. European Journal of Agronomy, 2019, 104, 97-106.	1.9	67
28	Lessons from climate modeling on the design and use of ensembles for crop modeling. Climatic Change, 2016, 139, 551-564.	1.7	66
29	Models of Yield, Grain Protein, and Residual Mineral Nitrogen Responses to Applied Nitrogen for Winter Wheat. Agronomy Journal, 1999, 91, 377-385.	0.9	62
30	Crop Model Calibration: A Statistical Perspective. Agronomy Journal, 2011, 103, 1144-1151.	0.9	55
31	A package of parameter estimation methods and implementation for the STICS crop-soil model. Environmental Modelling and Software, 2011, 26, 386-394.	1.9	53
32	Accounting for both parameter and model structure uncertainty in crop model predictions of phenology: A case study on rice. European Journal of Agronomy, 2017, 88, 53-62.	1.9	53
33	Multi-wheat-model ensemble responses to interannual climate variability. Environmental Modelling and Software, 2016, 81, 86-101.	1.9	50
34	Nearâ€Resonant Electronic Energy Transfer from Argon to Hydrogen. Journal of Chemical Physics, 1972, 56, 3608-3618.	1.2	49
35	Uncertainty of wheat water use: Simulated patterns and sensitivity to temperature and CO2. Field Crops Research, 2016, 198, 80-92.	2.3	47
36	Comparison of parameter estimation methods for crop models. Agronomy for Sustainable Development, 2004, 24, 351-365.	0.8	45

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37	Improving irrigation schedules by using a biophysical and a decisional model. European Journal of Agronomy, 2002, 16, 123-135.	1.9	43
38	Effect of weather data aggregation on regional crop simulation for different crops, production conditions, and response variables. Climate Research, 2015, 65, 141-157.	0.4	43
39	Modelling climate change impact on Septoria tritici blotch (STB) in France: Accounting for climate model and disease model uncertainty. Agricultural and Forest Meteorology, 2013, 170, 242-252.	1.9	41
40	Causes of variation among rice models in yield response to CO2 examined with Free-Air CO2 Enrichment and growth chamber experiments. Scientific Reports, 2017, 7, 14858.	1.6	41
41	Comparison of three calibration methods for modeling rice phenology. Agricultural and Forest Meteorology, 2020, 280, 107785.	1.9	40
42	Methodological comparison of calibration procedures for durum wheat parameters in the STICS model. European Journal of Agronomy, 2011, 35, 115-126.	1.9	39
43	Assessing the Uncertainty when Using a Model to Compare Irrigation Strategies. Agronomy Journal, 2012, 104, 1274-1283.	0.9	39
44	Variability of effects of spatial climate data aggregation on regional yield simulation by crop models. Climate Research, 2015, 65, 53-69.	0.4	39
45	Uncertainty in future irrigation water demand and risk of crop failure for maize in Europe. Environmental Research Letters, 2016, 11, 074007.	2.2	37
46	Spatial sampling of weather data for regional crop yield simulations. Agricultural and Forest Meteorology, 2016, 220, 101-115.	1.9	35
47	A statistical analysis of three ensembles of crop model responses to temperature and CO2 concentration. Agricultural and Forest Meteorology, 2015, 214-215, 483-493.	1.9	31
48	Uncertainty in wheat phenology simulation induced by cultivar parameterization under climate warming. European Journal of Agronomy, 2018, 94, 46-53.	1.9	31
49	The chaos in calibrating crop models: Lessons learned from a multi-model calibration exercise. Environmental Modelling and Software, 2021, 145, 105206.	1.9	31
50	Interaction Potential between Ground State Helium Atom and theB1Î£u+State of the Hydrogen Molecule. Journal of Chemical Physics, 1972, 56, 1219-1223.	1.2	30
51	Decomposing crop model uncertainty: A systematic review. Field Crops Research, 2022, 279, 108448.	2.3	29
52	The implication of input data aggregation on up-scaling soil organic carbon changes. Environmental Modelling and Software, 2017, 96, 361-377.	1.9	28
53	Statistical Methods for Predicting Responses to Applied Nitrogen and Calculating Optimal Nitrogen Rates. Agronomy Journal, 2001, 93, 531-539.	0.9	27
54	Calibration of the phenology sub-model of APSIM-Oryza: Going beyond goodness of fit. Environmental Modelling and Software, 2015, 70, 128-137.	1.9	27

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55	Estimating model prediction error: Should you treat predictions as fixed or random?. Environmental Modelling and Software, 2016, 84, 529-539.	1.9	27
56	How well do crop modeling groups predict wheat phenology, given calibration data from the target population?. European Journal of Agronomy, 2021, 124, 126195.	1.9	27
57	Evaluating the precision of eight spatial sampling schemes in estimating regional means of simulated yield for two crops. Environmental Modelling and Software, 2016, 80, 100-112.	1.9	26
58	Effect of uncertainty in input and parameter values on model prediction error. Ecological Modelling, 1998, 105, 337-345.	1.2	25
59	Effects of fruiting form removal on cotton reproductive development. Field Crops Research, 1982, 5, 69-84.	2.3	23
60	A Component-Based Framework for Simulating Agricultural Production and Externalities. , 2010, , 63-108.		23
61	Combining input uncertainty and residual error in crop model predictions: A case study on vineyards. European Journal of Agronomy, 2014, 52, 191-197.	1.9	23
62	A dynamic model with QTL covariables for predicting flowering time of common bean (Phaseolus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.9	23
63	Role of Spin Symmetry Conversion in Nuclear Relaxation in Solids. Journal of Chemical Physics, 1971, 54, 4044-4049.	1.2	20
64	Effect of fast internal rotation on the nitrogen-14 nuclear magnetic resonance relaxation times of the methylbenzyl cyanides. The Journal of Physical Chemistry, 1969, 73, 307-312.	2.9	19
65	The calculation of herbage intake of grazing sheep: A detailed comparison between models. Agricultural Systems, 1988, 26, 123-160.	3.2	19
66	A taxonomy-based approach to shed light on the babel of mathematical models for rice simulation. Environmental Modelling and Software, 2016, 85, 332-341.	1.9	18
67	ESTIMATING SOIL CARBON LEVELS USING AN ENSEMBLE KALMAN FILTER. Transactions of the American Society of Agricultural Engineers, 2004, 47, 331-339.	0.9	17
68	Multi-model evaluation of phenology prediction for wheat in Australia. Agricultural and Forest Meteorology, 2021, 298-299, 108289.	1.9	17
69	It pays to base parameter estimation on a realistic description of model errors. Agronomy for Sustainable Development, 2002, 22, 179-189.	0.8	16
70	Nuclear Relaxation in Solids due to Molecular Rotation at Low Temperatures. Journal of Chemical Physics, 1970, 52, 2534-2538.	1.2	14
71	Model Evaluation. , 2014, , 345-406.		13
72	Evaluation of crop model prediction and uncertainty using Bayesian parameter estimation and Bayesian model averaging. Agricultural and Forest Meteorology, 2021, 311, 108686.	1.9	13

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73	Utilisation de Donnees Intermediaires pour Corriger la Prediction de Modeles Mecanistes. Biometrics, 1991, 47, 1.	0.8	12
74	A new approach to crop model calibration: Phenotyping plus postâ€processing. Crop Science, 2020, 60, 709-720.	0.8	12
75	Importance of genetic parameters and uncertainty of MANIHOT, a new mechanistic cassava simulation model. European Journal of Agronomy, 2020, 115, 126031.	1.9	12
76	Mean Squared Error of Yield Prediction by SOYGRO. Agronomy Journal, 1995, 87, 397-402.	0.9	11
77	Evaluation of CECOL, a model of winter rape (Brassica napus L.). European Journal of Agronomy, 1998, 8, 205-214.	1.9	11
78	How to improve model-based decision rules for nitrogen fertilization. European Journal of Agronomy, 2001, 15, 197-208.	1.9	11
79	The error in agricultural systems model prediction depends on the variable being predicted. Environmental Modelling and Software, 2014, 62, 487-494.	1.9	11
80	Uncertainties in Scaling-Up Crop Models for Large-Area Climate Change Impact Assessments. ICP Series on Climate Change Impacts, Adaptation, and Mitigation, 2015, , 261-277.	0.4	11
81	An empirical mathematical model of a cotton crop subjected to damage. Field Crops Research, 1980, 3, 7-25.	2.3	10
82	Maintenance energy requirements of grazing sheep: A detailed comparison between models. Agricultural Systems, 1984, 15, 1-22.	3.2	10
83	Regional Optimization of Fertilization Using a Hierarchical Linear Model. Biometrics, 1995, 51, 338.	0.8	10
84	Adaptation of a functional model of grassland to simulate the behaviour of irrigated grasslands under a Mediterranean climate: The Crau case. European Journal of Agronomy, 2008, 29, 163-174.	1.9	10
85	Environment-dependent logistic equations applied to natural pasture growth curves. Agricultural Meteorology, 1976, 16, 389-404.	0.7	8
86	A simple model of cotton yield development. Field Crops Research, 1978, 1, 269-281.	2.3	8
87	Optimise importance sampling quantile estimation. Biometrika, 1996, 83, 791-800.	1.3	8
88	Uncertainty in Agricultural Impact Assessment. ICP Series on Climate Change Impacts, Adaptation, and Mitigation, 2015, , 223-259.	0.4	8
89	Optimal experimental designs for estimating model parameters, applied to yield response to nitrogen models. Agronomy for Sustainable Development, 2002, 22, 229-238.	0.8	8
90	The effect of parameter uncertainty on a model with adjusted parameters. Agronomy for Sustainable Development, 2002, 22, 159-170.	0.8	8

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91	A traitâ€based model ensemble approach to design rice plant types for future climate. Global Change Biology, 2022, 28, 2689-2710.	4.2	8
92	Spatialising Crop Models. , 2009, , 687-705.		7
93	The effect of environmental factors on the growth of a natural pasture. Agricultural Meteorology, 1975, 15, 231-244.	0.7	6
94	Primary production of grazed annual natural pasture and of grazed wheat in a semi-arid region of Israel. Agricultural Systems, 1978, 3, 205-220.	3.2	6
95	Modeling the Time Dependence of Nitrogen Uptake in Young Trees. Agronomy Journal, 1990, 82, 1135-1140.	0.9	6
96	Shrinkage Estimators Applied to Prediction of French Winter Wheat Yield. Biometrics, 1993, 49, 281.	0.8	6
97	Evaluating Decision Rules for Nitrogen Fertilization. Biometrics, 2000, 56, 420-426.	0.8	6
98	Data requirements for crop modellingâ€"Applying the learning curve approach to the simulation of winter wheat flowering time under climate change. European Journal of Agronomy, 2018, 95, 33-44.	1.9	6
99	Empirical Bayes optimal fertilizer decisions. Journal of Applied Statistics, 1995, 22, 507-516.	0.6	5
100	A bayesian approach to crop Model calibration under unknown error covariance. Journal of Agricultural, Biological, and Environmental Statistics, 2008, 13, 355-365.	0.7	5
101	Basics of Agricultural System Models. , 2019, , 3-43.		5
102	Weight gain in grazing sheep: A detailed comparison between models. Agricultural Systems, 1986, 19, 211-248.	3.2	4
103	The relation of cotton crop growth and development to final yield. Field Crops Research, 1978, 1, 283-294.	2.3	3
104	Model Evaluation. , 2019, , 311-373.		3
105	Parameter estimation in crop models: exploring the possibility of estimating linear combinations of parameters. Agronomy for Sustainable Development, 2002, 22, 171-178.	0.8	3
106	Parameter Estimation with Classical Methods (Model Calibration). , 2014, , 205-276.		2
107	Providing User-Oriented Uncertainty Information with a Vineyard Model Used for Irrigation Decisions. Advances in Agricultural Systems Modeling, 0, , 183-207.	0.3	2
108	Evaluating optimal fertilizer rates using plant measurements. Journal of Applied Statistics, 2002, 29, 1083-1099.	0.6	1

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109	Parameter Estimation with Bayesian Methods. , 2014, , 277-309.		1
110	Parameter Estimation With Bayesian Methods. , 2019, , 275-309.		1
111	AGROBASE : un systÃ¨me de gestion de donnÃ©es expÃ©rimentales. Agronomy for Sustainable Development, 1987, 7, 739-742.	0.8	1
112	Prediction of Boll Opening in a Cotton Crop 1. Agronomy Journal, 1981, 73, 763-767.	0.9	1
113	Developing skills: how to train adaptive modelers. Advances in Animal Biosciences, 2015, 6, 52-53.	1.0	0
114	Regression Analysis, Frequentist. , 2019, , 161-205.		0
115	Multimodel Ensembles. , 2019, , 425-443.		0
116	Gene-Based Crop Models. , 2019, , 445-486.		0
117	Calibration of System Models. , 2019, , 251-274.		0
118	PrÃ©vision des livraisons de maÃ¯s pour une coopÃ©rative agricole. Agronomy for Sustainable Development, 1992, 12, 631-637.	0.8	0