Alex C Ruane

List of Publications by Year
in descending order

72 papers	13,207 citations	66315 42 h-index	82499 72 g-index
88 all docs	88 docs citations	88 times ranked	11757 citing authors

#	Article	IF	Citations
1	Agricultural breadbaskets shift poleward given adaptive farmer behavior under climate change. Global Change Biology, 2022, 28, 167-181.	4.2	23
2	Are soybean models ready for climate change food impact assessments?. European Journal of Agronomy, 2022, 135, 126482.	1.9	25
3	Sustainable Use of Groundwater May Dramatically Reduce Irrigated Production of Maize, Soybean, and Wheat. Earth's Future, 2022, 10, .	2.4	8
4	Processing tomato production is expected to decrease by 2050 due to the projected increase in temperature. Nature Food, 2022, 3, 437-444.	6.2	27
5	Exploring uncertainties in global crop yield projections in a large ensemble of crop models and CMIP5 and CMIP6 climate scenarios. Environmental Research Letters, 2021, 16, 034040.	2.2	53
6	Strong regional influence of climatic forcing datasets on global crop model ensembles. Agricultural and Forest Meteorology, 2021, 300, 108313.	1.9	17
7	Large potential for crop production adaptation depends on available future varieties. Global Change Biology, 2021, 27, 3870-3882.	4.2	62
8	Methodology to assess the changing risk of yield failure due to heat and drought stress under climate change. Environmental Research Letters, 2021, 16, 104033.	2.2	6
9	Extreme lows of wheat production in Brazil. Environmental Research Letters, 2021, 16, 104025.	2.2	6
10	Climate change impacts and adaptation for dryland farming systems in Zimbabwe: a stakeholder-driven integrated multi-model assessment. Climatic Change, 2021, 168, 1.	1.7	22
11	A New Approach to Evaluate and Reduce Uncertainty of Model-Based Biodiversity Projections for Conservation Policy Formulation. BioScience, 2021, 71, 1261-1273.	2.2	6
12	Climate impacts on global agriculture emerge earlier in new generation of climate and crop models. Nature Food, 2021, 2, 873-885.	6.2	263
13	Impacts of 1.5â€‐Â°C and 2.0â€‐Â°C global warming above pre-industrial on potential winter wheat production of China. European Journal of Agronomy, 2020, 120, 126149.	1.9	39
14	The GGCMI Phase 2 experiment: global gridded crop model simulations under uniform changes in CO₂, temperature, water, and nitrogen levels (protocol) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.3	38
15	Understanding and managing connected extreme events. Nature Climate Change, 2020, 10, 611-621.	8.1	273
16	Modelling climate change impacts on maize yields under low nitrogen input conditions in subâ€Saharan Africa. Global Change Biology, 2020, 26, 5942-5964.	4.2	60
17	Recent Shrinkage and Fragmentation of Bluegrass Landscape in Kentucky. Remote Sensing, 2020, 12, 1815.	1.8	5
18	Integrated assessment of climate change impacts on crop productivity and income of commercial maize farms in northeast South Africa. Food Security, 2020, 12, 659-678.	2.4	29

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19	The GGCMI PhaseÂ2 emulators: global gridded crop model responses to changes in CO₂, temperature, water, and nitrogen (version 1.0). Geoscientific Model Development, 2020, 13, 3995-4018.	1.3	19
20	Using reanalysis in crop monitoring and forecasting systems. Agricultural Systems, 2019, 168, 144-153.	3.2	28
21	Parameterization-induced uncertainties and impacts of crop management harmonization in a global gridded crop model ensemble. PLoS ONE, 2019, 14, e0221862.	1.1	42
22	A crop yield change emulator for use in GCAM and similar models: Persephone v1.0. Geoscientific Model Development, 2019, 12, 1319-1350.	1.3	9
23	The Global Gridded Crop Model Intercomparison phase 1 simulation dataset. Scientific Data, 2019, 6, 50.	2.4	57
24	Hydrologic and Agricultural Earth Observations and Modeling for the Water-Food Nexus. Frontiers in Environmental Science, 2019, 7, .	1.5	16
25	Earth Observations and Integrative Models in Support of Food and Water Security. Remote Sensing in Earth Systems Sciences, 2019, 2, 18-38.	1.1	11
26	Global Response Patterns of Major Rainfed Crops to Adaptation by Maintaining Current Growing Periods and Irrigation. Earth's Future, 2019, 7, 1464-1480.	2.4	38
27	Sensitivity of Maize Yield in Smallholder Systems to Climate Scenarios in Semi-Arid Regions of West Africa: Accounting for Variability in Farm Management Practices. Agronomy, 2019, 9, 639.	1.3	22
28	Taking climate model evaluation to the next level. Nature Climate Change, 2019, 9, 102-110.	8.1	407
29	Global wheat production with 1.5 and 2.0Â°C above preâ€industrial warming. Global Change Biology, 2019, 25, 1428-1444.	4.2	107
30	Climate change impact and adaptation for wheat protein. Global Change Biology, 2019, 25, 155-173.	4.2	312
31	Coordinating AgMIP data and models across global and regional scales for 1.5Â°C and 2.0Â°C assessments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160455.	1.6	48
32	Impacts of 1.5 versus 2.0â€‰Â°C on cereal yields in the West African Sudan Savanna. Environmental Research Letters, 2018, 13, 034014.	2.2	70
33	How accurately do maize crop models simulate the interactions of atmospheric CO2 concentration levels with limited water supply on water use and yield?. European Journal of Agronomy, 2018, 100, 67-75.	1.9	68
34	Classifying multi-model wheat yield impact response surfaces showing sensitivity to temperature and precipitation change. Agricultural Systems, 2018, 159, 209-224.	3.2	47
35	Can Egypt become self-sufficient in wheat?. Environmental Research Letters, 2018, 13, 094012.	2.2	76
36	Climate Change Impacts on Agriculture. World Scientific Series in Grand Public Policy Challenges of the 21st Century, 2018, , 161-191.	0.3	4

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37	Diverging importance of drought stress for maize and winter wheat in Europe. Nature Communications, 2018, 9, 4249.	5.8	230
38	Global patterns of crop yield stability under additional nutrient and water inputs. PLoS ONE, 2018, 13, e0198748.	1.1	40
39	Climate shifts within major agricultural seasons for +1.5 and +2.0 Â°C worlds: HAPPI projections and AgMIP modeling scenarios. Agricultural and Forest Meteorology, 2018, 259, 329-344.	1.9	39
40	Biophysical and economic implications for agriculture of +1.5Â° and +2.0Â°C global warming using AgMIP Coordinated Global and Regional Assessments. Climate Research, 2018, 76, 17-39.	0.4	49
41	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
42	Selection of a representative subset of global climate models that captures the profile of regional changes for integrated climate impacts assessment. Earth Perspectives -- Transdisciplinarity Enabled, 2017, 4, .	1.4	82
43	Representing water scarcity in future agricultural assessments. Anthropocene, 2017, 18, 15-26.	1.6	27
44	Integrating growth stage deficit irrigation into a process based crop model. Agricultural and Forest Meteorology, 2017, 243, 84-92.	1.9	42
45	An AgMIP framework for improved agricultural representation in integrated assessment models. Environmental Research Letters, 2017, 12, 125003.	2.2	54
46	Representing agriculture in <scp>E</scp>arth <scp>S</scp>ystem <scp>M</scp>odels: Approaches and priorities for development. Journal of Advances in Modeling Earth Systems, 2017, 9, 2230-2265.	1.3	54
47	The uncertainty of crop yield projections is reduced by improved temperature response functions. Nature Plants, 2017, 3, 17102.	4.7	170
48	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
49	Spatial and temporal uncertainty of crop yield aggregations. European Journal of Agronomy, 2017, 88, 10-21.	1.9	63
50	A potato model intercomparison across varying climates and productivity levels. Global Change Biology, 2017, 23, 1258-1281.	4.2	90
51	Global gridded crop model evaluation: benchmarking, skills, deficiencies and implications. Geoscientific Model Development, 2017, 10, 1403-1422.	1.3	213
52	The Vulnerability, Impacts, Adaptation and Climate Services Advisory Board (VIACS AB v1.0) contribution to CMIP6. Geoscientific Model Development, 2016, 9, 3493-3515.	1.3	31
53	Multi-wheat-model ensemble responses to interannual climate variability. Environmental Modelling and Software, 2016, 81, 86-101.	1.9	50
54	Regional disparities in the beneficial effects of rising CO2 concentrations on crop waterÂproductivity. Nature Climate Change, 2016, 6, 786-790.	8.1	190

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55	Uncertainty of wheat water use: Simulated patterns and sensitivity to temperature and CO2. Field Crops Research, 2016, 198, 80-92.	2.3	47
56	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
57	Lessons from climate modeling on the design and use of ensembles for crop modeling. Climatic Change, 2016, 139, 551-564.	1.7	66
58	Similar estimates of temperature impacts on global wheat yield by three independent methods. Nature Climate Change, 2016, 6, 1130-1136.	8.1	352
59	Evaluating the Sensitivity of Agricultural Model Performance to Different Climate Inputs. Journal of Applied Meteorology and Climatology, 2016, 55, 579-594.	0.6	17
60	A framework for the cross-sectoral integration of multi-model impact projections: land use decisions under climate impacts uncertainties. Earth System Dynamics, 2015, 6, 447-460.	2.7	38
61	The Global Gridded Crop Model Intercomparison: data and modeling protocols for Phase 1 (v1.0). Geoscientific Model Development, 2015, 8, 261-277.	1.3	190
62	Uncertainties in predicting rice yield by current crop models under a wide range of climatic conditions. Global Change Biology, 2015, 21, 1328-1341.	4.2	339
63	Rising temperatures reduce global wheatÂproduction. Nature Climate Change, 2015, 5, 143-147.	8.1	1,544
64	Multimodel ensembles of wheat growth: many models are better than one. Global Change Biology, 2015, 21, 911-925.	4.2	387
65	Climate forcing datasets for agricultural modeling: Merged products for gap-filling and historical climate series estimation. Agricultural and Forest Meteorology, 2015, 200, 233-248.	1.9	299
66	Constraints and potentials of future irrigation water availability on agricultural production under climate change. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3239-3244.	3.3	795
67	How do various maize crop models vary in their responses to climate change factors?. Global Change Biology, 2014, 20, 2301-2320.	4.2	525
68	Carbonâ€“Temperatureâ€“Water change analysis for peanut production under climate change: a prototype for the <scp>AgMIP</scp> Coordinated Climateâ€Crop Modeling Project (C3<scp>MP</scp>). Global Change Biology, 2014, 20, 394-407.	4.2	48
69	Assessing agricultural risks of climate change in the 21st century in a global gridded crop model intercomparison. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3268-3273.	3.3	1,649
70	Multisectoral climate impact hotspots in a warming world. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3233-3238.	3.3	149
71	Uncertainty in simulating wheat yields under climate change. Nature Climate Change, 2013, 3, 827-832.	8.1	1,021
72	Climate change impact uncertainties for maize in Panama: Farm information, climate projections, and yield sensitivities. Agricultural and Forest Meteorology, 2013, 170, 132-145.	1.9	91