

Gordon B Bonan

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

24,031
citations

16411

64
h-index

32761

100
g-index

115
all docs

115
docs citations

115
times ranked

21979
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of atmospheric carbon dioxide concentration and metabolic activity in Boreal Forest ecosystems. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 44, 173.	0.8	8
2	Increasing the spatial and temporal impact of ecological research: A roadmap for integrating a novel terrestrial process into an Earth system model. <i>Global Change Biology</i> , 2022, 28, 665-684.	4.2	27
3	Impacts of a revised surface roughness parameterization in the Community Land Model 5.1. <i>Geoscientific Model Development</i> , 2022, 15, 2365-2393.	1.3	9
4	The signature of internal variability in the terrestrial carbon cycle. <i>Environmental Research Letters</i> , 2021, 16, 034022.	2.2	7
5	Moving beyond the incorrect but useful paradigm: reevaluating big-leaf and multilayer plant canopies to model biosphere-atmosphere fluxes – a review. <i>Agricultural and Forest Meteorology</i> , 2021, 306, 108435.	1.9	64
6	Beyond Static Benchmarking: Using Experimental Manipulations to Evaluate Land Model Assumptions. <i>Global Biogeochemical Cycles</i> , 2019, 33, 1289-1309.	1.9	59
7	Separating the Impact of Individual Land Surface Properties on the Terrestrial Surface Energy Budget in both the Coupled and Uncoupled Land–Atmosphere System. <i>Journal of Climate</i> , 2019, 32, 5725-5744.	1.2	50
8	Model Structure and Climate Data Uncertainty in Historical Simulations of the Terrestrial Carbon Cycle (1850–2014). <i>Global Biogeochemical Cycles</i> , 2019, 33, 1310-1326.	1.9	53
9	High predictability of terrestrial carbon fluxes from an initialized decadal prediction system. <i>Environmental Research Letters</i> , 2019, 14, 124074.	2.2	19
10	Climate, ecosystems, and planetary futures: The challenge to predict life in Earth system models. <i>Science</i> , 2018, 359, .	6.0	397
11	A Comparison of the Diel Cycle of Modeled and Measured Latent Heat Flux During the Warm Season in a Colorado Subalpine Forest. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 617-651.	1.3	19
12	Carbon cycle confidence and uncertainty: Exploring variation among soil biogeochemical models. <i>Global Change Biology</i> , 2018, 24, 1563-1579.	4.2	122
13	Modeling canopy-induced turbulence in the Earth system: a unified parameterization of turbulent exchange within plant canopies and the roughness sublayer (CLM-ml v0). <i>Geoscientific Model Development</i> , 2018, 11, 1467-1496.	1.3	98
14	Triose phosphate limitation in photosynthesis models reduces leaf photosynthesis and global terrestrial carbon storage. <i>Environmental Research Letters</i> , 2018, 13, 074025.	2.2	56
15	Comparing optimal and empirical stomatal conductance models for application in Earth system models. <i>Global Change Biology</i> , 2018, 24, 5708-5723.	4.2	75
16	Stomatal Function across Temporal and Spatial Scales: Deep-Time Trends, Land-Atmosphere Coupling and Global Models. <i>Plant Physiology</i> , 2017, 174, 583-602.	2.3	119
17	Reducing uncertainty in projections of terrestrial carbon uptake. <i>Environmental Research Letters</i> , 2017, 12, 044020.	2.2	84
18	Forests, Climate, and Public Policy: A 500-Year Interdisciplinary Odyssey. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2016, 47, 97-121.	3.8	43

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19	Managing uncertainty in soil carbon feedbacks to climate change. <i>Nature Climate Change</i> , 2016, 6, 751-758.	8.1	491
20	On the development of a coupled regional climate-vegetation model RCM-CLM-CN-DV and its validation in Tropical Africa. <i>Climate Dynamics</i> , 2016, 46, 515-539.	1.7	53
21	Optimizing Available Network Resources to Address Questions in Environmental Biogeochemistry. <i>BioScience</i> , 2016, 66, 317-326.	2.2	20
22	Temperature acclimation of photosynthesis and respiration: A key uncertainty in the carbon cycle-climate feedback. <i>Geophysical Research Letters</i> , 2015, 42, 8624-8631.	1.5	160
23	Effects of model structural uncertainty on carbon cycle projections: biological nitrogen fixation as a case study. <i>Environmental Research Letters</i> , 2015, 10, 044016.	2.2	109
24	Connecting mathematical ecosystems, real-world ecosystems, and climate science. <i>New Phytologist</i> , 2014, 202, 731-733.	3.5	38
25	Preindustrial-Control and Twentieth-Century Carbon Cycle Experiments with the Earth System Model CESM1(BGC). <i>Journal of Climate</i> , 2014, 27, 8981-9005.	1.2	156
26	The emerging anthropogenic signal in land-atmosphere carbon-cycle coupling. <i>Nature Climate Change</i> , 2014, 4, 796-800.	8.1	26
27	Evaluating soil biogeochemistry parameterizations in Earth system models with observations. <i>Global Biogeochemical Cycles</i> , 2014, 28, 211-222.	1.9	76
28	Global soil carbon projections are improved by modelling microbial processes. <i>Nature Climate Change</i> , 2013, 3, 909-912.	8.1	772
29	Impacts of human alteration of the nitrogen cycle in the US on radiative forcing. <i>Biogeochemistry</i> , 2013, 114, 25-40.	1.7	51
30	Evaluating litter decomposition in earth system models with long-term litterbag experiments: an example using the Community Land Model version 4 (CLM4). <i>Global Change Biology</i> , 2013, 19, 957-974.	4.2	164
31	Simulating the Biogeochemical and Biogeophysical Impacts of Transient Land Cover Change and Wood Harvest in the Community Climate System Model (CCSM4) from 1850 to 2100. <i>Journal of Climate</i> , 2012, 25, 3071-3095.	1.2	255
32	Reconciling leaf physiological traits and canopy flux data: Use of the TRY and FLUXNET databases in the Community Land Model version 4. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	169
33	The CCSM4 Land Simulation, 1850-2005: Assessment of Surface Climate and New Capabilities. <i>Journal of Climate</i> , 2012, 25, 2240-2260.	1.2	276
34	Interactive Crop Management in the Community Earth System Model (CESM1): Seasonal Influences on Land-Atmosphere Fluxes. <i>Journal of Climate</i> , 2012, 25, 4839-4859.	1.2	140
35	Improving canopy processes in the Community Land Model version 4 (CLM4) using global flux fields empirically inferred from FLUXNET data. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	522
36	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2011, 3, .	1.3	666

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37	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2011, 3, n/a-n/a.	1.3	367
38	Biophysical considerations in forestry for climate protection. <i>Frontiers in Ecology and the Environment</i> , 2011, 9, 174-182.	1.9	301
39	Forests and Global Change. <i>Ecological Studies</i> , 2011, , 711-725.	0.4	4
40	Changes in Arctic vegetation amplify high-latitude warming through the greenhouse effect. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 1295-1300.	3.3	228
41	Quantifying carbon–nitrogen feedbacks in the Community Land Model (CLM4). <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	167
42	Terrestrial Gross Carbon Dioxide Uptake: Global Distribution and Covariation with Climate. <i>Science</i> , 2010, 329, 834-838.	6.0	2,056
43	Parameterization of Urban Characteristics for Global Climate Modeling. <i>Annals of the American Association of Geographers</i> , 2010, 100, 848-865.	3.0	128
44	Rapid vegetation responses and feedbacks amplify climate model response to snow cover changes. <i>Climate Dynamics</i> , 2008, 30, 391-406.	1.7	17
45	The thermoinsulation effect of snow cover within a climate model. <i>Climate Dynamics</i> , 2008, 31, 107-124.	1.7	32
46	Forests and Climate Change: Forcings, Feedbacks, and the Climate Benefits of Forests. <i>Science</i> , 2008, 320, 1444-1449.	6.0	4,344
47	Protecting climate with forests. <i>Environmental Research Letters</i> , 2008, 3, 044006.	2.2	313
48	Land use and land-cover change. , 2008, , 432-469.		3
49	Present-day springtime high-latitude surface albedo as a predictor of simulated climate sensitivity. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	20
50	The Partitioning of Evapotranspiration into Transpiration, Soil Evaporation, and Canopy Evaporation in a GCM: Impacts on Land–Atmosphere Interaction. <i>Journal of Hydrometeorology</i> , 2007, 8, 862-880.	0.7	399
51	Evaluating Aspects of the Community Land and Atmosphere Models (CLM3 and CAM3) Using a Dynamic Global Vegetation Model. <i>Journal of Climate</i> , 2006, 19, 2290-2301.	1.2	117
52	Soil Moisture Feedbacks to Precipitation in Southern Africa. <i>Journal of Climate</i> , 2006, 19, 4198-4206.	1.2	124
53	The Community Climate System Model Version 3 (CCSM3). <i>Journal of Climate</i> , 2006, 19, 2122-2143.	1.2	2,075
54	The Importance of Land-Cover Change in Simulating Future Climates. <i>Science</i> , 2005, 310, 1674-1678.	6.0	930

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55	Soil feedback drives the mid-Holocene North African monsoon northward in fully coupled CCSM2 simulations with a dynamic vegetation model. <i>Climate Dynamics</i> , 2004, 23, 791-802.	1.7	122
56	Biogeophysical feedbacks between land cover and climate. <i>Geophysical Monograph Series</i> , 2004, , 61-72.	0.1	5
57	Simulating Springtime Temperature Patterns in the Community Atmosphere Model Coupled to the Community Land Model Using Prognostic Leaf Area. <i>Journal of Climate</i> , 2004, 17, 4531-4540.	1.2	63
58	A dynamic global vegetation model for use with climate models: concepts and description of simulated vegetation dynamics. <i>Global Change Biology</i> , 2003, 9, 1543-1566.	4.2	335
59	Assessment of global climate model land surface albedo using MODIS data. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	92
60	Simulating biogenic volatile organic compound emissions in the Community Climate System Model. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	106
61	Nitrogen Controls on Climate Model Evapotranspiration. <i>Journal of Climate</i> , 2002, 15, 278-295.	1.2	99
62	The Land Surface Climatology of the Community Land Model Coupled to the NCAR Community Climate Model*. <i>Journal of Climate</i> , 2002, 15, 3123-3149.	1.2	583
63	Landscapes as patches of plant functional types: An integrating concept for climate and ecosystem models. <i>Global Biogeochemical Cycles</i> , 2002, 16, 5-15-23.	1.9	483
64	Observational Evidence for Reduction of Daily Maximum Temperature by Croplands in the Midwest United States. <i>Journal of Climate</i> , 2001, 14, 2430-2442.	1.2	141
65	The Representation of Arctic Soils in the Land Surface Model: The Importance of Mosses. <i>Journal of Climate</i> , 2001, 14, 3324-3335.	1.2	196
66	The Effects of Remotely Sensed Plant Functional Type and Leaf Area Index on Simulations of Boreal Forest Surface Fluxes by the NCAR Land Surface Model. <i>Journal of Hydrometeorology</i> , 2000, 1, 431-446.	0.7	46
67	The microclimates of a suburban Colorado (USA) landscape and implications for planning and design. <i>Landscape and Urban Planning</i> , 2000, 49, 97-114.	3.4	98
68	Impact of tundra ecosystems on the surface energy budget and climate of Alaska. <i>Journal of Geophysical Research</i> , 1999, 104, 6647-6660.	3.3	68
69	FROST FOLLOWED THE PLOW: IMPACTS OF DEFORESTATION ON THE CLIMATE OF THE UNITED STATES. , 1999, 9, 1305-1315.		122
70	Soil water and the persistence of floods and droughts in the Mississippi River Basin. <i>Water Resources Research</i> , 1998, 34, 2693-2701.	1.7	34
71	The Land Surface Climatology of the NCAR Land Surface Model Coupled to the NCAR Community Climate Model*. <i>Journal of Climate</i> , 1998, 11, 1307-1326.	1.2	294
72	Feedbacks between climate and surface water in northern Africa during the middle Holocene. <i>Journal of Geophysical Research</i> , 1997, 102, 11087-11101.	3.3	89

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73	Comparison of the NCAR LSM1 land surface model with BOREAS aspen and jack pine tower fluxes. <i>Journal of Geophysical Research</i> , 1997, 102, 29065-29075.	3.3	67
74	Effects of Land Use on the Climate of the United States. <i>Climatic Change</i> , 1997, 37, 449-486.	1.7	325
75	Sensitivity of a GCM simulation to subgrid infiltration and surface runoff. <i>Climate Dynamics</i> , 1996, 12, 279-285.	1.7	27
76	Boreal forest and tundra ecosystems as components of the climate system. <i>Climatic Change</i> , 1995, 29, 145-167.	1.7	250
77	Land-Atmosphere interactions for climate system Models: coupling biophysical, biogeochemical, and ecosystem dynamical processes. <i>Remote Sensing of Environment</i> , 1995, 51, 57-73.	4.6	128
78	Sensitivity of a GCM Simulation to Inclusion of Inland Water Surfaces. <i>Journal of Climate</i> , 1995, 8, 2691-2704.	1.2	179
79	Land-atmosphere CO ₂ exchange simulated by a land surface process model coupled to an atmospheric general circulation model. <i>Journal of Geophysical Research</i> , 1995, 100, 2817.	3.3	254
80	Comparison of the land surface climatology of the National Center for Atmospheric Research community climate model 2 at R15 and T42 resolutions. <i>Journal of Geophysical Research</i> , 1994, 99, 10357.	3.3	11
81	Comparison of two land surface process models using prescribed forcings. <i>Journal of Geophysical Research</i> , 1994, 99, 25803.	3.3	33
82	Physiological derivation of the observed relationship between net primary production and mean annual air temperature. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 1993, 45, 397-408.	0.8	12
83	Physiological controls of the carbon balance of boreal forest ecosystems. <i>Canadian Journal of Forest Research</i> , 1993, 23, 1453-1471.	0.8	86
84	Analysis of neighborhood competition among annual plants: implications of a plant growth model. <i>Ecological Modelling</i> , 1993, 65, 123-136.	1.2	24
85	Influence of Subgrid-Scale Heterogeneity in Leaf Area Index, Stomatal Resistance, and Soil Moisture on Grid-Scale Land-Atmosphere Interactions. <i>Journal of Climate</i> , 1993, 6, 1882-1897.	1.2	113
86	Physiological derivation of the observed relationship between net primary production and mean annual air temperature. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 1993, 45, 397-408.	0.8	9
87	Soil temperature, nitrogen mineralization, and carbon source-sink relationships in boreal forests. <i>Canadian Journal of Forest Research</i> , 1992, 22, 629-639.	0.8	158
88	Comparison of atmospheric carbon dioxide concentration and metabolic activity in Boreal Forest ecosystems. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 1992, 44, 173-185.	0.8	4
89	Effects of boreal forest vegetation on global climate. <i>Nature</i> , 1992, 359, 716-718.	13.7	924
90	Air temperature, tree growth, and the northern and southern range limits to <i>Picea mariana</i> . <i>Journal of Vegetation Science</i> , 1992, 3, 495-506.	1.1	81

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91	The transition between boreal forest and tundra. , 1992, , 196-215.		33
92	Atmosphere-biosphere exchange of carbon dioxide in boreal forests. Journal of Geophysical Research, 1991, 96, 7301-7312.	3.3	93
93	Seasonal and annual carbon fluxes in a boreal forest landscape. Journal of Geophysical Research, 1991, 96, 17329-17338.	3.3	24
94	Density Effects on the Size Structure of Annual Plant Populations: An Indication of Neighbourhood Competition. Annals of Botany, 1991, 68, 341-347.	1.4	69
95	A biophysical surface energy budget analysis of soil temperature in the boreal forests of interior Alaska. Water Resources Research, 1991, 27, 767-781.	1.7	114
96	Using a Forest Stand Simulation Model to Examine the Ecological and Climatic Significance of the Late-Quaternary Pine-Spruce Pollen Zone in Eastern Virginia, U.S.A.. Quaternary Research, 1990, 33, 204-218.	1.0	50
97	The sensitivity of some high-latitude boreal forests to climatic parameters. Climatic Change, 1990, 16, 9-29.	1.7	138
98	Carbon and nitrogen cycling in North American boreal forests. Biogeochemistry, 1990, 10, 1.	1.7	61
99	Carbon and nitrogen cycling in North American boreal forests. II. Biogeographic patterns. Canadian Journal of Forest Research, 1990, 20, 1077-1088.	0.8	74
100	Simulation of moss and tree dynamics in the boreal forests of interior Alaska. Plant Ecology, 1989, 84, 31-44.	1.2	40
101	Environmental factors and ecological processes controlling vegetation patterns in boreal forests. Landscape Ecology, 1989, 3, 111-130.	1.9	82
102	A computer model of the solar radiation, soil moisture, and soil thermal regimes in boreal forests. Ecological Modelling, 1989, 45, 275-306.	1.2	158
103	The Size Structure of Theoretical Plant Populations: Spatial Patterns and Neighborhood Effects. Ecology, 1988, 69, 1721-1730.	1.5	89
104	Land surface processes in climate models. , 0, , 395-417.		1
105	Soil physics. , 0, , 131-140.		0
106	Ecosystems. , 0, , 303-325.		0
107	Vegetation dynamics. , 0, , 326-346.		0
108	Global biogeography. , 0, , 364-392.		0

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109	Seasonal-to-interannual variability. , 0, , 418-431.		0
110	Coupled climateâ€“vegetation dynamics. , 0, , 470-488.		0
111	Carbon cycleâ€“climate feedbacks. , 0, , 489-519.		0