

# Vincent E Larson

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2675612/publications.pdf>

Version: 2024-02-01

68  
papers

4,482  
citations

147801

31  
h-index

110387

64  
g-index

84  
all docs

84  
docs citations

84  
times ranked

3587  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Community Earth System Model Version 2 (CESM2). <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001916.	3.8	935
2	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2089-2129.	3.8	404
3	A PDF-Based Model for Boundary Layer Clouds. Part I: Method and Model Description. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 3540-3551.	1.7	363
4	Intercomparison of model simulations of mixed-phase clouds observed during the ARM Mixed-Phase Arctic Cloud Experiment. I: single-layer cloud. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009, 135, 979-1002.	2.7	224
5	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2377-2411.	3.8	168
6	Higher-Order Turbulence Closure and Its Impact on Climate Simulations in the Community Atmosphere Model. <i>Journal of Climate</i> , 2013, 26, 9655-9676.	3.2	165
7	Using Probability Density Functions to Derive Consistent Closure Relationships among Higher-Order Moments. <i>Monthly Weather Review</i> , 2005, 133, 1023-1042.	1.4	163
8	CGILS: Results from the first phase of an international project to understand the physical mechanisms of low cloud feedbacks in single column models. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 826-842.	3.8	140
9	Small-Scale and Mesoscale Variability in Cloudy Boundary Layers: Joint Probability Density Functions. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 3519-3539.	1.7	136
10	Understanding Cloud and Convective Characteristics in Version 1 of the E3SM Atmosphere Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 2618-2644.	3.8	105
11	Observed Microphysical Structure of Midlevel, Mixed-Phase Clouds. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 1779-1804.	1.7	100
12	Intercomparison of model simulations of mixed-phase clouds observed during the ARM Mixed-Phase Arctic Cloud Experiment. II: Multilayer cloud. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009, 135, 1003-1019.	2.7	84
13	Systematic Biases in the Microphysics and Thermodynamics of Numerical Models That Ignore Subgrid-Scale Variability. <i>Journals of the Atmospheric Sciences</i> , 2001, 58, 1117-1128.	1.7	83
14	PDF Parameterization of Boundary Layer Clouds in Models with Horizontal Grid Spacings from 2 to 16 km. <i>Monthly Weather Review</i> , 2012, 140, 285-306.	1.4	80
15	A PDF-Based Model for Boundary Layer Clouds. Part II: Model Results. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 3552-3571.	1.7	79
16	The path to CAM6: coupled simulations with CAM5.4 and CAM5.5. <i>Geoscientific Model Development</i> , 2018, 11, 235-255.	3.6	66
17	Small-Scale and Mesoscale Variability of Scalars in Cloudy Boundary Layers: One-Dimensional Probability Density Functions. <i>Journals of the Atmospheric Sciences</i> , 2001, 58, 1978-1994.	1.7	64
18	Unified parameterization of the planetary boundary layer and shallow convection with a higher-order turbulence closure in the Community Atmosphere Model: single-column experiments. <i>Geoscientific Model Development</i> , 2012, 5, 1407-1423.	3.6	61

#	ARTICLE	IF	CITATIONS
19	A single-column model intercomparison of a heavily drizzling stratocumulus-topped boundary layer. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	60
20	An Analytic Longwave Radiation Formula for Liquid Layer Clouds. <i>Monthly Weather Review</i> , 2007, 135, 689-699.	1.4	53
21	Parametric Sensitivity and Uncertainty Quantification in the Version 1 of E3SM Atmosphere Model Based on Short Perturbed Parameter Ensemble Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 13,046.	3.3	53
22	A sensitivity analysis of cloud properties to CLUBB parameters in the single-column Community Atmosphere Model (SCAM5). <i>Journal of Advances in Modeling Earth Systems</i> , 2014, 6, 829-858.	3.8	51
23	Supplying Local Microphysics Parameterizations with Information about Subgrid Variability: Latin Hypercube Sampling. <i>Journals of the Atmospheric Sciences</i> , 2005, 62, 4010-4026.	1.7	42
24	The Vertical Profile of Liquid and Ice Water Content in Midlatitude Mixed-Phase Altocumulus Clouds. <i>Journal of Applied Meteorology and Climatology</i> , 2008, 47, 2487-2495.	1.5	42
25	Regional Climate Simulations With the Community Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 1245-1265.	3.8	41
26	Parameterizing deep convection using the assumed probability density function method. <i>Geoscientific Model Development</i> , 2015, 8, 1-19.	3.6	40
27	A multiscale modeling framework model (superparameterized CAM5) with a higher-order turbulence closure: Model description and low-cloud simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2015, 7, 484-509.	3.8	39
28	A unified parameterization of clouds and turbulence using CLUBB and subcolumns in the Community Atmosphere Model. <i>Geoscientific Model Development</i> , 2015, 8, 3801-3821.	3.6	39
29	Elucidating Model Inadequacies in a Cloud Parameterization by Use of an Ensemble-Based Calibration Framework. <i>Monthly Weather Review</i> , 2007, 135, 4077-4096.	1.4	37
30	Analytic upscaling of a local microphysics scheme. Part I: Derivation. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 46-57.	2.7	36
31	A single-column model ensemble approach applied to the TWP-ICE experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 6544-6563.	3.3	33
32	Parametric behaviors of CLUBB in simulations of low clouds in the Community Atmosphere Model (CAM). <i>Journal of Advances in Modeling Earth Systems</i> , 2015, 7, 1005-1025.	3.8	32
33	The Subgrid Importance Latin Hypercube Sampler (SILHS): a multivariate subcolumn generator. <i>Geoscientific Model Development</i> , 2013, 6, 1813-1829.	3.6	30
34	Multi-variate probability density functions with dynamics for cloud droplet activation in large-scale models: single column tests. <i>Geoscientific Model Development</i> , 2010, 3, 475-486.	3.6	28
35	Single-Column Model Simulations of Subtropical Marine Boundary Layer Cloud Transitions Under Weakening Inversions. <i>Journal of Advances in Modeling Earth Systems</i> , 2017, 9, 2385-2412.	3.8	27
36	Subgrid variations of the cloud water and droplet number concentration over the tropical ocean: satellite observations and implications for warm rain simulations in climate models. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 1077-1096.	4.9	26

#	ARTICLE	IF	CITATIONS
37	What determines altocumulus dissipation time?. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	24
38	Analytic upscaling of a local microphysics scheme. Part II: Simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 58-69.	2.7	24
39	Assessment of marine boundary layer cloud simulations in the CAM with CLUBB and updated microphysics scheme based on ARM observations from the Azores. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 8472-8492.	3.3	20
40	Processes that generate and deplete liquid water and snow in thin midlevel mixed-phase clouds. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	18
41	Better calibration of cloud parameterizations and subgrid effects increases the fidelity of the E3SM Atmosphere Model version 1. <i>Geoscientific Model Development</i> , 2022, 15, 2881-2916.	3.6	17
42	The death of an altocumulus cloud. <i>Geophysical Research Letters</i> , 2001, 28, 2609-2612.	4.0	15
43	Low-Cloud Feedback in CAM5-CLUBB: Physical Mechanisms and Parameter Sensitivity Analysis. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 2844-2864.	3.8	15
44	Prognostic Equations for Cloud Fraction and Liquid Water, and Their Relation to Filtered Density Functions. <i>Journals of the Atmospheric Sciences</i> , 2004, 61, 338-351.	1.7	14
45	Framework for improvement by vertical enhancement: A simple approach to improve representation of low and high-level clouds in large-scale models. <i>Journal of Advances in Modeling Earth Systems</i> , 2017, 9, 627-646.	3.8	14
46	Momentum Transport in Shallow Cumulus Clouds and Its Parameterization by Higher-Order Closure. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 3419-3442.	3.8	14
47	Quantifying and attributing time step sensitivities in present-day climate simulations conducted with EAMv1. <i>Geoscientific Model Development</i> , 2021, 14, 1921-1948.	3.6	13
48	From cloud overlap to PDF overlap. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007, 133, 1877-1891.	2.7	12
49	Parameterizing microphysical effects on variances and covariances of moisture and heat content using a multivariate probability density function: a study with CLUBB (tag MVCS). <i>Geoscientific Model Development</i> , 2016, 9, 4273-4295.	3.6	12
50	A cloudy planetary boundary layer oscillation arising from the coupling of turbulence with precipitation in climate simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2017, 9, 1973-1993.	3.8	12
51	Vertical dependence of horizontal variation of cloud microphysics: observations from the ACE-ENA field campaign and implications for warm-rain simulation in climate models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 3103-3121.	4.9	11
52	An idealized model of the one-dimensional carbon dioxide rectifier effect. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2008, 60, 525-536.	1.6	10
53	Parameterizing correlations between hydrometeor species in mixed-phase Arctic clouds. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	10
54	Quadrature Methods for the Calculation of Subgrid Microphysics Moments. <i>Monthly Weather Review</i> , 2015, 143, 2955-2972.	1.4	10

#	ARTICLE	IF	CITATIONS
55	A Cloud Top Radiative Cooling Model Coupled With CLUBB in the Community Atmosphere Model: Description and Simulation of Low Clouds. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 979-997.	3.8	9
56	A new subgrid-scale representation of hydrometeor fields using a multivariate PDF. <i>Geoscientific Model Development</i> , 2016, 9, 2031-2053.	3.6	8
57	What causes partial cloudiness to form in multilayered midlevel clouds? A simulated case study. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	7
58	Parameterization of the Spatial Variability of Rain for Large-Scale Models and Remote Sensing. <i>Journal of Applied Meteorology and Climatology</i> , 2015, 54, 2027-2046.	1.5	7
59	Dependence of Vertical Alignment of Cloud and Precipitation Properties on Their Effective Fall Speeds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 2079-2093.	3.3	7
60	A Parameterization of Turbulent Dissipation and Pressure Damping Time Scales in Stably Stratified Inversions, and its Effects on Low Clouds in Global Simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2020MS002278.	3.8	7
61	Long-term single-column model intercomparison of diurnal cycle of precipitation over midlatitude and tropical land. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2022, 148, 641-669.	2.7	6
62	Improving Time Step Convergence in an Atmosphere Model With Simplified Physics: The Impacts of Closure Assumption and Process Coupling. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001982.	3.8	5
63	CondiDiag1.0: a flexible online diagnostic tool for conditional sampling and budget analysis in the E3SM atmosphere model (EAM). <i>Geoscientific Model Development</i> , 2022, 15, 3205-3231.	3.6	4
64	An Analytic Scaling Law for the Depositional Growth of Snow in Thin Mixed-Phase Layer Clouds. <i>Journals of the Atmospheric Sciences</i> , 2009, 66, 2620-2639.	1.7	3
65	Vertical overlap of probability density functions of cloud and precipitation hydrometeors. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12,966-12,984.	3.3	3
66	A flexible importance sampling method for integrating subgrid processes. <i>Geoscientific Model Development</i> , 2016, 9, 413-429.	3.6	2
67	Assessing the Sensitivity of the Tropical Cyclone Boundary Layer to the Parameterization of Momentum Flux in the Community Earth System Model. <i>Monthly Weather Review</i> , 2022, 150, 883-906.	1.4	1
68	An Objective and Efficient Method for Assessing the Impact of Reduced-Precision Calculations On Solution Correctness. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 3131-3147.	3.8	0