George Bryan

List of Publications by Year
in descending order

74 papers	4,240 citations	172457 29 h-index	110387 64 g-index
77 all docs	77 docs citations	77 times ranked	2539 citing authors

#	Article	IF	Citations
1	Resolution Requirements for the Simulation of Deep Moist Convection. Monthly Weather Review, 2003, 131, 2394-2416.	1.4	617
2	A Benchmark Simulation for Moist Nonhydrostatic Numerical Models. Monthly Weather Review, 2002, 130, 2917-2928.	1.4	485
3	Sensitivity of a Simulated Squall Line to Horizontal Resolution and Parameterization of Microphysics. Monthly Weather Review, 2012, 140, 202-225.	1.4	350
4	The Maximum Intensity of Tropical Cyclones in Axisymmetric Numerical Model Simulations. Monthly Weather Review, 2009, 137, 1770-1789.	1.4	229
5	The Bow Echo and MCV Experiment: Observations and Opportunities. Bulletin of the American Meteorological Society, 2004, 85, 1075-1094.	3.3	164
6	Parameterization of Cloud Microphysics Based on the Prediction of Bulk Ice Particle Properties. Part II: Case Study Comparisons with Observations and Other Schemes. Journals of the Atmospheric Sciences, 2015, 72, 312-339.	1.7	146
7	Mechanisms Supporting Long-Lived Episodes of Propagating Nocturnal Convection within a 7-Day WRF Model Simulation. Journals of the Atmospheric Sciences, 2006, 63, 2437-2461.	1.7	142
8	Evaluation of an Analytical Model for the Maximum Intensity of Tropical Cyclones. Journals of the Atmospheric Sciences, 2009, 66, 3042-3060.	1.7	140
9	Effects of Surface Exchange Coefficients and Turbulence Length Scales on the Intensity and Structure of Numerically Simulated Hurricanes. Monthly Weather Review, 2012, 140, 1125-1143.	1.4	139
10	Moist Absolute Instability: The Sixth Static Stability State. Bulletin of the American Meteorological Society, 2000, 81, 1207-1230.	3.3	108
11	Explicit Numerical Diffusion in the WRF Model. Monthly Weather Review, 2007, 135, 3808-3824.	1.4	105
12	Clouds and Convective Selfâ€Aggregation in a Multimodel Ensemble of Radiativeâ€Convective Equilibrium Simulations. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002138.	3.8	86
13	A Multimodel Assessment of RKW Theoryâ€™s Relevance to Squall-Line Characteristics. Monthly Weather Review, 2006, 134, 2772-2792.	1.4	79
14	Effects of Parameterized Diffusion on Simulated Hurricanes. Journals of the Atmospheric Sciences, 2012, 69, 2284-2299.	1.7	75
15	The Influence of Near-Surface, High-Entropy Air in Hurricane Eyes on Maximum Hurricane Intensity. Journals of the Atmospheric Sciences, 2009, 66, 148-158.	1.7	68
16	The Mysteries of Mammatus Clouds: Observations and Formation Mechanisms. Journals of the Atmospheric Sciences, 2006, 63, 2409-2435.	1.7	64
17	The Triggering of Orographic Rainbands by Small-Scale Topography. Journals of the Atmospheric Sciences, 2007, 64, 1530-1549.	1.7	60
18	Observations of a Squall Line and Its Near Environment Using High-Frequency Rawinsonde Launches during VORTEX2. Monthly Weather Review, 2010, 138, 4076-4097.	1.4	60

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19	A Large-Eddy Simulation Study of Moist Convection Initiation over Heterogeneous Surface Fluxes. Monthly Weather Review, 2011, 139, 2901-2917.	1.4	55
20	On the Computation of Pseudoadiabatic Entropy and Equivalent Potential Temperature. Monthly Weather Review, 2008, 136, 5239-5245.	1.4	52
21	The Madison County, Virginia, Flash Flood of 27 June 1995. Weather and Forecasting, 1999, 14, 384-404.	1.4	47
22	Broadening of Modeled Cloud Droplet Spectra Using Bin Microphysics in an Eulerian Spatial Domain. Journals of the Atmospheric Sciences, 2018, 75, 4005-4030.	1.7	41
23	Eye of the Storm: Observing Hurricanes with a Small Unmanned Aircraft System. Bulletin of the American Meteorological Society, 2020, 101, E186-E205.	3.3	41
24	Extreme Low-Level Updrafts and Wind Speeds Measured by Dropsondes in Tropical Cyclones. Monthly Weather Review, 2016, 144, 2177-2204.	1.4	39
25	LES of Laminar Flow in the PBL: A Potential Problem for Convective Storm Simulations. Monthly Weather Review, 2016, 144, 1841-1850.	1.4	39
26	A Simple Method for Simulating Wind Profiles in the Boundary Layer of Tropical Cyclones. Boundary-Layer Meteorology, 2017, 162, 475-502.	2.3	38
27	Evaluation of a Time-Dependent Model for the Intensification of Tropical Cyclones. Journals of the Atmospheric Sciences, 2018, 75, 2125-2138.	1.7	37
28	Spurious Convective Organization in Simulated Squall Lines Owing to Moist Absolutely Unstable Layers. Monthly Weather Review, 2005, 133, 1978-1997.	1.4	35
29	Tornado Vortex Structure, Intensity, and Surface Wind Gusts in Large-Eddy Simulations with Fully Developed Turbulence. Journals of the Atmospheric Sciences, 2017, 74, 1573-1597.	1.7	31
30	Gusts and shear within hurricane eyewalls can exceed offshore wind turbine design standards. Geophysical Research Letters, 2017, 44, 6413-6420.	4.0	30
31	Gravity Currents in a Deep Anelastic Atmosphere. Journals of the Atmospheric Sciences, 2008, 65, 536-556.	1.7	29
32	The Optimal State for Gravity Currents in Shear. Journals of the Atmospheric Sciences, 2014, 71, 448-468.	1.7	29
33	Roll Circulations in the Convective Region of a Simulated Squall Line. Journals of the Atmospheric Sciences, 2007, 64, 1249-1266.	1.7	28
34	â€œNear Groundâ€•Vertical Vorticity in Supercell Thunderstorm Models. Journals of the Atmospheric Sciences, 2017, 74, 1757-1766.	1.7	27
35	Aerosol Effects on Idealized Supercell Thunderstorms in Different Environments. Journals of the Atmospheric Sciences, 2014, 71, 4558-4580.	1.7	26
36	A Reevaluation of Iceâ€"Liquid Water Potential Temperature. Monthly Weather Review, 2004, 132, 2421-2431.	1.4	24

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37	Models of non-Boussinesq lock-exchange flow. Journal of Fluid Mechanics, 2011, 675, 1-26.	3.4	24
38	Comments on â€˜Sensitivity of tropicalâ€cyclone models to the surface drag coefficientâ€™. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1957-1960.	2.7	24
39	Using Large-Eddy Simulations to Define Spectral and Coherence Characteristics of the Hurricane Boundary Layer for Wind-Energy Applications. Boundary-Layer Meteorology, 2017, 165, 55-86.	2.3	24
40	The Origins of Vortex Sheets in a Simulated Supercell Thunderstorm. Monthly Weather Review, 2014, 142, 3944-3954.	1.4	21
41	Large-Eddy Simulation of the Stratocumulus-Capped Boundary Layer with Explicit Filtering and Reconstruction Turbulence Modeling. Journals of the Atmospheric Sciences, 2018, 75, 611-637.	1.7	21
42	The Spacing of Orographic Rainbands Triggered by Small-Scale Topography. Journals of the Atmospheric Sciences, 2007, 64, 4222-4245.	1.7	20
43	Using Simulated Dropsondes to Understand Extreme Updrafts and Wind Speeds in Tropical Cyclones. Monthly Weather Review, 2018, 146, 3901-3925.	1.4	20
44	Diabatically Driven Discrete Propagation of Surface Fronts: A Numerical Analysis. Journals of the Atmospheric Sciences, 2000, 57, 2061-2079.	1.7	18
45	Supercell Low-Level Mesocyclones in Simulations with a Sheared Convective Boundary Layer. Monthly Weather Review, 2015, 143, 272-297.	1.4	18
46	Axisymmetric Tornado Simulations at High Reynolds Number. Journals of the Atmospheric Sciences, 2016, 73, 3843-3854.	1.7	18
47	Cumulonimbus Clouds and Severe Convective Storms. International Geophysics, 2011, 99, 315-454.	0.6	17
48	Reexamination of the State of the Art of Cloud Modeling Shows Real Improvements. Bulletin of the American Meteorological Society, 2013, 94, ES45-ES48.	3.3	17
49	Gravity Currents in Confined Channels with Environmental Shear. Journals of the Atmospheric Sciences, 2014, 71, 1121-1142.	1.7	17
50	Properties of a Simulated Convective Boundary Layer in an Idealized Supercell Thunderstorm Environment. Monthly Weather Review, 2014, 142, 3955-3976.	1.4	17
51	Evolution of an Axisymmetric Tropical Cyclone before Reaching Slantwise Moist Neutrality. Journals of the Atmospheric Sciences, 2019, 76, 1865-1884.	1.7	17
52	Using High-Resolution Simulations to Quantify Underestimates of Tornado Intensity from In Situ Observations. Monthly Weather Review, 2017, 145, 1963-1982.	1.4	16
53	Understanding Atypical Midlevel Wind Speed Maxima in Hurricane Eyewalls. Journals of the Atmospheric Sciences, 2020, 77, 1531-1557.	1.7	16
54	An Eddy Injection Method for Large-Eddy Simulations of Tornado-Like Vortices. Monthly Weather Review, 2017, 145, 1937-1961.	1.4	15

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55	Key Elements of Turbulence Closures for Simulating Deep Convection at Kilometerâ€Scale Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 818-838.	3.8	15
56	An analytical model of maximum potential intensity for tropical cyclones incorporating the effect of ocean mixing. Geophysical Research Letters, 2017, 44, 5826-5835.	4.0	13
57	An Evaluation of LES Turbulence Models for Scalar Mixing in the Stratocumulus-Capped Boundary Layer. Journals of the Atmospheric Sciences, 2018, 75, 1499-1507.	1.7	12
58	Discrete Propagation of Surface Fronts in a Convective Environment: Observations and Theory. Journals of the Atmospheric Sciences, 2000, 57, 2041-2060.	1.7	11
59	Numerical Simulations of Two-Layer Flow past Topography. Part I: The Leeside Hydraulic Jump. Journals of the Atmospheric Sciences, 2018, 75, 1231-1241.	1.7	11
60	Ice Nucleation Parameterization and Relative Humidity Distribution in Idealized Squall-Line Simulations. Journals of the Atmospheric Sciences, 2017, 74, 2761-2787.	1.7	9
61	Mean Climate and Tropical Rainfall Variability in Aquaplanet Simulations Using the Model for Prediction Across Scalesâ€Atmosphere. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002102.	3.8	8
62	Hurricane eyewall winds and structural response of wind turbines. Wind Energy Science, 2020, 5, 89-104.	3.3	8
63	A Flash Flood from a Lake-Enhanced Rainband. Weather and Forecasting, 1999, 14, 271-288.	1.4	6
64	Mesoscale Convective Systems. International Geophysics, 2011, , 455-526.	0.6	6
65	A Framework for Simulating the Tropical-Cyclone Boundary Layer Using Large-Eddy Simulation and Its Use in Evaluating PBL Parameterizations. Journals of the Atmospheric Sciences, 2021, , .	1.7	6
66	Using the Translation Speed and Vertical Structure of Gust Fronts to Infer Buoyancy Deficits within Thunderstorm Outflow. Monthly Weather Review, 2019, 147, 3575-3594.	1.4	5
67	Evaluation and Improvement of a TKE-Based Eddy-Diffusivity Mass-Flux (EDMF) Planetary Boundary Layer Scheme in Hurricane Conditions. Weather and Forecasting, 2022, 37, 935-951.	1.4	5
68	An Implicit Algebraic Turbulence Closure Scheme for Atmospheric Boundary Layer Simulation. Journals of the Atmospheric Sciences, 2019, 76, 3367-3386.	1.7	4
69	Differences in Tropical Rainfall in Aquaplanet Simulations With Resolved or Parameterized Deep Convection. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	4
70	Role of Advection of Parameterized Turbulence Kinetic Energy in Idealized Tropical Cyclone Simulations. Journals of the Atmospheric Sciences, 2021, , .	1.7	3
71	Fundamental Equations Governing Cloud Processes. International Geophysics, 2011, , 15-52.	0.6	2
72	Numerical Simulations of Two-Layer Flow past Topography. Part II: Lee Vortices. Journals of the Atmospheric Sciences, 2020, 77, 965-980.	1.7	2

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73	Supersaturation Variability from Scalar Mixing: Evaluation of a New Subgrid-Scale Model Using Direct Numerical Simulations of Turbulent Rayleighâ€"BÃ©nard Convection. Journals of the Atmospheric Sciences, 2022, 79, 1191-1210.	1.7	2
74	Assessing the Sensitivity of the Tropical Cyclone Boundary Layer to the Parameterization of Momentum Flux in the Community Earth System Model. Monthly Weather Review, 2022, 150, 883-906.	1.4	1