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	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
2	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
3	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
4	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
5	Role of Advection of Parameterized Turbulence Kinetic Energy in Idealized Tropical Cyclone Simulations. Journals of the Atmospheric Sciences, 2021, , .	1.7	3
6	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
7	Numerical Simulations of Two-Layer Flow past Topography. Part II: Lee Vortices. Journals of the Atmospheric Sciences, 2020, 77, 965-980.	1.7	2
8	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
9	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
10	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
11	Understanding Atypical Midlevel Wind Speed Maxima in Hurricane Eyewalls. Journals of the Atmospheric Sciences, 2020, 77, 1531-1557.	1.7	16
12	Hurricane eyewall winds and structural response of wind turbines. Wind Energy Science, 2020, 5, 89-104.	3.3	8
13	An Implicit Algebraic Turbulence Closure Scheme for Atmospheric Boundary Layer Simulation. Journals of the Atmospheric Sciences, 2019, 76, 3367-3386.	1.7	4
14	Evolution of an Axisymmetric Tropical Cyclone before Reaching Slantwise Moist Neutrality. Journals of the Atmospheric Sciences, 2019, 76, 1865-1884.	1.7	17
15	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
16	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
17	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
18	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

#	Article	IF	Citations
19	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
20	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
21	Using Simulated Dropsondes to Understand Extreme Updrafts and Wind Speeds in Tropical Cyclones. Monthly Weather Review, 2018, 146, 3901-3925.	1.4	20
22	Evaluation of a Time-Dependent Model for the Intensification of Tropical Cyclones. Journals of the Atmospheric Sciences, 2018, 75, 2125-2138.	1.7	37
23	Using High-Resolution Simulations to Quantify Underestimates of Tornado Intensity from In Situ Observations. Monthly Weather Review, 2017, 145, 1963-1982.	1.4	16
24	â€œNear Groundâ€•Vertical Vorticity in Supercell Thunderstorm Models. Journals of the Atmospheric Sciences, 2017, 74, 1757-1766.	1.7	27
25	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
26	Gusts and shear within hurricane eyewalls can exceed offshore wind turbine design standards. Geophysical Research Letters, 2017, 44, 6413-6420.	4.0	30
27	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
28	An Eddy Injection Method for Large-Eddy Simulations of Tornado-Like Vortices. Monthly Weather Review, 2017, 145, 1937-1961.	1.4	15
29	Ice Nucleation Parameterization and Relative Humidity Distribution in Idealized Squall-Line Simulations. Journals of the Atmospheric Sciences, 2017, 74, 2761-2787.	1.7	9
30	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
31	A Simple Method for Simulating Wind Profiles in the Boundary Layer of Tropical Cyclones. Boundary-Layer Meteorology, 2017, 162, 475-502.	2.3	38
32	Extreme Low-Level Updrafts and Wind Speeds Measured by Dropsondes in Tropical Cyclones. Monthly Weather Review, 2016, 144, 2177-2204.	1.4	39
33	LES of Laminar Flow in the PBL: A Potential Problem for Convective Storm Simulations. Monthly Weather Review, 2016, 144, 1841-1850.	1.4	39
34	Axisymmetric Tornado Simulations at High Reynolds Number. Journals of the Atmospheric Sciences, 2016, 73, 3843-3854.	1.7	18
35	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
36	Supercell Low-Level Mesocyclones in Simulations with a Sheared Convective Boundary Layer. Monthly Weather Review, 2015, 143, 272-297.	1.4	18

#	Article	IF	Citations
37	The Optimal State for Gravity Currents in Shear. Journals of the Atmospheric Sciences, 2014, 71, 448-468.	1.7	29
38	Aerosol Effects on Idealized Supercell Thunderstorms in Different Environments. Journals of the Atmospheric Sciences, 2014, 71, 4558-4580.	1.7	26
39	Gravity Currents in Confined Channels with Environmental Shear. Journals of the Atmospheric Sciences, 2014, 71, 1121-1142.	1.7	17
40	The Origins of Vortex Sheets in a Simulated Supercell Thunderstorm. Monthly Weather Review, 2014, 142, 3944-3954.	1.4	21
41	Properties of a Simulated Convective Boundary Layer in an Idealized Supercell Thunderstorm Environment. Monthly Weather Review, 2014, 142, 3955-3976.	1.4	17
42	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
43	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
44	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
45	Sensitivity of a Simulated Squall Line to Horizontal Resolution and Parameterization of Microphysics. Monthly Weather Review, 2012, 140, 202-225.	1.4	350
46	Effects of Parameterized Diffusion on Simulated Hurricanes. Journals of the Atmospheric Sciences, 2012, 69, 2284-2299.	1.7	75
47	Mesoscale Convective Systems. International Geophysics, 2011, , 455-526.	0.6	6
48	Models of non-Boussinesq lock-exchange flow. Journal of Fluid Mechanics, 2011, 675, 1-26.	3.4	24
49	Cumulonimbus Clouds and Severe Convective Storms. International Geophysics, 2011, 99, 315-454.	0.6	17
50	Fundamental Equations Governing Cloud Processes. International Geophysics, 2011, , 15-52.	0.6	2
51	A Large-Eddy Simulation Study of Moist Convection Initiation over Heterogeneous Surface Fluxes. Monthly Weather Review, 2011, 139, 2901-2917.	1.4	55
52	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
53	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
54	Evaluation of an Analytical Model for the Maximum Intensity of Tropical Cyclones. Journals of the Atmospheric Sciences, 2009, 66, 3042-3060.	1.7	140

#	Article	IF	Citations
55	The Maximum Intensity of Tropical Cyclones in Axisymmetric Numerical Model Simulations. Monthly Weather Review, 2009, 137, 1770-1789.	1.4	229
56	Gravity Currents in a Deep Anelastic Atmosphere. Journals of the Atmospheric Sciences, 2008, 65, 536-556.	1.7	29
57	On the Computation of Pseudoadiabatic Entropy and Equivalent Potential Temperature. Monthly Weather Review, 2008, 136, 5239-5245.	1.4	52
58	The Triggering of Orographic Rainbands by Small-Scale Topography. Journals of the Atmospheric Sciences, 2007, 64, 1530-1549.	1.7	60
59	The Spacing of Orographic Rainbands Triggered by Small-Scale Topography. Journals of the Atmospheric Sciences, 2007, 64, 4222-4245.	1.7	20
60	Explicit Numerical Diffusion in the WRF Model. Monthly Weather Review, 2007, 135, 3808-3824.	1.4	105
61	Roll Circulations in the Convective Region of a Simulated Squall Line. Journals of the Atmospheric Sciences, 2007, 64, 1249-1266.	1.7	28
62	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
63	A Multimodel Assessment of RKW Theoryâ€™s Relevance to Squall-Line Characteristics. Monthly Weather Review, 2006, 134, 2772-2792.	1.4	79
64	The Mysteries of Mammatus Clouds: Observations and Formation Mechanisms. Journals of the Atmospheric Sciences, 2006, 63, 2409-2435.	1.7	64
65	Spurious Convective Organization in Simulated Squall Lines Owing to Moist Absolutely Unstable Layers. Monthly Weather Review, 2005, 133, 1978-1997.	1.4	35
66	The Bow Echo and MCV Experiment: Observations and Opportunities. Bulletin of the American Meteorological Society, 2004, 85, 1075-1094.	3.3	164
67	A Reevaluation of Iceâ€“Liquid Water Potential Temperature. Monthly Weather Review, 2004, 132, 2421-2431.	1.4	24
68	Resolution Requirements for the Simulation of Deep Moist Convection. Monthly Weather Review, 2003, 131, 2394-2416.	1.4	617
69	A Benchmark Simulation for Moist Nonhydrostatic Numerical Models. Monthly Weather Review, 2002, 130, 2917-2928.	1.4	485
70	Diabatically Driven Discrete Propagation of Surface Fronts: A Numerical Analysis. Journals of the Atmospheric Sciences, 2000, 57, 2061-2079.	1.7	18
71	Moist Absolute Instability: The Sixth Static Stability State. Bulletin of the American Meteorological Society, 2000, 81, 1207-1230.	3.3	108
72	Discrete Propagation of Surface Fronts in a Convective Environment: Observations and Theory. Journals of the Atmospheric Sciences, 2000, 57, 2041-2060.	1.7	11

#	Article	IF	Citations
73	A Flash Flood from a Lake-Enhanced Rainband. Weather and Forecasting, 1999, 14, 271-288.	1.4	6
74	The Madison County, Virginia, Flash Flood of 27 June 1995. Weather and Forecasting, 1999, 14, 384-404.	1.4	47