

IAN GROOMS

List of Publications by Year in descending order

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46
papers

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566801

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46
times ranked

519
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical and physical balances in low Rossby number Rayleigh-Bénard convection. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2012, 106, 392-428.	0.4	171
2	Model of Convective Taylor Columns in Rotating Rayleigh-Bénard Convection. <i>Physical Review Letters</i> , 2010, 104, 224501.	2.9	68
3	Efficient stochastic superparameterization for geophysical turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 4464-4469.	3.3	56
4	New perspectives on superparameterization for geophysical turbulence. <i>Journal of Computational Physics</i> , 2014, 271, 60-77.	1.9	51
5	Stochastic superparameterization in a quasigeostrophic model of the Antarctic Circumpolar Current. <i>Ocean Modelling</i> , 2015, 85, 1-15.	1.0	45
6	Stochastic superparameterization in quasigeostrophic turbulence. <i>Journal of Computational Physics</i> , 2014, 271, 78-98.	1.9	34
7	A Gaussian-product stochastic Gent-McWilliams parameterization. <i>Ocean Modelling</i> , 2016, 106, 27-43.	1.0	27
8	Diffusion-Based Smoothers for Spatial Filtering of Gridded Geophysical Data. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2021MS002552.	1.3	25
9	Numerical Schemes for Stochastic Backscatter in the Inverse Cascade of Quasigeostrophic Turbulence. <i>Multiscale Modeling and Simulation</i> , 2015, 13, 1001-1021.	0.6	24
10	Mesoscale Eddy Energy Locality in an Idealized Ocean Model. <i>Journal of Physical Oceanography</i> , 2013, 43, 1911-1923.	0.7	23
11	On the interactions between planetary geostrophy and mesoscale eddies. <i>Dynamics of Atmospheres and Oceans</i> , 2011, 51, 109-136.	0.7	21
12	Ensemble Kalman filters for dynamical systems with unresolved turbulence. <i>Journal of Computational Physics</i> , 2014, 273, 435-452.	1.9	21
13	Linearly implicit methods for nonlinear PDEs with linear dispersion and dissipation. <i>Journal of Computational Physics</i> , 2011, 230, 3630-3650.	1.9	20
14	Stochastic superparameterization in a one-dimensional model for wave turbulence. <i>Communications in Mathematical Sciences</i> , 2014, 12, 509-525.	0.5	20
15	Vertical Structure of Ocean Mesoscale Eddies with Implications for Parameterizations of Tracer Transport. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2020MS002151.	1.3	17
16	Analog ensemble data assimilation and a method for constructing analogs with variational autoencoders. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2021, 147, 139-149.	1.0	12
17	A note on "Toward a stochastic parameterization of ocean mesoscale eddies". <i>Ocean Modelling</i> , 2017, 113, 30-33.	1.0	11
18	Machine learning techniques to construct patched analog ensembles for data assimilation. <i>Journal of Computational Physics</i> , 2021, 443, 110532.	1.9	11

#	ARTICLE	IF	CITATIONS
19	Diagnosing, modeling, and testing a multiplicative stochastic Gent-McWilliams parameterization. <i>Ocean Modelling</i> , 2019, 133, 1-10.	1.0	10
20	Molecular Embedding via a Second Order Dissimilarity Parameterized Approach. <i>SIAM Journal of Scientific Computing</i> , 2009, 31, 2733-2756.	1.3	9
21	Multiscale models for synopticâ€™mesoscale interactions in the ocean. <i>Dynamics of Atmospheres and Oceans</i> , 2012, 58, 95-107.	0.7	9
22	Submesoscale baroclinic instability in the balance equations. <i>Journal of Fluid Mechanics</i> , 2015, 762, 256-272.	1.4	9
23	On Galerkin Approximations of the Surface Active Quasigeostrophic Equations. <i>Journal of Physical Oceanography</i> , 2016, 46, 125-139.	0.7	9
24	Some effects of horizontal discretization on linear baroclinic and symmetric instabilities. <i>Ocean Modelling</i> , 2018, 125, 106-116.	1.0	9
25	GCM-Filters: A Python Package for Diffusion-based Spatial Filtering of Gridded Data. <i>Journal of Open Source Software</i> , 2022, 7, 3947.	2.0	9
26	Asymptotic behavior of heat transport for a class of exact solutions in rotating Rayleighâ€™BÃ©nard convection. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2015, 109, 145-158.	0.4	8
27	Assimilation of ocean sea-surface height observations of mesoscale eddies. <i>Chaos</i> , 2017, 27, 126803.	1.0	8
28	On the control of subantarctic stratification by the ocean circulation. <i>Climate Dynamics</i> , 2021, 56, 299-327.	1.7	8
29	Multiscale Models in Geophysical Fluid Dynamics. <i>Earth and Space Science</i> , 2018, 5, 668-675.	1.1	7
30	A framework for variational data assimilation with superparameterization. <i>Nonlinear Processes in Geophysics</i> , 2015, 22, 601-611.	0.6	6
31	Parameterizing the Impact of Unresolved Temperature Variability on the Largeâ€™Scale Density Field: Part 1. Theory.. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2020MS002185.	1.3	6
32	A hybrid particle-ensemble Kalman filter for problems with medium nonlinearity. <i>PLoS ONE</i> , 2021, 16, e0248266.	1.1	6
33	Improving Particle Filter Performance by Smoothing Observations. <i>Monthly Weather Review</i> , 2018, 146, 2433-2446.	0.5	5
34	Investigations of non-hydrostatic, stably stratified and rapidly rotating flows. <i>Journal of Fluid Mechanics</i> , 2016, 801, 430-458.	1.4	4
35	Comparing Eddyâ€™Permitting Ocean Model Parameterizations via Lagrangian Particle Statistics in a Quasigeostrophic Setting. <i>Journal of Geophysical Research: Oceans</i> , 2018, 123, 5637-5651.	1.0	3
36	Exact instantaneous optimals in the non-geostrophic Eady problem and the detrimental effects of discretization. <i>Theoretical and Computational Fluid Dynamics</i> , 2019, 33, 125-139.	0.9	3

#	ARTICLE	IF	CITATIONS
37	The Effects of Mesoscale Ocean-Atmosphere Coupling on the Quasigeostrophic Double Gyre. <i>Fluids</i> , 2016, 1, 34.	0.8	2
38	Energy-conserving Galerkin approximations for quasigeostrophic dynamics. <i>Journal of Computational Physics</i> , 2019, 388, 23-40.	1.9	2
39	Rigorous bounds on the heat transport of rotating convection with Ekman pumping. <i>Journal of Mathematical Physics</i> , 2020, 61, 023101.	0.5	2
40	The fidelity of exponential and IMEX integrators for wave turbulence: Introduction of a new near-minimax integrating factor scheme. <i>Journal of Computational Physics</i> , 2021, 434, 109992.	1.9	2
41	A Fast Tunable Blurring Algorithm for Scattered Data. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A2281-A2299.	1.3	2
42	Multivariate localization functions for strongly coupled data assimilation in the bivariate Lorenz 96 system. <i>Nonlinear Processes in Geophysics</i> , 2021, 28, 565-583.	0.6	2
43	A comparison of nonlinear extensions to the ensemble Kalman filter. <i>Computational Geosciences</i> , 2022, , 1-18.	1.2	2
44	An eddifying Stommel model: fast eddy effects in a two-box ocean. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2019, 113, 505-526.	0.4	1
45	On energy exchanges between eddies and the mean flow in quasigeostrophic turbulence. <i>Journal of Fluid Mechanics</i> , 2020, 885, .	1.4	1
46	Parameterizing the Impact of Unresolved Temperature Variability on the Large-Scale Density Field: 2. Modeling. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	1