Olga Shishkina

List of Publications by Year
in descending order

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79	2,255	172207	223531
papers	citations	29	46
		h-index	g-index

84	84	84	652
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Boundary layer structure in turbulent thermal convection and its consequences for the required numerical resolution. New Journal of Physics, 2010, 12, 075022.	1.2	264
2	Aspect-ratio dependency of Rayleigh-BÃ©nard convection in box-shaped containers. Physics of Fluids, 2013, 25, .	1.6	92
3	Analysis of sheet-like thermal plumes in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2008, 599, 383-404.	1.4	84
4	Thermal Boundary Layer Equation for Turbulent Rayleighâ€“BÃ©nard Convection. Physical Review Letters, 2015, 114, 114302.	2.9	72
5	Analysis of thermal dissipation rates in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2006, 546, 51.	1.4	68
6	Boundary layers and wind in cylindrical Rayleighâ€“BÃ©nard cells. Journal of Fluid Mechanics, 2012, 697, 336-366.	1.4	64
7	Heat flux enhancement by regular surface roughness in turbulent thermal convection. Journal of Fluid Mechanics, 2015, 763, 109-135.	1.4	63
8	Thermal convection in inclined cylindrical containers. Journal of Fluid Mechanics, 2016, 790, .	1.4	63
9	Mean temperature profiles in turbulent Rayleighâ€“BÃ©nard convection of water. Journal of Fluid Mechanics, 2009, 633, 449-460.	1.4	62
10	Comparison of computational codes for direct numerical simulations of turbulent Rayleighâ€“BÃ©nard convection. Computers and Fluids, 2018, 166, 1-8.	1.3	62
11	Modelling the influence of wall roughness on heat transfer in thermal convection. Journal of Fluid Mechanics, 2011, 686, 568-582.	1.4	60
12	Rotating non-Oberbeckâ€“Boussinesq Rayleighâ€“BÃ©nard convection in water. Physics of Fluids, 2014, 26, .	1.6	58
13	Heat and momentum transport scalings in horizontal convection. Geophysical Research Letters, 2016, 43, 1219-1225.	1.5	58
14	On non-Oberbeckâ€“Boussinesq effects in three-dimensional Rayleighâ€“BÃ©nard convection in glycerol. Journal of Fluid Mechanics, 2013, 724, 175-202.	1.4	57
15	Local heat fluxes in turbulent Rayleigh-BÃ©nard convection. Physics of Fluids, 2007, 19, 085107.	1.6	55
16	scaling enabled by multiscale wall roughness in Rayleighâ€“BÃ©nard turbulence. Journal of Fluid Mechanics, 2019, 869, .	1.4	52
17	Multiple States in Turbulent Large-Aspect-Ratio Thermal Convection: What Determines the Number of Convection Rolls?. Physical Review Letters, 2020, 125, 074501.	2.9	51
18	Toroidal and poloidal energy in rotating Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2015, 762, 232-255.	1.4	48

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19	Confined inclined thermal convection in low-Prandtl-number fluids. Journal of Fluid Mechanics, 2018, 850, 984-1008.	1.4	43
20	Effect of Prandtl number on heat transport enhancement in Rayleigh-BÃ©nard convection under geometrical confinement. Physical Review Fluids, 2018, 3, .	1.0	43
21	Boundary Zonal Flow in Rotating Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2020, 124, 084505.	2.9	42
22	Momentum and heat transport scalings in laminar vertical convection. Physical Review E, 2016, 93, 051102.	0.8	40
23	Prandtl-Number Dependence of Heat Transport in Laminar Horizontal Convection. Physical Review Letters, 2016, 116, 024302.	2.9	35
24	Periodically Modulated Thermal Convection. Physical Review Letters, 2020, 125, 154502.	2.9	35
25	Rayleigh-BÃ©nard convection: The container shape matters. Physical Review Fluids, 2021, 6, .	1.0	35
26	A fourth order finite volume scheme for turbulent flow simulations in cylindrical domains. Computers and Fluids, 2007, 36, 484-497.	1.3	34
27	Elliptical Instability and Multiple-Roll Flow Modes of the Large-Scale Circulation in Confined Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2020, 125, 054502.	2.9	34
28	Simulation of turbulent thermal convection in complicated domains. Journal of Computational and Applied Mathematics, 2009, 226, 336-344.	1.1	32
29	Falknerâ€“Skan boundary layer approximation in Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2013, 730, 442-463.	1.4	30
30	The influence of the cell inclination on the heat transport and large-scale circulation in liquid metal convection. Journal of Fluid Mechanics, 2020, 884, .	1.4	29
31	Bulk temperature and heat transport in turbulent Rayleighâ€“BÃ©nard convection of fluids with temperature-dependent properties. Journal of Fluid Mechanics, 2018, 851, 374-390.	1.4	27
32	A fourth order accurate finite volume scheme for numerical simulations of turbulent Rayleighâ€“BÃ©nard convection in cylindrical containers. Comptes Rendus - Mecanique, 2005, 333, 17-28.	2.1	26
33	Scaling relations in large-Prandtl-number natural thermal convection. Physical Review Fluids, 2017, 2, .	1.0	26
34	Aspect Ratio Dependence of Heat Transfer in a Cylindrical Rayleigh-BÃ©nard Cell. Physical Review Letters, 2022, 128, 084501.	2.9	23
35	Influence of the angle between the wind and the isothermal surfaces on the boundary layer structures in turbulent thermal convection. Physical Review E, 2014, 89, 033014.	0.8	22
36	Scaling in Internally Heated Convection: A Unifying Theory. Geophysical Research Letters, 2021, 48, e2020GL091198.	1.5	21

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37	Boundary zonal flows in rapidly rotating turbulent thermal convection. Journal of Fluid Mechanics, 2021, 915, .	1.4	21
38	Mean temperature profiles in turbulent thermal convection. Physical Review Fluids, 2017, 2, .	1.0	21
39	Stability conditions for the Leapfrog-Euler scheme with central spatial discretization of any order. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 315-326.	0.6	20
40	Low-dimensional model of turbulent mixed convection in a complex domain. Physics of Fluids, 2012, 24, .	1.6	19
41	Natural convection in cylindrical containers with isothermal ring-shaped obstacles. Journal of Fluid Mechanics, 2020, 882, .	1.4	19
42	Regime transitions in thermally driven high-Rayleigh number vertical convection. Journal of Fluid Mechanics, 2021, 917, .	1.4	19
43	Mean flow structure in horizontal convection. Journal of Fluid Mechanics, 2017, 812, 525-540.	1.4	18
44	Velocity and thermal boundary layer equations for turbulent Rayleigh-BÃ©nard convection. Physical Review Research, 2019, 1, .	1.3	18
45	Connecting wall modes and boundary zonal flows in rotating Rayleigh-BÃ©nard convection. Physical Review Fluids, 2022, 7, .	1.0	16
46	Boundary and interior layers in turbulent thermal convection in cylindrical containers. International Journal of Computing Science and Mathematics, 2007, 1, 360.	0.2	15
47	Properties of large-scale flow structures in an isothermal ventilated room. Building and Environment, 2013, 59, 563-574.	3.0	15
48	Tenacious wall states in thermal convection in rapidly rotating containers. Journal of Fluid Mechanics, 2020, 898, .	1.4	12
49	Classical and symmetrical horizontal convection: detaching plumes and oscillations. Journal of Fluid Mechanics, 2020, 892, .	1.4	12
50	Developement of a Numerical Procedure for Direct Simulations of Turbulent Convection in a Closed Rectangular Cell. , 2007, , 381-388.		12
51	Dynamics and length scales in vertical convection of liquid metals. Journal of Fluid Mechanics, 2022, 932, .	1.4	11
52	Fluctuating Thermal Boundary Layers and Heat Transfer in Turbulent Rayleighâ€“BÃ©nard Convection. Journal of Statistical Physics, 2017, 167, 626-635.	0.5	10
53	A numerical study of turbulent mixed convection in an enclosure with heated rectangular elements. Journal of Turbulence, 2012, 13, N22.	0.5	9
54	Conductive heat flux in measurements of the Nusselt number in turbulent Rayleigh-BÃ©nard convection. Physical Review Fluids, 2016, 1, .	1.0	9

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55	The Neumann stability of high-order symmetric schemes for convection-diffusion problems. Siberian Mathematical Journal, 2007, 48, 1141-1146.	0.2	8
56	Analysis of the large-scale circulation and the boundary layers in turbulent Rayleigh-BÃ©nard convection. ERCOFTAC Series, 2011, , 383-388.	0.1	8
57	Generation of zonal flows in convective systems by travelling thermal waves. Journal of Fluid Mechanics, 2021, 913, .	1.4	8
58	Heat flux in turbulent Rayleigh-BÃ©nard convection: Predictions derived from a boundary layer theory. Physical Review Fluids, 2021, 6, .	1.0	7
59	Universal properties of penetrative turbulent Rayleigh-BÃ©nard convection. Physical Review Fluids, 2021, 6, .	1.0	7
60	The influence of non-Oberbeck-Boussinesq effects on rotating turbulent Rayleigh-BÃ©nard convection. Journal of Physics: Conference Series, 2011, 318, 082005.	0.3	5
61	Thermal boundary-layer structure in laminar horizontal convection. Journal of Fluid Mechanics, 2021, 915, .	1.4	5
62	Crossover of the relative heat transport contributions of plume ejecting and impacting zones in turbulent Rayleigh-BÃ©nard convection ^(a). Europhysics Letters, 2021, 134, 34002.	0.7	5
63	Dataâ€driven identification of the spatiotemporal structure of turbulent flows by streaming dynamic mode decomposition. GAMM Mitteilungen, 2022, 45, .	2.7	4
64	The use of Direct Numerical Simulations for solving industrial flow problems. ERCOFTAC Series, 2011, , 397-404.	0.1	3
65	Flow states and heat transport in Rayleighâ€“BÃ©nard convection with different sidewall boundary conditions. Journal of Fluid Mechanics, 2022, 936, .	1.4	3
66	Passive scalar transport in Couette flow. Journal of Fluid Mechanics, 2022, 943, .	1.4	2
67	Modeling the influence of regular wall roughnesses on the heat transport. Journal of Physics: Conference Series, 2011, 318, 022034.	0.3	1
68	Heat transport in a cell heated at the bottom and the side (a). Europhysics Letters, 2021, 134, 34001.	0.7	1
69	Analysis of Thermal Dissipation Rates Based on Direct Numerical and Largeâ€“Eddy Simulations of Turbulent Rayleighâ€“Bâ€™enard Convection. , 2007, , 201-204.		1
70	DNS of Mixed Convection in Enclosed 3D-Domains with Interior Boundaries. ERCOFTAC Series, 2010, , 401-407.	0.1	1
71	Influence of the Geometry on Rayleigh-BÃ©nard Convection. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2014, , 313-321.	0.2	0
72	Highly resolved numerical simulations of turbulent ventilation in a generic room. , 2009, , .		0

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73	Direct Numerical Simulations of Indoor Ventilation. Springer Proceedings in Physics, 2012, , 293-296.	0.1	0
74	Direct Numerical Simulation of Non-Oberbeck-Boussinesq Effects in Turbulent Rayleigh-BÃ©nard Convection of Water. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2013, , 599-606.	0.2	0
75	Highly-Resolved Numerical Simulations of High Rayleigh and Reynolds Number Indoor Ventilation in a Generic Room. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2014, , 303-311.	0.2	0
76	Numerical Investigation of the Spatial Resolution Requirements for Turbulent Rayleigh-BÃ©nard Convection. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2014, , 181-187.	0.2	0
77	DNS of Thermal Convection in Rectangular Domains with Different Depth. ERCOFTAC Series, 2015, , 337-343.	0.1	0
78	Heat Transport in Horizontal and Inclined Convection. Springer Proceedings in Physics, 2017, , 245-250.	0.1	0
79	Simulation of Turbulent Thermal Convection Using Finite Volumes. , 2006, , 709-716.		0