

Ke-Qing Xia

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/45001/ke-qing-xia-publications-by-year.pdf>

Version: 2024-04-26

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

122
papers

4,803
citations

39
h-index

64
g-index

130
ext. papers

5,362
ext. citations

4.3
avg, IF

5.94
L-index

#	Paper	IF	Citations
122	Lagrangian velocity and acceleration measurements in plume-rich regions of turbulent Rayleigh-BBard convection. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	1
121	On the effective horizontal buoyancy in turbulent thermal convection generated by cell tilting. <i>Journal of Fluid Mechanics</i> , 2021 , 914,	3.7	3
120	Inverse centrifugal effect induced by collective motion of vortices in rotating thermal convection. <i>Nature Communications</i> , 2021 , 12, 5585	17.4	2
119	Centrifugal-Force-Induced Flow Bifurcations in Turbulent Thermal Convection.. <i>Physical Review Letters</i> , 2021 , 127, 244501	7.4	2
118	Vortices as Brownian particles in turbulent flows. <i>Science Advances</i> , 2020 , 6, eaaz1110	14.3	13
117	Universal fluctuations in the bulk of RayleighBBard turbulence. <i>Journal of Fluid Mechanics</i> , 2019 , 878,	3.7	7
116	Quasistatic magnetoconvection: heat transport enhancement and boundary layer crossing. <i>Journal of Fluid Mechanics</i> , 2019 , 870, 519-542	3.7	15
115	Emergence of substructures inside the large-scale circulation induces transition in flow reversals in turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2019 , 877,	3.7	17
114	Tuning heat transport via boundary layer topographies. <i>Journal of Fluid Mechanics</i> , 2019 , 876, 1-4	3.7	2
113	Moisture transfer by turbulent natural convection. <i>Journal of Fluid Mechanics</i> , 2019 , 874, 1041-1056	3.7	1
112	Temperature Fluctuation Profiles in Turbulent Thermal Convection: A Logarithmic Dependence versus a Power-Law Dependence. <i>Physical Review Letters</i> , 2019 , 122, 014503	7.4	12
111	Contribution of Surface Thermal Forcing to Mixing in the Ocean. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 855-863	3.3	4
110	Effect of Prandtl number on heat transport enhancement in Rayleigh-BBard convection under geometrical confinement. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	29
109	Multiple-resolution scheme in finite-volume code for active or passive scalar turbulence. <i>Journal of Computational Physics</i> , 2018 , 375, 1045-1058	4.1	7
108	Flow Topology Transition via Global Bifurcation in Thermally Driven Turbulence. <i>Physical Review Letters</i> , 2018 , 120, 214501	7.4	20
107	Thermal convection with mixed thermal boundary conditions: effects of insulating lids at the top. <i>Journal of Fluid Mechanics</i> , 2017 , 817,	3.7	14
106	Turbulent thermal convection over rough plates with varying roughness geometries. <i>Journal of Fluid Mechanics</i> , 2017 , 825, 573-599	3.7	37

105	Confined Rayleigh-Bénard, Rotating Rayleigh-Bénard, and Double Diffusive Convection: A Unifying View on Turbulent Transport Enhancement through Coherent Structure Manipulation. <i>Physical Review Letters</i> , 2017 , 119, 064501	7.4	38
104	Laboratory simulation of the geothermal heating effects on ocean overturning circulation. <i>Journal of Geophysical Research: Oceans</i> , 2016 , 121, 7589-7598	3.3	5
103	Statistical characterization of thermal plumes in turbulent thermal convection. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	8
102	Higher-order flow modes in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2016 , 805, 31-51	3.7	22
101	Exploring the severely confined regime in Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2016 , 805,	3.7	24
100	Effects of geometric confinement in quasi-2-D turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2016 , 794, 639-654	3.7	27
99	Reversals of the large-scale circulation in quasi-2D Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2015 , 778,	3.7	36
98	Effects of polymer additives in the bulk of turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2015 , 784,	3.7	15
97	Comparative Experimental Study of Fixed Temperature and Fixed Heat Flux Boundary Conditions in Turbulent Thermal Convection. <i>Physical Review Letters</i> , 2015 , 115, 154502	7.4	24
96	Condensation of Coherent Structures in Turbulent Flows. <i>Physical Review Letters</i> , 2015 , 115, 264503	7.4	35
95	Heat transport properties of plates with smooth and rough surfaces in turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2014 , 740, 28-46	3.7	43
94	Turbulent flow in the bulk of Rayleigh-Bénard convection: aspect-ratio dependence of the small-scale properties. <i>Journal of Fluid Mechanics</i> , 2014 , 747, 73-102	3.7	22
93	Confinement-induced heat-transport enhancement in turbulent thermal convection. <i>Physical Review Letters</i> , 2013 , 111, 104501	7.4	59
92	Dynamics and flow coupling in two-layer turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2013 , 728,	3.7	5
91	Viscous boundary layer properties in turbulent thermal convection in a cylindrical cell: the effect of cell tilting. <i>Journal of Fluid Mechanics</i> , 2013 , 720, 140-168	3.7	18
90	Dynamics of the large-scale circulation in high-Prandtl-number turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2013 , 717, 322-346	3.7	16
89	Turbulent flow in the bulk of Rayleigh-Bénard convection: small-scale properties in a cubic cell. <i>Journal of Fluid Mechanics</i> , 2013 , 722, 596-617	3.7	54
88	Thermal boundary layer structure in turbulent Rayleigh-Bénard convection in a rectangular cell. <i>Journal of Fluid Mechanics</i> , 2013 , 721, 199-224	3.7	39

87	Experimental investigation of pair dispersion with small initial separation in convective turbulent flows. <i>Physical Review E</i> , 2013 , 87, 063006	2.4	14
86	Kolmogorov constants for the second-order structure function and the energy spectrum. <i>Physical Review E</i> , 2013 , 87, 023002	2.4	9
85	Current trends and future directions in turbulent thermal convection. <i>Theoretical and Applied Mechanics Letters</i> , 2013 , 3, 052001	1.8	93
84	Lagrangian acceleration measurements in convective thermal turbulence. <i>Journal of Fluid Mechanics</i> , 2012 , 692, 395-419	3.7	42
83	Enhanced and reduced heat transport in turbulent thermal convection with polymer additives. <i>Physical Review E</i> , 2012 , 86, 016325	2.4	17
82	Thermal boundary layer profiles in turbulent Rayleigh-Bénard convection in a cylindrical sample. <i>Physical Review E</i> , 2012 , 85, 027301	2.4	34
81	Disentangle plume-induced anisotropy in the velocity field in buoyancy-driven turbulence. <i>Journal of Fluid Mechanics</i> , 2011 , 684, 192-203	3.7	8
80	Local Dissipation Scales and Integral-Scale Reynolds Number Scalings in Thermally-Driven Turbulence. <i>Journal of Physics: Conference Series</i> , 2011 , 318, 042016	0.3	
79	How heat transfer efficiencies in turbulent thermal convection depend on internal flow modes. <i>Journal of Fluid Mechanics</i> , 2011 , 676, 1-4	3.7	12
78	An experimental investigation of turbulent thermal convection in water-based alumina nanofluid. <i>Physics of Fluids</i> , 2011 , 23, 022005	4.4	27
77	Local energy dissipation rate balances local heat flux in the center of turbulent thermal convection. <i>Physical Review Letters</i> , 2011 , 107, 174503	7.4	28
76	Analysis of the large-scale circulation and the boundary layers in turbulent Rayleigh-Bénard convection. <i>ERCOFTAC Series</i> , 2011 , 383-388	0.1	8
75	Horizontal structures of velocity and temperature boundary layers in two-dimensional numerical turbulent Rayleigh-Bénard convection. <i>Physics of Fluids</i> , 2011 , 23, 125104	4.4	24
74	Flow reversals in thermally driven turbulence. <i>Physical Review Letters</i> , 2010 , 105, 034503	7.4	128
73	Measured instantaneous viscous boundary layer in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2010 , 104, 104301	7.4	64
72	Universality of local dissipation scales in buoyancy-driven turbulence. <i>Physical Review Letters</i> , 2010 , 104, 124301	7.4	21
71	The mixing evolution and geometric properties of a passive scalar field in turbulent Rayleigh-Bénard convection. <i>New Journal of Physics</i> , 2010 , 12, 083029	2.9	6
70	Small-Scale Properties of Turbulent Rayleigh-Bénard Convection. <i>Annual Review of Fluid Mechanics</i> , 2010 , 42, 335-364	2.2	554

69	Physical and geometrical properties of thermal plumes in turbulent Rayleigh-Bénard convection. <i>New Journal of Physics</i> , 2010 , 12, 075006	2.9	35
68	Prandtl-BLasius temperature and velocity boundary-layer profiles in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2010 , 664, 297-312	3.7	50
67	Origin of the temperature oscillation in turbulent thermal convection. <i>Physical Review Letters</i> , 2009 , 102, 044503	7.4	94
66	Oscillations of the large-scale circulation in turbulent Rayleigh-Bénard convection: the sloshing mode and its relationship with the torsional mode. <i>Journal of Fluid Mechanics</i> , 2009 , 630, 367-390	3.7	58
65	Experimental Studies of Turbulent Rayleigh-Bénard Convection. <i>Springer Proceedings in Physics</i> , 2009 , 471-478	0.2	
64	Flow mode transitions in turbulent thermal convection. <i>Physics of Fluids</i> , 2008 , 20, 055104	4.4	85
63	Comparative experimental study of local mixing of active and passive scalars in turbulent thermal convection. <i>Physical Review E</i> , 2008 , 77, 056312	2.4	20
62	Scaling of the local convective heat flux in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2008 , 100, 244503	7.4	44
61	Azimuthal motion, reorientation, cessation, and reversal of the large-scale circulation in turbulent thermal convection: a comparative study in aspect ratio one and one-half geometries. <i>Physical Review E</i> , 2008 , 78, 036326	2.4	43
60	Experimental investigation of homogeneity, isotropy, and circulation of the velocity field in buoyancy-driven turbulence. <i>Journal of Fluid Mechanics</i> , 2008 , 598, 361-372	3.7	36
59	Experimental studies of the viscous boundary layer properties in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2008 , 605, 79-113	3.7	76
58	An experimental study of kicked thermal turbulence. <i>Journal of Fluid Mechanics</i> , 2008 , 606, 133-151	3.7	14
57	Multi-point local temperature measurements inside the conducting plates in turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2007 , 570, 479-489	3.7	10
56	Measured thermal dissipation field in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2007 , 98, 144501	7.4	20
55	Morphological evolution of thermal plumes in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2007 , 98, 074501	7.4	77
54	Cessations and reversals of the large-scale circulation in turbulent thermal convection. <i>Physical Review E</i> , 2007 , 75, 066307	2.4	60
53	Two clocks for a single engine in turbulent convection. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007 , 2007, N11001-N11001	1.9	6
52	Measured oscillations of the velocity and temperature fields in turbulent Rayleigh-Bénard convection in a rectangular cell. <i>Physical Review E</i> , 2007 , 76, 036301	2.4	18

51	Azimuthal motion of the mean wind in turbulent thermal convection. <i>Physical Review E</i> , 2006 , 73, 056312.	2.4	74
50	Cascades of velocity and temperature fluctuations in buoyancy-driven thermal turbulence. <i>Physical Review Letters</i> , 2006 , 97, 144504	7.4	67
49	Scaling of the Reynolds number in turbulent thermal convection. <i>Physical Review E</i> , 2005 , 72, 067302	2.4	36
48	Heat transport by turbulent Rayleigh-Bénard convection in 1 m diameter cylindrical cells of widely varying aspect ratio. <i>Journal of Fluid Mechanics</i> , 2005 , 542, 165	3.7	82
47	Statistics and Scaling of the Velocity Field in Turbulent Thermal Convection 2005 , 163-170		2
46	Azimuthal symmetry, flow dynamics, and heat transport in turbulent thermal convection in a cylinder with an aspect ratio of 0.5. <i>Physical Review Letters</i> , 2005 , 95, 074502	7.4	82
45	Density fluctuations in strongly stratified two-dimensional turbulence. <i>Physical Review Letters</i> , 2005 , 94, 174503	7.4	21
44	Test of steady-state fluctuation theorem in turbulent Rayleigh-Bénard convection. <i>Physical Review E</i> , 2005 , 72, 015301	2.4	34
43	Three-dimensional flow structures and dynamics of turbulent thermal convection in a cylindrical cell. <i>Physical Review E</i> , 2005 , 72, 026302	2.4	95
42	Experimental study of velocity boundary layer near a rough conducting surface in turbulent natural convection. <i>Journal of Turbulence</i> , 2005 , 6, N30	2.1	38
41	Measurements of the local convective heat flux in turbulent Rayleigh-Bénard convection. <i>Physical Review E</i> , 2004 , 70, 026308	2.4	51
40	Extraction of plumes in turbulent thermal convection. <i>Physical Review Letters</i> , 2004 , 93, 124501	7.4	37
39	From laminar plumes to organized flows: the onset of large-scale circulation in turbulent thermal convection. <i>Journal of Fluid Mechanics</i> , 2004 , 503, 47-56	3.7	152
38	Velocity and temperature cross-scaling in turbulent thermal convection. <i>Journal of Turbulence</i> , 2004 , 5,	2.1	8
37	Velocity oscillations in turbulent Rayleigh-Bénard convection. <i>Physics of Fluids</i> , 2004 , 16, 412-423	4.4	65
36	Spatial variations of the mean and statistical quantities in the thermal boundary layers of turbulent convection. <i>European Physical Journal B</i> , 2003 , 32, 127-136	1.2	26
35	Measured local heat transport in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2003 , 90, 074501	7.4	104
34	Particle image velocimetry measurement of the velocity field in turbulent thermal convection. <i>Physical Review E</i> , 2003 , 68, 066303	2.4	99

33	Extended self similarity of passive scalar in Rayleigh-Bénard convection flow based on wavelet transform. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2002 , 23, 804-810	3.2	
32	Heat-flux measurement in high-Prandtl-number turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2002 , 88, 064501	7.4	106
31	Prandtl number dependence of the viscous boundary layer and the Reynolds numbers in Rayleigh-Bénard convection. <i>Physical Review E</i> , 2002 , 65, 066306	2.4	67
30	Turbidity measurements and amplitude scaling of critical solutions of polystyrene in methylcyclohexane. <i>Journal of Chemical Physics</i> , 2002 , 117, 4557-4563	3.9	8
29	Plume statistics in thermal turbulence: mixing of an active scalar. <i>Physical Review Letters</i> , 2002 , 89, 184502	7.4	51
28	Scaling properties of the temperature field in convective turbulence. <i>Physical Review Letters</i> , 2001 , 87, 064501	7.4	49
27	Spatially correlated temperature fluctuations in turbulent convection. <i>Physical Review E</i> , 2001 , 63, 046304	2.4	11
26	Scaling of the velocity power spectra in turbulent thermal convection. <i>Physical Review E</i> , 2001 , 64, 065301	2.4	55
25	Effect of Additives on Self-Assembling Behavior of Nafion in Aqueous Media. <i>Macromolecules</i> , 2001 , 34, 7783-7788	5.5	58
24	Temperature power spectra and the viscous boundary layer in thermal turbulence: the role of Prandtl number. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000 , 288, 308-314	3.3	8
23	Energy dependence of impact fragmentation of long glass rods. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000 , 287, 83-90	3.3	28
22	Turbulent convection with "disconnected" top and bottom boundary layers. <i>Europhysics Letters</i> , 1999 , 46, 171-176	1.6	8
21	Correlation length and amplitude scaling in critical polymer solutions. <i>Journal of Chemical Physics</i> , 1999 , 111, 8298-8301	3.9	12
20	Spatial structure of the viscous boundary layer in turbulent convection. <i>Physical Review E</i> , 1998 , 58, 5816-5820	2.4	29
19	Viscous boundary layers at the sidewall of a convection cell. <i>Physical Review E</i> , 1998 , 58, 486-491	2.4	52
18	Spatial structure of the thermal boundary layer in turbulent convection. <i>Physical Review E</i> , 1998 , 57, 5494-5503	2.4	38
17	Turbulent Thermal Convection with an Obstructed Sidewall. <i>Physical Review Letters</i> , 1997 , 79, 5006-5009	7.4	39
16	Boundary layer length scales in convective turbulence. <i>Physical Review E</i> , 1997 , 56, 3010-3015	2.4	39

15	Interactions in mixtures of a microemulsion and a polymer. <i>Physical Review E</i> , 1997 , 55, 5792-5795	2.4	17
14	Turbidity of critical solutions of polymethylmethacrylate in 3-octanone. <i>Journal of Chemical Physics</i> , 1997 , 107, 2060-2065	3.9	11
13	Turbulent convection over rough surfaces. <i>Physical Review Letters</i> , 1996 , 76, 908-911	7.4	86
12	Measured Velocity Boundary Layers in Turbulent Convection. <i>Physical Review Letters</i> , 1996 , 77, 1266-1269	7.4	62
11	Measured coexistence curves of phase-separated polymer solutions. <i>Journal of Chemical Physics</i> , 1996 , 105, 6018-6025	3.9	30
10	Measured local-velocity fluctuations in turbulent convection. <i>Physical Review Letters</i> , 1995 , 75, 437-440	7.4	22
9	Experimental Study of the Spectral Distribution of the Light Scattered from Flexible Macromolecules in Very Dilute Solution. <i>Macromolecules</i> , 1995 , 28, 1032-1037	5.5	36
8	Dual-beam incoherent cross-correlation spectroscopy. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1995 , 12, 1571	1.8	31
7	Incorporation of a differential refractometer into a laser light-scattering spectrometer. <i>Review of Scientific Instruments</i> , 1994 , 65, 587-590	1.7	109
6	Incoherent cross-correlation spectroscopy. <i>Journal of Chemical Physics</i> , 1993 , 98, 9256-9265	3.9	17
5	Interfacial tensions of phase-separated polymer solutions. <i>Journal of Chemical Physics</i> , 1992 , 97, 1446-1454	3.9	35
4	A holographic relaxation spectrometer with phase-modulated detection. <i>Review of Scientific Instruments</i> , 1991 , 62, 27-32	1.7	5
3	Radiation pressure induced gratings in colloidal suspensions: Dynamics of formation and decay. <i>Journal of Chemical Physics</i> , 1989 , 91, 1351-1356	3.9	4
2	Dynamic light scattering from binary-liquid gels. <i>Physical Review A</i> , 1988 , 37, 3626-3629	2.6	20
1	Light scattering from a binary-liquid entanglement gel. <i>Physical Review A</i> , 1987 , 36, 2432-2439	2.6	19