

Guenter Ahlers

List of Publications by Year in Descending Order

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

67
papers

3,276
citations

32
h-index

57
g-index

67
ext. papers

3,582
ext. citations

4.4
avg, IF

5.24
L-index

#	Paper	IF	Citations
67	Universal scaling of temperature variance in Rayleigh-B̄ard convection near the transition to the ultimate state. <i>Journal of Fluid Mechanics</i> , 2022 , 931,	3.7	3
66	Aspect Ratio Dependence of Heat Transfer in a Cylindrical Rayleigh-B̄ard Cell.. <i>Physical Review Letters</i> , 2022 , 128, 084501	7.4	2
65	He et al. Reply. <i>Physical Review Letters</i> , 2020 , 124, 229402	7.4	4
64	Boundary Zonal Flow in Rotating Turbulent Rayleigh-B̄ard Convection. <i>Physical Review Letters</i> , 2020 , 124, 084505	7.4	21
63	Aspect ratio dependence of the ultimate-state transition in turbulent thermal convection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 30022-30023 ^{11.5}		4
62	Effect of sidewall on heat transfer and flow structure in Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , 2019 , 881, 218-243	3.7	12
61	Bulk temperature and heat transport in turbulent Rayleigh-B̄ard convection of fluids with temperature-dependent properties. <i>Journal of Fluid Mechanics</i> , 2018 , 851, 374-390	3.7	21
60	Ultimate-state transition of turbulent Rayleigh-B̄ard convection. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	8
59	Large-scale flow and Reynolds numbers in the presence of boiling in locally heated turbulent convection. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	1
58	Heat-transport enhancement in rotating turbulent Rayleigh-B̄ard convection. <i>Physical Review E</i> , 2016 , 93, 043102	2.4	14
57	On the nature of fluctuations in turbulent Rayleigh-B̄ard convection at large Prandtl numbers. <i>Journal of Fluid Mechanics</i> , 2016 , 802, 203-244	3.7	10
56	Heat-flux enhancement by vapour-bubble nucleation in Rayleigh-B̄ard turbulence. <i>Journal of Fluid Mechanics</i> , 2016 , 787, 331-366	3.7	15
55	Vapour-bubble nucleation and dynamics in turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , 2016 , 795, 60-95	3.7	5
54	Azimuthal diffusion of the large-scale-circulation plane, and absence of significant non-Boussinesq effects, in turbulent convection near the ultimate-state transition. <i>Journal of Fluid Mechanics</i> , 2016 , 791,	3.7	18
53	Multiple transitions in rotating turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , 2015 , 114, 114506	7.4	24
52	Logarithmic spatial variations and universal f-1 power spectra of temperature fluctuations in turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , 2014 , 112, 174501	7.4	20
51	Logarithmic temperature profiles of turbulent Rayleigh-B̄ard convection in the classical and ultimate state for a Prandtl number of 0.8. <i>Journal of Fluid Mechanics</i> , 2014 , 758, 436-467	3.7	39

50	Logarithmic temperature profiles in the bulk of turbulent Rayleigh-Bénard convection for a Prandtl number of 12.3. <i>Journal of Fluid Mechanics</i> , 2014 , 758, 809-830	3.7	24
49	Reynolds-number measurements for low-Prandtl-number turbulent convection of large-aspect-ratio samples. <i>Journal of Fluid Mechanics</i> , 2013 , 725, 664-680	3.7	20
48	Magnetic-field effect on thermal convection of a nematic liquid crystal at large Rayleigh numbers. <i>Journal of Fluid Mechanics</i> , 2013 , 716,	3.7	4
47	Effect of tilting on turbulent convection: cylindrical samples with aspect ratio. <i>Journal of Fluid Mechanics</i> , 2013 , 715, 314-334	3.7	33
46	Logarithmic temperature profiles in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2012 , 109, 114501	7.4	81
45	Transition to the ultimate state of turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2012 , 108, 024502	7.4	166
44	Heat transport by turbulent Rayleigh-Bénard convection for $Pr = 0.8$ and $3 \leq Ra \leq 1015$: aspect ratio $\Gamma = 0.50$. <i>New Journal of Physics</i> , 2012 , 14, 103012	2.9	50
43	Heat transport by turbulent Rayleigh-Bénard convection for $Pr = 0.8$ and $4 \leq Ra \leq 2 \times 10^4$: ultimate-state transition for aspect ratio $\Gamma = 1.00$. <i>New Journal of Physics</i> , 2012 , 14, 063030	2.9	43
42	The large-scale flow structure in turbulent rotating Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2011 , 688, 461-492	3.7	32
41	Heat transport by turbulent rotating Rayleigh-Bénard convection and its dependence on the aspect ratio. <i>Journal of Fluid Mechanics</i> , 2011 , 684, 407-426	3.7	37
40	Turbulent Rayleigh-Bénard convection in a cylindrical container with aspect ratio $\Gamma = 0.50$ and Prandtl number $Pr = 4.38$. <i>Journal of Fluid Mechanics</i> , 2011 , 676, 5-40	3.7	46
39	Strong non-Boussinesq effects near the onset of convection in a fluid near its critical point. <i>Journal of Fluid Mechanics</i> , 2010 , 642, 15-48	3.7	15
38	Effect of a polymer additive on heat transport in turbulent Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2010 , 104, 034503	7.4	31
37	Heat transport and the large-scale circulation in rotating turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2010 , 665, 300-333	3.7	65
36	Transitions in heat transport by turbulent convection at Rayleigh numbers up to 1015. <i>New Journal of Physics</i> , 2009 , 11, 123001	2.9	56
35	Turbulent Rayleigh-Bénard convection for a Prandtl number of 0.67. <i>Journal of Fluid Mechanics</i> , 2009 , 641, 157-167	3.7	24
34	The origin of oscillations of the large-scale circulation of turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2009 , 638, 383-400	3.7	65
33	Azimuthal asymmetries of the large-scale circulation in turbulent Rayleigh-Bénard convection. <i>Physics of Fluids</i> , 2008 , 20, 105105	4.4	32

32	A model of diffusion in a potential well for the dynamics of the large-scale circulation in turbulent Rayleigh-Bénard convection. <i>Physics of Fluids</i> , 2008 , 20, 075101	4.4	52
31	Torsional oscillations of the large-scale circulation in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2008 , 607, 119-139	3.7	56
30	Non-Oberbeck-Boussinesq effects in turbulent thermal convection in ethane close to the critical point. <i>Physical Review E</i> , 2008 , 77, 046302	2.4	30
29	Finite-size Effects on the Thermal Resistivity of 4He Near the Superfluid Transition. <i>Journal of Low Temperature Physics</i> , 2007 , 146, 471-483	1.3	1
28	Specific Heat of 4He Confined in Cylindrical Micro-Channels and Near the Superfluid Transition. <i>Journal of Low Temperature Physics</i> , 2007 , 149, 209-221	1.3	2
27	Non-oberbeck-boussinesq effects in gaseous Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 2007 , 98, 054501	7.4	53
26	Effect of the Earth's Coriolis force on the large-scale circulation of turbulent Rayleigh-Bénard convection. <i>Physics of Fluids</i> , 2006 , 18, 125108	4.4	48
25	Non-Oberbeck-Boussinesq effects in strongly turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2006 , 569, 409	3.7	114
24	Rotations and cessations of the large-scale circulation in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2006 , 568, 351	3.7	150
23	The search for slow transients, and the effect of imperfect vertical alignment, in turbulent Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2006 , 557, 347	3.7	46
22	Heat transport by turbulent Rayleigh-Bénard convection in cylindrical samples with aspect ratio one and larger. <i>Journal of Fluid Mechanics</i> , 2005 , 536, 145-154	3.7	134
21	Heat transport by turbulent Rayleigh-Bénard convection in cylindrical cells with aspect ratio one and less. <i>Journal of Fluid Mechanics</i> , 2005 , 523, 251-260	3.7	91
20	Critical Phenomena Near Bifurcations in Nonequilibrium Systems. <i>International Journal of Modern Physics B</i> , 2003 , 17, 3899-3907	1.1	4
19	Recent Developments in Rayleigh-Bénard Convection. <i>Annual Review of Fluid Mechanics</i> , 2000 , 32, 709-778	2	674
18	The boundary resistance between superfluid 4He near T _λ and a solid surface. <i>Low Temperature Physics</i> , 1998 , 24, 69-71	0.7	5
17	Convection under rotation for Prandtl numbers near 1: Linear stability, wave-number selection, and pattern dynamics. <i>Physical Review E</i> , 1997 , 55, 6928-6949	2.4	44
16	4He very near T _λ heated from above. <i>European Physical Journal D</i> , 1996 , 46, 187-188		
15	Thermal resistance below the superfluid transition of 4He in a heat current. <i>European Physical Journal D</i> , 1996 , 46, 189-190		1

14	The thermal boundary resistance in superfluid ^4He near T_λ . <i>European Physical Journal D</i> , 1996 , 46, 191-192		2
13	A high-resolution susceptibility thermometer for use near 2 K. <i>European Physical Journal D</i> , 1996 , 46, 2859-2860		3
12	Chaotic Localized States near the Onset of Electroconvection. <i>Physical Review Letters</i> , 1996 , 77, 2475-2478		76
11	Apparatus for the study of Rayleigh-Bénard convection in gases under pressure. <i>Review of Scientific Instruments</i> , 1996 , 67, 2043-2067	1.7	122
10	Time and length scales in rotating Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 1995 , 74, 5040-5043		56
9	Transition to spiral-defect chaos in low Prandtl number convection. <i>Physical Review Letters</i> , 1995 , 74, 391-394	7.4	43
8	Some aspects of the effect of gravity on the superfluid transition in ^4He . <i>Journal of Low Temperature Physics</i> , 1991 , 84, 173-195	1.3	19
7	Novel states in Taylor-Couette flow subjected to a Coriolis force. <i>Journal of Statistical Physics</i> , 1991 , 64, 927-944	1.5	3
6	Deterministic and stochastic effects near the convective onset. <i>Journal of Statistical Physics</i> , 1989 , 54, 1121-1131	1.5	28
5	Pattern competition in temporally modulated Rayleigh-Bénard convection. <i>Physical Review Letters</i> , 1988 , 61, 947-950	7.4	42
4	Pattern Formation and Wave-Number Selection by Rayleigh-Bénard Convection in a Cylindrical Container. <i>Physica Scripta</i> , 1985 , T9, 97-110	2.6	32
3	Heat transport and temporal evolution of fluid flow near the Rayleigh-Bénard instability in cylindrical containers. <i>Journal of Fluid Mechanics</i> , 1982 , 125, 219	3.7	74
2	The amplitude equation near the convective threshold: application to time-dependent heating experiments. <i>Journal of Fluid Mechanics</i> , 1981 , 110, 297-334	3.7	163
1	Non-Boussinesq and penetrative convection in a cylindrical cell. <i>Journal of Fluid Mechanics</i> , 1981 , 109, 89-114	3.7	63