

# Guenter Ahlers

## List of Publications by Citations

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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	Recent Developments in Rayleigh-B̄ard Convection. <i>Annual Review of Fluid Mechanics</i> , <b>2000</b> , 32, 709-778	2	674
66	Transition to the ultimate state of turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2012</b> , 108, 024502	7.4	166
65	The amplitude equation near the convective threshold: application to time-dependent heating experiments. <i>Journal of Fluid Mechanics</i> , <b>1981</b> , 110, 297-334	3.7	163
64	Rotations and cessations of the large-scale circulation in turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 568, 351	3.7	150
63	Heat transport by turbulent Rayleigh-B̄ard convection in cylindrical samples with aspect ratio one and larger. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 536, 145-154	3.7	134
62	Apparatus for the study of Rayleigh-B̄ard convection in gases under pressure. <i>Review of Scientific Instruments</i> , <b>1996</b> , 67, 2043-2067	1.7	122
61	Non-Oberbeck-Boussinesq effects in strongly turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 569, 409	3.7	114
60	Heat transport by turbulent Rayleigh-B̄ard convection in cylindrical cells with aspect ratio one and less. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 523, 251-260	3.7	91
59	Logarithmic temperature profiles in turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2012</b> , 109, 114501	7.4	81
58	Chaotic Localized States near the Onset of Electroconvection. <i>Physical Review Letters</i> , <b>1996</b> , 77, 2475-2478	7.4	76
57	Heat transport and temporal evolution of fluid flow near the Rayleigh-B̄ard instability in cylindrical containers. <i>Journal of Fluid Mechanics</i> , <b>1982</b> , 125, 219	3.7	74
56	Heat transport and the large-scale circulation in rotating turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 665, 300-333	3.7	65
55	The origin of oscillations of the large-scale circulation of turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 638, 383-400	3.7	65
54	Non-Boussinesq and penetrative convection in a cylindrical cell. <i>Journal of Fluid Mechanics</i> , <b>1981</b> , 109, 89-114	3.7	63
53	Transitions in heat transport by turbulent convection at Rayleigh numbers up to 1015. <i>New Journal of Physics</i> , <b>2009</b> , 11, 123001	2.9	56
52	Torsional oscillations of the large-scale circulation in turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 607, 119-139	3.7	56
51	Time and length scales in rotating Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>1995</b> , 74, 5040-5043	3.7	56

50	Non-oberbeck-boussinesq effects in gaseous Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2007</b> , 98, 054501	7.4	53
49	A model of diffusion in a potential well for the dynamics of the large-scale circulation in turbulent Rayleigh-B̄ard convection. <i>Physics of Fluids</i> , <b>2008</b> , 20, 075101	4.4	52
48	Heat transport by turbulent Rayleigh-B̄ard convection for $Pr = 0.8$ and $3 \leq Ra \leq 1015$ : aspect ratio $\Gamma = 0.50$ . <i>New Journal of Physics</i> , <b>2012</b> , 14, 103012	2.9	50
47	Effect of the Earth's Coriolis force on the large-scale circulation of turbulent Rayleigh-B̄ard convection. <i>Physics of Fluids</i> , <b>2006</b> , 18, 125108	4.4	48
46	Turbulent Rayleigh-B̄ard convection in a cylindrical container with aspect ratio $\Gamma = 0.50$ and Prandtl number $Pr = 4.38$ . <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 676, 5-40	3.7	46
45	The search for slow transients, and the effect of imperfect vertical alignment, in turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 557, 347	3.7	46
44	Convection under rotation for Prandtl numbers near 1: Linear stability, wave-number selection, and pattern dynamics. <i>Physical Review E</i> , <b>1997</b> , 55, 6928-6949	2.4	44
43	Heat transport by turbulent Rayleigh-B̄ard convection for $Pr = 0.8$ and $4 \leq Ra \leq 2 \times 1014$ : ultimate-state transition for aspect ratio $\Gamma = 1.00$ . <i>New Journal of Physics</i> , <b>2012</b> , 14, 063030	2.9	43
42	Transition to spiral-defect chaos in low Prandtl number convection. <i>Physical Review Letters</i> , <b>1995</b> , 74, 391-394	7.4	43
41	Pattern competition in temporally modulated Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>1988</b> , 61, 947-950	7.4	42
40	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> , <b>2014</b> , 758, 436-467	3.7	39
39	Heat transport by turbulent rotating Rayleigh-B̄ard convection and its dependence on the aspect ratio. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 684, 407-426	3.7	37
38	Effect of tilting on turbulent convection: cylindrical samples with aspect ratio. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 715, 314-334	3.7	33
37	The large-scale flow structure in turbulent rotating Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 688, 461-492	3.7	32
36	Azimuthal asymmetries of the large-scale circulation in turbulent Rayleigh-B̄ard convection. <i>Physics of Fluids</i> , <b>2008</b> , 20, 105105	4.4	32
35	Pattern Formation and Wave-Number Selection by Rayleigh-B̄ard Convection in a Cylindrical Container. <i>Physica Scripta</i> , <b>1985</b> , T9, 97-110	2.6	32
34	Effect of a polymer additive on heat transport in turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2010</b> , 104, 034503	7.4	31
33	Non-Oberbeck-Boussinesq effects in turbulent thermal convection in ethane close to the critical point. <i>Physical Review E</i> , <b>2008</b> , 77, 046302	2.4	30

32	Deterministic and stochastic effects near the convective onset. <i>Journal of Statistical Physics</i> , <b>1989</b> , 54, 1121-1131	1.5	28
31	Multiple transitions in rotating turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2015</b> , 114, 114506	7.4	24
30	Logarithmic temperature profiles in the bulk of turbulent Rayleigh-B̄ard convection for a Prandtl number of 12.3. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 758, 809-830	3.7	24
29	Turbulent Rayleigh-B̄ard convection for a Prandtl number of 0.67. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 641, 157-167	3.7	24
28	Boundary Zonal Flow in Rotating Turbulent Rayleigh-B̄ard Convection. <i>Physical Review Letters</i> , <b>2020</b> , 124, 084505	7.4	21
27	Bulk temperature and heat transport in turbulent Rayleigh-B̄ard convection of fluids with temperature-dependent properties. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 851, 374-390	3.7	21
26	Logarithmic spatial variations and universal f-1 power spectra of temperature fluctuations in turbulent Rayleigh-B̄ard convection. <i>Physical Review Letters</i> , <b>2014</b> , 112, 174501	7.4	20
25	Reynolds-number measurements for low-Prandtl-number turbulent convection of large-aspect-ratio samples. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 725, 664-680	3.7	20
24	Some aspects of the effect of gravity on the superfluid transition in 4He. <i>Journal of Low Temperature Physics</i> , <b>1991</b> , 84, 173-195	1.3	19
23	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> , <b>2016</b> , 791,	3.7	18
22	Strong non-Boussinesq effects near the onset of convection in a fluid near its critical point. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 642, 15-48	3.7	15
21	Heat-flux enhancement by vapour-bubble nucleation in Rayleigh-B̄ard turbulence. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 787, 331-366	3.7	15
20	Heat-transport enhancement in rotating turbulent Rayleigh-B̄ard convection. <i>Physical Review E</i> , <b>2016</b> , 93, 043102	2.4	14
19	Effect of sidewall on heat transfer and flow structure in Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 881, 218-243	3.7	12
18	On the nature of fluctuations in turbulent Rayleigh-B̄ard convection at large Prandtl numbers. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 802, 203-244	3.7	10
17	Ultimate-state transition of turbulent Rayleigh-B̄ard convection. <i>Physical Review Fluids</i> , <b>2017</b> , 2,	2.8	8
16	The boundary resistance between superfluid 4He near T <sub>λ</sub> and a solid surface. <i>Low Temperature Physics</i> , <b>1998</b> , 24, 69-71	0.7	5
15	Vapour-bubble nucleation and dynamics in turbulent Rayleigh-B̄ard convection. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 795, 60-95	3.7	5

14	He et al. Reply. <i>Physical Review Letters</i> , <b>2020</b> , 124, 229402	7.4	4
13	Magnetic-field effect on thermal convection of a nematic liquid crystal at large Rayleigh numbers. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 716,	3.7	4
12	Critical Phenomena Near Bifurcations in Nonequilibrium Systems. <i>International Journal of Modern Physics B</i> , <b>2003</b> , 17, 3899-3907	1.1	4
11	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> , <b>2020</b> , 117, 30022-30023	11.5	4
10	A high-resolution susceptibility thermometer for use near 2 K. <i>European Physical Journal D</i> , <b>1996</b> , 46, 2859-2860		3
9	Novel states in Taylor-Couette flow subjected to a Coriolis force. <i>Journal of Statistical Physics</i> , <b>1991</b> , 64, 927-944	1.5	3
8	Universal scaling of temperature variance in Rayleigh-Bénard convection near the transition to the ultimate state. <i>Journal of Fluid Mechanics</i> , <b>2022</b> , 931,	3.7	3
7	Specific Heat of $^4\text{He}$ Confined in Cylindrical Micro-Channels and Near the Superfluid Transition. <i>Journal of Low Temperature Physics</i> , <b>2007</b> , 149, 209-221	1.3	2
6	The thermal boundary resistance in superfluid $^4\text{He}$ near $T_\lambda$ <i>European Physical Journal D</i> , <b>1996</b> , 46, 191-192		2
5	Aspect Ratio Dependence of Heat Transfer in a Cylindrical Rayleigh-Bénard Cell.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 084501	7.4	2
4	Finite-size Effects on the Thermal Resistivity of $^4\text{He}$ Near the Superfluid Transition. <i>Journal of Low Temperature Physics</i> , <b>2007</b> , 146, 471-483	1.3	1
3	Thermal resistance below the superfluid transition of $^4\text{He}$ in a heat current. <i>European Physical Journal D</i> , <b>1996</b> , 46, 189-190		1
2	Large-scale flow and Reynolds numbers in the presence of boiling in locally heated turbulent convection. <i>Physical Review Fluids</i> , <b>2017</b> , 2,	2.8	1
1	$^4\text{He}$ very near $T_\lambda$ heated from above. <i>European Physical Journal D</i> , <b>1996</b> , 46, 187-188		