# Quan Zhou

## List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/2591673/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 60 papers | 1,629 citations | 304743 22 h-index | 302126 39 g-index |
| 60 all docs | 60 docs citations | 60 times ranked | 584 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Dynamic coupling between carrier and dispersed phases in Rayleighâ€“BÃ©nard convection laden with inertial isothermal particles. Journal of Fluid Mechanics, 2022, 930, . | 3.4 | 15 |
| 2 | The heat transfer enhancement by unipolar charge injection in a rectangular Rayleighâ€“BÃ©nard convection. AIP Advances, 2022, 12, . | 1.3 | 6 |
| 3 | Lagrangian coherent structures and their heat-transport mechanism in the turbulent Rayleigh-BÃ©nard convection. Science China Technological Sciences, 2022, 65, 966-976. | 4.0 | 3 |
| 4 | Shear-induced modulation on thermal convection over rough plates. Journal of Fluid Mechanics, 2022, 936, . | 3.4 | 12 |
| 5 | Predicting micro-bubble dynamics with semi-physics-informed deep learning. AIP Advances, 2022, 12, . | 1.3 | 11 |
| 6 | Transport modes of inertial particles and their effects on flow structures and heat transfer in Rayleighâ€“BÃ©nard convection. Physics of Fluids, 2022, 34, . | 4.0 | 8 |
| 7 | Spectra and structure functions of the temperature and velocity fields in supergravitational thermal turbulence. Physics of Fluids, 2022, 34, . | 4.0 | 9 |
| 8 | Turbulent vertical convection under vertical vibration. Physics of Fluids, 2022, 34, . | 4.0 | 16 |
| 9 | Flow modulation and heat transport of radiatively heated particles settling in Rayleighâ€“BÃ©nard convection. Computers and Fluids, 2022, 241, 105454. | 2.5 | 4 |
| 10 | Massive heat transfer enhancement of Rayleigh-BÃ©nard turbulence over rough surfaces and under horizontal vibration. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, . | 3.4 | 10 |
| 11 | Modulation of turbulent Rayleigh-BÃ©nard convection under spatially harmonic heating. Physical Review E, 2022, 105, . | 2.1 | 9 |
| 12 | The Influence of Anisotropic Sediment Layer on Dissolved Oxygen Transfer in Turbulent Flows. Water Resources Research, 2021, 57, e2020WR027932. | 4.2 | 1 |
| 13 | The -dependence of the critical roughness height in two-dimensional turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2021, 911, . | 3.4 | 29 |
| 14 | Stabilizing/destabilizing the large-scale circulation in turbulent Rayleighâ€“BÃ©nard convection with sidewall temperature control. Journal of Fluid Mechanics, 2021, 915, . | 3.4 | 13 |
| 15 | Phase decomposition analysis on oscillatory Rayleighâ€“BÃ©nard turbulence. Physics of Fluids, 2021, 33, 045108. | 4.0 | 18 |
| 16 | Flow structures of turbulent Rayleighâ€“BÃ©nard convection in annular cells with aspect ratio one and larger. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 1291-1298. | 3.4 | 17 |
| 17 | Horizontal convection in a rectangular enclosure driven by a linear temperature profile. Applied Mathematics and Mechanics (English Edition), 2021, 42, 1183-1190. | 3.6 | 6 |
| 18 | The driven cavity turbulent flow with porous walls: Energy transfer, dissipation, and time-space correlations. Journal of Hydrodynamics, 2021, 33, 712-724. | 3.2 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Thermal convection in a tilted rectangular box. AIP Advances, 2021, 11, . | 1.3 | 1 |
| 20 | Controlling flow reversal in two-dimensional Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2020, 891, . | 3.4 | 10 |
| 21 | Experimental investigation of turbulent Rayleigh-BÃ©nard convection of water in a cylindrical cell: The Prandtl number effects for Prâ€ˆ> 1. Physics of Fluids, 2020, 32, . | 4.0 | 23 |
| 22 | On non-Oberbeckâ€“Boussinesq effects in Rayleighâ€“BÃ©nard convection of air for large temperature differences. Journal of Fluid Mechanics, 2020, 889, . | 3.4 | 21 |
| 23 | Turbulent drag modification in open channel flow over an anisotropic porous wall. Physics of Fluids, 2020, 32, . | 4.0 | 16 |
| 24 | Influence of spatial arrangements of roughness elements on turbulent Rayleigh-BÃ©nard convection. Physics of Fluids, 2020, 32, . | 4.0 | 31 |
| 25 | Tomographic particle image velocimetry flow structures downstream of a dynamic cylindrical element in a turbulent boundary layer by multi-scale proper orthogonal decomposition. Physics of Fluids, 2020, 32, . | 4.0 | 11 |
| 26 | Vibration-induced boundary-layer destabilization achieves massive heat-transport enhancement. Science Advances, 2020, 6, eaaz8239. | 10.3 | 67 |
| 27 | Drag reduction of turbulent channel flows over an anisotropic porous wall with reduced spanwise permeability. Applied Mathematics and Mechanics (English Edition), 2019, 40, 1041-1052. | 3.6 | 6 |
| 28 | Penetrative turbulent Rayleighâ€“BÃ©nard convection in two and three dimensions. Journal of Fluid Mechanics, 2019, 870, 718-734. | 3.4 | 20 |
| 29 | Turbulent Rayleighâ€“BÃ©nard convection in an annular cell. Journal of Fluid Mechanics, 2019, 869, . | 3.4 | 13 |
| 30 | An efficient parallel algorithm for DNS of buoyancy-driven turbulent flows. Journal of Hydrodynamics, 2019, 31, 1159-1169. | 3.2 | 11 |
| 31 | How surface roughness reduces heat transport for small roughness heights in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2018, 836, . | 3.4 | 80 |
| 32 | Flow reversals in two-dimensional thermal convection in tilted cells. Journal of Fluid Mechanics, 2018, 849, 355-372. | 3.4 | 44 |
| 33 | Statistics of kinetic and thermal energy dissipation rates in two-dimensional turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2017, 814, 165-184. | 3.4 | 88 |
| 34 | Taylor dispersion in two-dimensional bacterial turbulence. Physics of Fluids, 2017, 29, 051901. | 4.0 | 5 |
| 35 | Statistics of velocity and temperature fluctuations in two-dimensional Rayleigh-BÃ©nard convection. Physical Review E, 2017, 96, 023105. | 2.1 | 23 |
| 36 | Kinetic and thermal energy dissipation rates in two-dimensional Rayleigh-Taylor turbulence. Physics of Fluids, 2016, 28, . | 4.0 | 13 |

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|---|---|---|---|
| 37 | Scale-to-scale energy and enstrophy transport in two-dimensional Rayleighâ€“Taylor turbulence. Journal of Fluid Mechanics, 2016, 786, 294-308. | 3.4 | 24 |
| 38 | Intermittency measurement in two-dimensional bacterial turbulence. Physical Review E, 2016, 93, 062226. | 2.1 | 8 |
| 39 | Enhanced heat transport in partitioned thermal convection. Journal of Fluid Mechanics, 2015, 784, . | 3.4 | 43 |
| 40 | Local dissipation scales in two-dimensional Rayleigh-Taylor turbulence. Physical Review E, 2014, 90, 043012. | 2.1 | 10 |
| 41 | Experimental techniques for turbulent Taylorâ€“Couette flow and Rayleighâ€“BÃ©nard convection. Nonlinearity, 2014, 27, R89-R121. | 1.4 | 16 |
| 42 | Scaling of maximum probability density function of velocity increments in turbulent Rayleigh-BÃ©nard convection. Journal of Hydrodynamics, 2014, 26, 351-362. | 3.2 | 4 |
| 43 | Measurements of heat transport by turbulent Rayleigh-BÃ©nard convection in rectangular cells of widely varying aspect ratios. Science China: Physics, Mechanics and Astronomy, 2013, 56, 989-994. | 5.1 | 4 |
| 44 | Temporal evolution and scaling of mixing in two-dimensional Rayleigh-Taylor turbulence. Physics of Fluids, 2013, 25, . | 4.0 | 37 |
| 45 | Thermal boundary layer structure in turbulent Rayleighâ€“BÃ©nard convection in a rectangular cell. Journal of Fluid Mechanics, 2013, 721, 199-224. | 3.4 | 57 |
| 46 | Counter-gradient heat transport in two-dimensional turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2013, 737, . | 3.4 | 45 |
| 47 | Aspect ratio dependence of heat transport by turbulent Rayleighâ€“BÃ©nard convection in rectangular cells. Journal of Fluid Mechanics, 2012, 710, 260-276. | 3.4 | 49 |
| 48 | Disentangle plume-induced anisotropy in the velocity field in buoyancy-driven turbulence. Journal of Fluid Mechanics, 2011, 684, 192-203. | 3.4 | 12 |
| 49 | Experimental investigation of longitudinal spaceâ€“time correlations of the velocity field in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2011, 683, 94-111. | 3.4 | 34 |
| 50 | Horizontal structures of velocity and temperature boundary layers in two-dimensional numerical turbulent Rayleigh-BÃ©nard convection. Physics of Fluids, 2011, 23, 125104. | 4.0 | 36 |
| 51 | Prandtlâ€“Blasius temperature and velocity boundary-layer profiles in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2010, 664, 297-312. | 3.4 | 64 |
| 52 | Measured Instantaneous Viscous Boundary Layer in Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2010, 104, 104301. | 7.8 | 75 |
| 53 | Universality of Local Dissipation Scales in Buoyancy-Driven Turbulence. Physical Review Letters, 2010, 104, 124301. | 7.8 | 23 |
| 54 | Origin of the Temperature Oscillation in Turbulent Thermal Convection. Physical Review Letters, 2009, 102, 044503. | 7.8 | 112 |

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|---|---|---|---|
| 55 | Oscillations of the large-scale circulation in turbulent Rayleighâ€“BÃ©nard convection: the sloshing mode and its relationship with the torsional mode. Journal of Fluid Mechanics, 2009, 630, 367-390. | 3.4 | 74 |
| 56 | Comparative experimental study of local mixing of active and passive scalars in turbulent thermal convection. Physical Review E, 2008, 77, 056312. | 2.1 | 23 |
| 57 | Experimental investigation of homogeneity, isotropy, and circulation of the velocity field in buoyancy-driven turbulence. Journal of Fluid Mechanics, 2008, 598, 361-372. | 3.4 | 42 |
| 58 | Morphological Evolution of Thermal Plumes in Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2007, 98, 074501. | 7.8 | 92 |
| 59 | Cascades of Velocity and Temperature Fluctuations in Buoyancy-Driven Thermal Turbulence. Physical Review Letters, 2006, 97, 144504. | 7.8 | 73 |
| 60 | Tuning turbulent convection through rough element arrangement. Journal of Hydrodynamics, 0, , 1. | 3.2 | 0 |