# Roberto Verzicco

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3684171/publications.pdf

Version: 2024-02-01

| | | 41258 | 48187 |
|---|---|---|---|
| 230<br>papers | 9,243<br>citations | 49<br>h-index | 88<br>g-index |
| 238<br>all docs | 238<br>docs citations | 238<br>times ranked | 4187<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Combined Immersed-Boundary Finite-Difference Methods for Three-Dimensional Complex Flow Simulations. Journal of Computational Physics, 2000, 161, 35-60. | 1.9 | 1,444 |
| 2 | A Finite-Difference Scheme for Three-Dimensional Incompressible Flows in Cylindrical Coordinates. Journal of Computational Physics, 1996, 123, 402-414. | 1.9 | 515 |
| 3 | Immersed boundary technique for turbulent flow simulations. Applied Mechanics Reviews, 2003, 56, 331-347. | 4.5 | 321 |
| 4 | Numerical experiments on strongly turbulent thermal convection in a slender cylindrical cell. Journal of Fluid Mechanics, 2003, 477, . | 1.4 | 244 |
| 5 | Radial boundary layer structure and Nusselt number in Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2010, 643, 495-507. | 1.4 | 206 |
| 6 | Vortex rings impinging on walls: axisymmetric and three-dimensional simulations. Journal of Fluid Mechanics, 1993, 256, 615-646. | 1.4 | 153 |
| 7 | Prandtl number effects in convective turbulence. Journal of Fluid Mechanics, 1999, 383, 55-73. | 1.4 | 150 |
| 8 | A pencil distributed finite difference code for strongly turbulent wall-bounded flows. Computers and Fluids, 2015, 116, 10-16. | 1.3 | 150 |
| 9 | Large Eddy Simulation in Complex Geometric Configurations Using Boundary Body Forces. AIAA Journal, 2000, 38, 427-433. | 1.5 | 141 |
| 10 | Direct simulation of transition in an oscillatory boundary layer. Journal of Fluid Mechanics, 1998, 371, 207-232. | 1.4 | 135 |
| 11 | Extended Lifetime of Respiratory Droplets in a Turbulent Vapor Puff and Its Implications on Airborne Disease Transmission. Physical Review Letters, 2021, 126, 034502. | 2.9 | 132 |
| 12 | Modeling of vortex dynamics in the wake of a marine propeller. Computers and Fluids, 2013, 73, 65-79. | 1.3 | 129 |
| 13 | Direct numerical simulation of the pulsatile flow through an aortic bileaflet mechanical heart valve. Journal of Fluid Mechanics, 2009, 622, 259-290. | 1.4 | 118 |
| 14 | Prandtl-, Rayleigh-, and Rossby-Number Dependence of Heat Transport in Turbulent Rotating Rayleigh-BÃ©nard Convection. Physical Review Letters, 2009, 102, 044502. | 2.9 | 114 |
| 15 | Prandtl and Rayleigh number dependence of heat transport in high Rayleigh number thermal convection. Journal of Fluid Mechanics, 2011, 688, 31-43. | 1.4 | 108 |
| 16 | Transition to the Ultimate Regime in Two-Dimensional Rayleigh-BÃ©nard Convection. Physical Review Letters, 2018, 120, 144502. | 2.9 | 104 |
| 17 | Effects of nonperfect thermal sources in turbulent thermal convection. Physics of Fluids, 2004, 16, 1965-1979. | 1.6 | 99 |
| 18 | Numerical experiments on flapping foils mimicking fish-like locomotion. Physics of Fluids, 2005, 17, 113601. | 1.6 | 98 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Turbulent thermal superstructures in Rayleigh-BÃ©nard convection. Physical Review Fluids, 2018, 3, . | 1.0 | 95 |
| 20 | Exploring the phase diagram of fully turbulent Taylorâ€“Couette flow. Journal of Fluid Mechanics, 2014, 761, 1-26. | 1.4 | 90 |
| 21 | Logarithmic Temperature Profiles in Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2012, 109, 114501. | 2.9 | 89 |
| 22 | Optimal Taylorâ€“Couette flow: direct numerical simulations. Journal of Fluid Mechanics, 2013, 719, 14-46. | 1.4 | 80 |
| 23 | Roughness-Facilitated Local <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:math> Scaling Does Not Imply the Onset of the Ultimate Regime of Thermal Convection. Physical Review Letters, 2017, 119, 154501. | 2.9 | 77 |
| 24 | A comparison of turbulent thermal convection between conditions of constant temperature and constant heat flux. Journal of Fluid Mechanics, 2008, 595, 203-219. | 1.4 | 74 |
| 25 | Large-eddy simulations in mixed-flow pumps using an immersed-boundary method. Computers and Fluids, 2011, 47, 33-43. | 1.3 | 73 |
| 26 | Large Eddy Simulation of a Road Vehicle with Drag-Reduction Devices. AIAA Journal, 2002, 40, 2447-2455. | 1.5 | 72 |
| 27 | A multiple-resolution strategy for Direct Numerical Simulation of scalar turbulence. Journal of Computational Physics, 2015, 301, 308-321. | 1.9 | 70 |
| 28 | Transitional regimes of low-Prandtl thermal convection in a cylindrical cell. Physics of Fluids, 1997, 9, 1287-1295. | 1.6 | 69 |
| 29 | A numerical study of three-dimensional vortex ring instabilities: viscous corrections and early nonlinear stage. Journal of Fluid Mechanics, 1994, 279, 351-375. | 1.4 | 68 |
| 30 | Turbulent thermal convection at high Rayleigh numbers for a Boussinesq fluid of constant Prandtl number. Physics of Fluids, 2005, 17, 121701. | 1.6 | 68 |
| 31 | Physical mechanisms governing drag reduction in turbulent Taylorâ€“Couette flow with finite-size deformable bubbles. Journal of Fluid Mechanics, 2018, 849, . | 1.4 | 68 |
| 32 | Confined Rayleigh-BÃ©nard, Rotating Rayleigh-BÃ©nard, and Double Diffusive Convection: A Unifying View on Turbulent Transport Enhancement through Coherent Structure Manipulation. Physical Review Letters, 2017, 119, 064501. | 2.9 | 67 |
| 33 | Combined Immersed Boundary/Large-Eddy-Simulations of Incompressible Three Dimensional Complex Flows. Flow, Turbulence and Combustion, 2006, 77, 3-26. | 1.4 | 66 |
| 34 | Numerical simulations of Rayleighâ€“BÃ©nard convection for Prandtl numbers between 10<sup>âˆ’1</sup> and 10<sup>4</sup> and Rayleigh numbers between 10<sup>5</sup> and 10<sup>9</sup>. Journal of Fluid Mechanics, 2010, 662, 409-446. | 1.4 | 66 |
| 35 | Numerical and experimental investigation of structure-function scaling in turbulent Rayleigh-BÃ©nard convection. Physical Review E, 2008, 77, 016302. | 0.8 | 64 |
| 36 | Mixed convection in turbulent channels with unstable stratification. Journal of Fluid Mechanics, 2017, 821, 482-516. | 1.4 | 62 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Comparison of computational codes for direct numerical simulations of turbulent Rayleighâ€“BÃ©nard convection. Computers and Fluids, 2018, 166, 1-8. | 1.3 | 62 |
| 38 | Optimal Taylorâ€“Couette flow: radius ratio dependence. Journal of Fluid Mechanics, 2014, 747, 1-29. | 1.4 | 61 |
| 39 | AFiD-GPU: A versatile Navierâ€“Stokes solver for wall-bounded turbulent flows on GPU clusters. Computer Physics Communications, 2018, 229, 199-210. | 3.0 | 60 |
| 40 | One-point statistics for turbulent pipe flow up to. Journal of Fluid Mechanics, 2021, 926, . | 1.4 | 60 |
| 41 | Boundary layer dynamics at the transition between the classical and the ultimate regime of Taylor-Couette flow. Physics of Fluids, 2014, 26, . | 1.6 | 58 |
| 42 | Sidewall finite-conductivity effects in confined turbulent thermal convection. Journal of Fluid Mechanics, 2002, 473, 201-210. | 1.4 | 57 |
| 43 | Transition to geostrophic convection: the role ofÂtheÂboundary conditions. Journal of Fluid Mechanics, 2016, 799, 413-432. | 1.4 | 56 |
| 44 | Turbulent thermal convection over grooved plates. Journal of Fluid Mechanics, 2006, 557, 307. | 1.4 | 54 |
| 45 | Flow in an impeller-stirred tank using an immersed-boundary method. AICHE Journal, 2004, 50, 1109-1118. | 1.8 | 53 |
| 46 | Heat transport in bubbling turbulent convection. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9237-9242. | 3.3 | 53 |
| 47 | scaling enabled by multiscale wall roughness in Rayleighâ€“BÃ©nard turbulence. Journal of Fluid Mechanics, 2019, 869, . | 1.4 | 52 |
| 48 | Direct numerical simulation of turbulent particle dispersion in an unbaffled stirred-tank reactor. Chemical Engineering Science, 2006, 61, 2843-2851. | 1.9 | 51 |
| 49 | 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 |
| 50 | Controlling Heat Transport and Flow Structures in Thermal Turbulence Using Ratchet Surfaces. Physical Review Letters, 2018, 120, 044501. | 2.9 | 48 |
| 51 | Diffusive interaction of multiple surface nanobubbles: shrinkage, growth, and coarsening. Soft Matter, 2018, 14, 2006-2014. | 1.2 | 47 |
| 52 | Numerical simulation of the non-Newtonian blood flow through a mechanical aortic valve. Theoretical and Computational Fluid Dynamics, 2016, 30, 129-138. | 0.9 | 46 |
| 53 | Flow structure in healthy and pathological left ventricles with natural and prosthetic mitral valves. Journal of Fluid Mechanics, 2018, 834, 271-307. | 1.4 | 46 |
| 54 | Three-dimensional structure and decay properties of vortices in shallow fluid layers. Physics of Fluids, 2001, 13, 1932-1945. | 1.6 | 45 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Growth of respiratory droplets in cold and humid air. Physical Review Fluids, 2021, 6, . | 1.0 | 45 |
| 56 | The near-wall region of highly turbulent Taylorâ€“Couette flow. Journal of Fluid Mechanics, 2016, 788, 95-117. | 1.4 | 44 |
| 57 | A parallel interaction potential approach coupled with the immersed boundary method for fully resolved simulations of deformable interfaces and membranes. Journal of Computational Physics, 2017, 348, 567-590. | 1.9 | 44 |
| 58 | Effects of the computational domain size on direct numerical simulations of Taylor-Couette turbulence with stationary outer cylinder. Physics of Fluids, 2015, 27, . | 1.6 | 43 |
| 59 | Wall roughness induces asymptotic ultimate turbulence. Nature Physics, 2018, 14, 417-423. | 6.5 | 40 |
| 60 | Fluidâ€“Structure-Electrophysiology interaction (FSEI) in the left-heart: A multi-way coupled computational model. European Journal of Mechanics, B/Fluids, 2020, 79, 212-232. | 1.2 | 40 |
| 61 | Effect of velocity boundary conditions on the heat transfer and flow topology in two-dimensional Rayleigh-BÃ©nard convection. Physical Review E, 2014, 90, 013017. | 0.8 | 39 |
| 62 | Mechanisms for selective radial dispersion of microparticles in the transitional region of a confined turbulent round jet. International Journal of Multiphase Flow, 2004, 30, 1389-1417. | 1.6 | 38 |
| 63 | Dynamics of pancake-like vortices in a stratified fluid: experiments, model and numerical simulations. Journal of Fluid Mechanics, 2001, 433, 1-27. | 1.4 | 37 |
| 64 | Mean flow structure in thermal convection in a cylindrical cell of aspect ratio one half. Journal of Fluid Mechanics, 2006, 548, 1. | 1.4 | 37 |
| 65 | A numerical model for the analysis of unsteady train braking and releasing manoeuvres. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2009, 223, 305-317. | 1.3 | 37 |
| 66 | From zonal flow to convection rolls in Rayleighâ€“BÃ©nard convection with free-slip plates. Journal of Fluid Mechanics, 2020, 905, . | 1.4 | 37 |
| 67 | Heat transfer mechanisms in bubbly Rayleigh-BÃ©nard convection. Physical Review E, 2009, 80, 026304. | 0.8 | 36 |
| 68 | Thermal boundary layer profiles in turbulent Rayleigh-BÃ©nard convection in a cylindrical sample. Physical Review E, 2012, 85, 027301. | 0.8 | 36 |
| 69 | Flow organization and heat transfer in turbulent wall sheared thermal convection. Journal of Fluid Mechanics, 2020, 897, A22. | 1.4 | 36 |
| 70 | On steady columnar vortices under local compression. Journal of Fluid Mechanics, 1995, 299, 367-388. | 1.4 | 35 |
| 71 | Plume emission statistics in turbulent Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2015, 772, 5-15. | 1.4 | 35 |
| 72 | Periodically Modulated Thermal Convection. Physical Review Letters, 2020, 125, 154502. | 2.9 | 35 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Normal and oblique collisions of a vortex ring with a wall. Meccanica, 1994, 29, 383-391. | 1.2 | 34 |
| 74 | Transitional regimes and rotation effects in Rayleighâ€"BÃ©nard convection in a slender cylindrical cell. European Journal of Mechanics, B/Fluids, 2007, 26, 1-14. | 1.2 | 34 |
| 75 | Deformation statistics of sub-Kolmogorov-scale ellipsoidal neutrally buoyant drops in isotropicÂturbulence. Journal of Fluid Mechanics, 2014, 754, 184-207. | 1.4 | 34 |
| 76 | Numerical and experimental study of the interaction between a vortex dipole and a circular cylinder. Experiments in Fluids, 1995, 18, 153-163. | 1.1 | 32 |
| 77 | On the effect of aortic root geometry on the coronary entry-flow after a bileaflet mechanical heart valve implant: a numerical study. Acta Mechanica, 2011, 216, 147-163. | 1.1 | 32 |
| 78 | On the suitability of second-order accurate discretizations for turbulent flow simulations. European Journal of Mechanics, B/Fluids, 2016, 55, 242-245. | 1.2 | 32 |
| 79 | From Rayleighâ€"BÃ©nard convection to porous-media convection: how porosity affects heat transfer and flow structure. Journal of Fluid Mechanics, 2020, 895, . | 1.4 | 32 |
| 80 | Temporal statistics in high Rayleigh number convective turbulence. European Journal of Mechanics, B/Fluids, 2004, 23, 427-442. | 1.2 | 31 |
| 81 | Logarithmic Mean Temperature Profiles and Their Connection to Plume Emissions in Turbulent Rayleigh-BÃ©nard Convection. Physical Review Letters, 2015, 115, 154501. | 2.9 | 31 |
| 82 | From convection rolls to finger convection in double-diffusive turbulence. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 69-73. | 3.3 | 31 |
| 83 | Direct numerical simulation of Taylorâ€"Couette flow with grooved walls: torque scaling and flow structure. Journal of Fluid Mechanics, 2016, 794, 746-774. | 1.4 | 31 |
| 84 | Experimental investigation of heat transport in homogeneous bubbly flow. Journal of Fluid Mechanics, 2018, 845, 226-244. | 1.4 | 31 |
| 85 | Convection-dominated dissolution for single and multiple immersed sessile droplets. Journal of Fluid Mechanics, 2020, 892, . | 1.4 | 30 |
| 86 | Pulsating pipe flow with large-amplitude oscillations in the very high frequency regime. PartÂ1. Time-averaged analysis. Journal of Fluid Mechanics, 2012, 700, 246-282. | 1.4 | 29 |
| 87 | Sidewall effects in Rayleighâ€"BÃ©nard convection. Journal of Fluid Mechanics, 2014, 741, 1-27. | 1.4 | 28 |
| 88 | Scaling laws and flow structures of double diffusive convection in the finger regime. Journal of Fluid Mechanics, 2016, 802, 667-689. | 1.4 | 28 |
| 89 | Mixed insulating and conducting thermal boundary conditions in Rayleighâ€"BÃ©nard convection. Journal of Fluid Mechanics, 2018, 835, 491-511. | 1.4 | 28 |
| 90 | Dynamics of baroclinic vortices in a rotating, stratified fluid: A numerical study. Physics of Fluids, 1997, 9, 419-432. | 1.6 | 27 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Salinity transfer in bounded double diffusive convection. Journal of Fluid Mechanics, 2015, 768, 476-491. | 1.4 | 27 |
| 92 | Computational prediction of mechanical hemolysis in aortic valved prostheses. European Journal of Mechanics, B/Fluids, 2012, 35, 47-53. | 1.2 | 26 |
| 93 | Dynamics of a vortex ring in a rotating fluid. Journal of Fluid Mechanics, 1996, 317, 215-239. | 1.4 | 25 |
| 94 | Turbulent thermal convection in a closed domain: viscous boundary layer and mean flow effects. European Physical Journal B, 2003, 35, 133-141. | 0.6 | 25 |
| 95 | Axially homogeneous Rayleighâ€"BÃ©nard convection in a cylindrical cell. Journal of Fluid Mechanics, 2012, 691, 52-68. | 1.4 | 25 |
| 96 | A fast moving least squares approximation with adaptive Lagrangian mesh refinement for large scale immersed boundary simulations. Journal of Computational Physics, 2018, 375, 228-239. | 1.9 | 25 |
| 97 | Multiple states and transport properties of double-diffusive convection turbulence. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14676-14681. | 3.3 | 25 |
| 98 | An efficient phase-field method for turbulent multiphase flows. Journal of Computational Physics, 2021, 446, 110659. | 1.9 | 25 |
| 99 | Numerical simulations of transitional axisymmetric coaxial jets. AIAA Journal, 1996, 34, 736-743. | 1.5 | 23 |
| 100 | Fluidâ€"structure interaction of deformable aortic prostheses with a bileaflet mechanical valve. Journal of Biomechanics, 2011, 44, 1684-1690. | 0.9 | 23 |
| 101 | Aspect Ratio Dependence of Heat Transfer in a Cylindrical Rayleigh-BÃ©nard Cell. Physical Review Letters, 2022, 128, 084501. | 2.9 | 23 |
| 102 | Effect of sidewall on heat transfer and flow structure in Rayleighâ€"BÃ©nard convection. Journal of Fluid Mechanics, 2019, 881, 218-243. | 1.4 | 22 |
| 103 | Flow-induced dissolution of femtoliter surface droplet arrays. Lab on A Chip, 2018, 18, 1066-1074. | 3.1 | 21 |
| 104 | Growth dynamics of microbubbles on microcavity arrays by solvent exchange: Experiments and numerical simulations. Journal of Colloid and Interface Science, 2018, 532, 103-111. | 5.0 | 21 |
| 105 | Spatial distribution of heat flux and fluctuations in turbulent Rayleigh-BÃ©nard convection. Physical Review E, 2012, 86, 056315. | 0.8 | 20 |
| 106 | Pulsating pipe flow with large-amplitude oscillations in the very high frequency regime. PartÂ2. Phase-averaged analysis. Journal of Fluid Mechanics, 2015, 766, 272-296. | 1.4 | 19 |
| 107 | Regime transitions in thermally driven high-Rayleigh number vertical convection. Journal of Fluid Mechanics, 2021, 917, . | 1.4 | 19 |
| 108 | Instabilities driven by diffusiophoretic flow on catalytic surfaces. Journal of Fluid Mechanics, 2021, 919, . | 1.4 | 19 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | FSEI-GPU: GPU accelerated simulations of the fluidâ€"structureâ€"electrophysiology interaction in the left heart. Computer Physics Communications, 2022, 273, 108248. | 3.0 | 19 |
| 110 | Convective turbulence in mercury: Scaling laws and spectra. Physics of Fluids, 1998, 10, 516-527. | 1.6 | 18 |
| 111 | Evolution and instability of monopolar vortices in a stratified fluid. Physics of Fluids, 2003, 15, 1033-1045. | 1.6 | 18 |
| 112 | Numerical simulations of flow reversal in Rayleigh-BÃ©nard convection. Europhysics Letters, 2008, 81, 64008. | 0.7 | 18 |
| 113 | Effect of vapor bubbles on velocity fluctuations and dissipation rates in bubbly Rayleigh-BÃ©nard convection. Physical Review E, 2011, 84, 036312. | 0.8 | 18 |
| 114 | Turbulence decay towards the linearly stable regime of Taylorâ€"Couette flow. Journal of Fluid Mechanics, 2014, 748, . | 1.4 | 18 |
| 115 | Drag reduction in numerical two-phase Taylorâ€"Couette turbulence using an Eulerâ€"Lagrange approach. Journal of Fluid Mechanics, 2016, 798, 411-435. | 1.4 | 18 |
| 116 | Deformation and orientation statistics of neutrally buoyant sub-Kolmogorov ellipsoidal droplets in turbulent Taylorâ€"Couette flow. Journal of Fluid Mechanics, 2016, 809, 480-501. | 1.4 | 17 |
| 117 | The effect of Prandtl number on turbulent sheared thermal convection. Journal of Fluid Mechanics, 2021, 910, . | 1.4 | 17 |
| 118 | Wall/Vortex-Ring Interactions. Applied Mechanics Reviews, 1996, 49, 447-461. | 4.5 | 16 |
| 119 | Vertically Bounded Double Diffusive Convection in the Finger Regime: Comparing No-Slip versus Free-Slip Boundary Conditions. Physical Review Letters, 2016, 117, 184501. | 2.9 | 16 |
| 120 | Dynamics and evolution of turbulent Taylor rolls. Journal of Fluid Mechanics, 2019, 870, 970-987. | 1.4 | 16 |
| 121 | Effect of roll number on the statistics of turbulent Taylor-Couette flow. Physical Review Fluids, 2016, 1, . | 1.0 | 16 |
| 122 | Do increased flow rates in displacement ventilation always lead to better results?. Journal of Fluid Mechanics, 2022, 932, . | 1.4 | 16 |
| 123 | Dipole formation by two interacting shielded monopoles in a stratified fluid. Physics of Fluids, 2002, 14, 704-720. | 1.6 | 15 |
| 124 | A Non-Adiabatic Flamelet Progressâ€"Variable Approach for LES of Turbulent Premixed Flames. Flow, Turbulence and Combustion, 2011, 86, 667-688. | 1.4 | 15 |
| 125 | A numerical study on gasâ€"liquid mass transfer in the rotorâ€"stator spinning disc reactor. Chemical Engineering Science, 2015, 129, 14-24. | 1.9 | 15 |
| 126 | Direct numerical simulations of Taylorâ€"Couette turbulence: the effects of sand grain roughness. Journal of Fluid Mechanics, 2019, 873, 260-286. | 1.4 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Two-layer thermally driven turbulence: mechanisms for interface breakup. Journal of Fluid Mechanics, 2021, 913, . | 1.4 | 15 |
| 128 | Electro-fluid-mechanics of the heart. Journal of Fluid Mechanics, 2022, 941, . | 1.4 | 15 |
| 129 | Modification of turbulence in Rayleighâ€“BÃ©nard convection by phase change. New Journal of Physics, 2011, 13, 025002. | 1.2 | 14 |
| 130 | Breaking of modulated wave groups: kinematics and energy dissipation processes. Journal of Fluid Mechanics, 2018, 855, 267-298. | 1.4 | 14 |
| 131 | Controlling secondary flow in Taylorâ€“Couette turbulence through spanwise-varying roughness. Journal of Fluid Mechanics, 2020, 883, . | 1.4 | 14 |
| 132 | What rotation rate maximizes heat transport in rotating Rayleigh-BÃ©nard convection with Prandtl number larger than one?. Physical Review Fluids, 2020, 5, . | 1.0 | 14 |
| 133 | Left Ventricular Hemodynamics with an Implanted Assist Device: An In Vitro Fluid Dynamics Study. Annals of Biomedical Engineering, 2019, 47, 1799-1814. | 1.3 | 13 |
| 134 | Direct numerical simulations of spiral Taylorâ€“Couette turbulence. Journal of Fluid Mechanics, 2020, 887, . | 1.4 | 13 |
| 135 | Heat transport enhancement in confined Rayleigh-BÃ©nard convection feels the shape of the container <sup>(a)</sup>. Europhysics Letters, 2021, 135, 24004. | 0.7 | 13 |
| 136 | Heat transfer in turbulent Rayleighâ€“BÃ©nard convection through two immiscible fluid layers. Journal of Fluid Mechanics, 2022, 938, . | 1.4 | 13 |
| 137 | A fast computational model for the electrophysiology of the whole human heart. Journal of Computational Physics, 2022, 457, 111084. | 1.9 | 13 |
| 138 | DNS of passive scalars in turbulent pipe flow. Journal of Fluid Mechanics, 2022, 940, . | 1.4 | 13 |
| 139 | Fluidâ€“particle flow simulation by averaged continuous model. Computers and Fluids, 2005, 34, 1040-1061. | 1.3 | 12 |
| 140 | Specific roles of fluid properties in non-Boussinesq thermal convection at the Rayleigh number of 2 Ã— 10 <sup>8</sup>. Europhysics Letters, 2009, 86, 14006. | 0.7 | 12 |
| 141 | Turbulent Flow and Dispersion of Inertial Particles in a Confined Jet Issued by a Long Cylindrical Pipe. Flow, Turbulence and Combustion, 2009, 82, 1-23. | 1.4 | 12 |
| 142 | Turbulent Taylorâ€“Couette flow with stationary inner cylinder. Journal of Fluid Mechanics, 2016, 799, . | 1.4 | 12 |
| 143 | Zhu <i>et al.</i> Reply:. Physical Review Letters, 2019, 123, 259402. | 2.9 | 12 |
| 144 | Effects of the wind on the breaking of modulated wave trains. European Journal of Mechanics, B/Fluids, 2019, 73, 6-23. | 1.2 | 12 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Disentangling the origins of torque enhancement through wall roughness in Taylorâ€“Couette turbulence. Journal of Fluid Mechanics, 2017, 812, 279-293. | 1.4 | 12 |
| 146 | Deformable ellipsoidal bubbles in Taylor-Couette flow with enhanced Euler-Lagrangian tracking. Physical Review Fluids, 2017, 2, . | 1.0 | 12 |
| 147 | Non-Boussinesq convection at moderate Rayleigh numbers in low temperature gaseous helium. Physica Scripta, 2008, T132, 014053. | 1.2 | 11 |
| 148 | Moving from momentum transfer to heat transfer â€“ A comparative study of an advanced Graetz-Nusselt problem using immersed boundary methods. Chemical Engineering Science, 2019, 198, 317-333. | 1.9 | 11 |
| 149 | Flow organisation in laterally unconfined Rayleighâ€“BÃ©nard turbulence. Journal of Fluid Mechanics, 2021, 906, . | 1.4 | 11 |
| 150 | Large eddy simulation in complex geometric configurations using boundary body forces. AIAA Journal, 2000, 38, 427-433. | 1.5 | 11 |
| 151 | Boundary layers in turbulent vertical convection at high Prandtl number. Journal of Fluid Mechanics, 2022, 930, . | 1.4 | 11 |
| 152 | Statistics of turbulence in the energy-containing range of Taylorâ€“Couette compared to canonical wall-bounded flows. Journal of Fluid Mechanics, 2017, 830, 797-819. | 1.4 | 10 |
| 153 | Effects of mitral chordae tendineae on the flow in the left heart ventricle. European Physical Journal E, 2018, 41, 27. | 0.7 | 10 |
| 154 | Convective heat transfer along ratchet surfaces in vertical natural convection. Journal of Fluid Mechanics, 2019, 873, 1055-1071. | 1.4 | 10 |
| 155 | Enhancing heat transport in multiphase Rayleighâ€“BÃ©nard turbulence by changing the plateâ€“liquid contact angles. Journal of Fluid Mechanics, 2022, 933, . | 1.4 | 10 |
| 156 | On the survival of strong vortex filaments in â€˜modelâ€™ turbulence. Journal of Fluid Mechanics, 1999, 394, 261-279. | 1.4 | 9 |
| 157 | Vortex Structures Generated by a Finite-span Oscillating Foil. , 2005, , . | | 9 |
| 158 | Ekman pumping and intermittent particle resuspension in a stirred tank reactor. Chemical Engineering Research and Design, 2009, 87, 557-564. | 2.7 | 9 |
| 159 | Evaluation of prosthetic-valved devices by means of numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2502-2509. | 1.6 | 9 |
| 160 | Two-scalar turbulent Rayleighâ€“BÃ©nard convection: numerical simulations and unifyingÂtheory. Journal of Fluid Mechanics, 2018, 848, 648-659. | 1.4 | 9 |
| 161 | Modeling mitral valve stenosis: A parametric study on the stenosis severity level. Journal of Biomechanics, 2019, 84, 218-226. | 0.9 | 9 |
| 162 | Heart rate effects on the ventricular hemodynamics and mitral valve kinematics. Computers and Fluids, 2020, 197, 104359. | 1.3 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Towards realistic simulations of human cough: Effect of droplet emission duration and spread angle. International Journal of Multiphase Flow, 2022, 147, 103883. | 1.6 | 9 |
| 164 | The effect of buoyancy driven convection on the growth and dissolution of bubbles on electrodes. Electrochimica Acta, 2022, 403, 139616. | 2.6 | 9 |
| 165 | Annular dilatation and loss of sino-tubular junction in aneurysmatic aorta: implications on leaflet quality at the time of surgery. A finite element studyâ€. Interactive Cardiovascular and Thoracic Surgery, 2013, 17, 8-12. | 0.5 | 7 |
| 166 | A finiteâ€"difference scheme for threeâ€"dimensional incompressible flows in spherical coordinates. Journal of Computational Physics, 2021, 424, 109848. | 1.9 | 7 |
| 167 | Systolic anterior motion in hypertrophic cardiomyopathy: a fluidâ€"structure interaction computational model. Theoretical and Computational Fluid Dynamics, 2021, 35, 381-396. | 0.9 | 7 |
| 168 | Life stages of wall-bounded decay of Taylor-Couette turbulence. Physical Review Fluids, 2017, 2, . | 1.0 | 7 |
| 169 | Layering and vertical transport in sheared double-diffusive convection in the diffusive regime. Journal of Fluid Mechanics, 2022, 933, . | 1.4 | 7 |
| 170 | Structure function exponents and probability density function of the velocity difference in turbulence. Physics of Fluids, 2002, 14, 906-909. | 1.6 | 6 |
| 171 | Fluid velocity fluctuations in a collision of a sphere with a wall. Physics of Fluids, 2011, 23, . | 1.6 | 6 |
| 172 | Calculation of the mean velocity profile for strongly turbulent Taylorâ€"Couette flow at arbitrary radius ratios. Journal of Fluid Mechanics, 2020, 905, . | 1.4 | 6 |
| 173 | Non-monotonic transport mechanisms in vertical natural convection with dispersed light droplets. Journal of Fluid Mechanics, 2020, 900, . | 1.4 | 6 |
| 174 | Double maxima of angular momentum transport in small gap Taylorâ€"Couette turbulence. Journal of Fluid Mechanics, 2020, 900, . | 1.4 | 6 |
| 175 | Diffusionâ€Free Scaling in Rotating Spherical Rayleighâ€BÃ©nard Convection. Geophysical Research Letters, 2021, 48, e2021GL095017. | 1.5 | 6 |
| 176 | Strong alignment of prolate ellipsoids in Taylorâ€"Couette flow. Journal of Fluid Mechanics, 2022, 935, . | 1.4 | 6 |
| 177 | Multiple heat transport maxima in confined-rotating Rayleighâ€"BÃ©nard convection. Journal of Fluid Mechanics, 2022, 939, . | 1.4 | 6 |
| 178 | Reverse transition of a turbulent spiral Poiseuille flow at. Journal of Fluid Mechanics, 2022, 941, . | 1.4 | 6 |
| 179 | Anomalous scaling exponents and coherent structures in high Re fluid turbulence. Physics of Fluids, 2000, 12, 676-687. | 1.6 | 5 |
| 180 | Transition to ultimate Rayleighâ€"BÃ©nard turbulence revealed through extended self-similarity scaling analysis of the temperature structure functions. Journal of Fluid Mechanics, 2018, 851, . | 1.4 | 5 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Biomechanical properties and histomorphometric features of aortic tissue in patients with or without bicuspid aortic valve. Journal of Thoracic Disease, 2020, 12, 2304-2316. | 0.6 | 5 |
| 182 | Toward DNS of the Ultimate Regime of Rayleighâ€“BÃ©nard Convection. ERCOFTAC Series, 2020, , 215-224. | 0.1 | 5 |
| 183 | Exploring the large-scale structure of Taylorâ€“Couette turbulence through Large-Eddy Simulations. Journal of Physics: Conference Series, 2018, 1001, 012017. | 0.3 | 4 |
| 184 | CafÃ© latte: spontaneous layer formation in laterally cooled double diffusive convection. Journal of Fluid Mechanics, 2020, 900, . | 1.4 | 4 |
| 185 | Sensitivity analysis of an electrophysiology model for the left ventricle. Journal of the Royal Society Interface, 2020, 17, 20200532. | 1.5 | 4 |
| 186 | Pulsating spiral Poiseuille flow. Journal of Fluid Mechanics, 2020, 890, . | 1.4 | 4 |
| 187 | On the collision of a rigid sphere with a deformable membrane in a viscous fluid. Journal of Fluid Mechanics, 2021, 914, . | 1.4 | 4 |
| 188 | Anatomic features in SCAD assessed by CCT: A propensity score matching case control study. Annales De Cardiologie Et D'Angeiologie, 2021, 70, 161-167. | 0.3 | 4 |
| 189 | Numerical simulations of nonlinear thermally stratified spin-up in a circular cylinder. Physics of Fluids, 2010, 22, . | 1.6 | 3 |
| 190 | Boundary layer structure in confined turbulent thermal convection. Journal of Fluid Mechanics, 2012, 706, 1-4. | 1.4 | 3 |
| 191 | Unsteady Conjugate Heat Transfer Analysis of an Immersed Particle Innovative Heat Exchanger. Journal of Thermal Science and Engineering Applications, 2012, 4, . | 0.8 | 3 |
| 192 | Identifying coherent structures and vortex clusters in Taylor-Couette turbulence. Journal of Physics: Conference Series, 2016, 708, 012006. | 0.3 | 3 |
| 193 | Rough-wall turbulent Taylor-Couette flow: The effect of the rib height. European Physical Journal E, 2018, 41, 125. | 0.7 | 3 |
| 194 | Constructive interference in a network of elastically-bounded flapping plates. Journal of Fluids and Structures, 2019, 90, 334-353. | 1.5 | 3 |
| 195 | Droplet plume emission during plasmonic bubble growth in ternary liquids. Physical Review E, 2021, 104, 025101. | 0.8 | 3 |
| 196 | Droplets generated from toilets during urination as a possible vehicle of carbapenem-resistant Klebsiella pneumoniae. Antimicrobial Resistance and Infection Control, 2021, 10, 149. | 1.5 | 3 |
| 197 | How small-scale flow structures affect the heat transport in sheared thermal convection. Journal of Fluid Mechanics, 2022, 944, . | 1.4 | 3 |
| 198 | Vortex rings interacting with a wall. Flow, Turbulence and Combustion, 1993, 51, 469-473. | 0.2 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 199 | Identification of zones in a free evolving vortex ring. Flow, Turbulence and Combustion, 1994, 53, 387-399. | 0.2 | 2 |
| 200 | The study of vortex ring/wall interaction for artificial nose improvement. ESAIM: Proceedings and Surveys, 1999, 7, 258-269. | 0.4 | 2 |
| 201 | Three-dimensional vortex visualization in stratified spin-up. Journal of Visualization, 2010, 13, 81-84. | 1.1 | 2 |
| 202 | Formation of columnar baroclinic vortices in thermally stratified nonlinear spin-up. Journal of Fluid Mechanics, 2012, 702, 265-285. | 1.4 | 2 |
| 203 | Performance Analysis for Steady Flow Generation and Improved Readout Signal in Amperometric Biosensors. IEEE Sensors Journal, 2015, 15, 5208-5216. | 2.4 | 2 |
| 204 | Dynamic mode decomposition analysis of coherent structures in rotating plane Couette flow. Journal of Physics: Conference Series, 2020, 1522, 012012. | 0.3 | 2 |
| 205 | A fully Eulerian solver for the simulation of multiphase flows with solid bodies: Application to surface gravity waves. Journal of Computational Physics, 2021, 438, 110355. | 1.9 | 2 |
| 206 | Off-centre gravity induces large-scale flow patterns in spherical Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2022, 942, . | 1.4 | 2 |
| 207 | Passive scalar transport in Couette flow. Journal of Fluid Mechanics, 2022, 943, . | 1.4 | 2 |
| 208 | Numerical Simulations of Blood Flow Inside a Mechanical Heart Valve. AIP Conference Proceedings, 2005, , . | 0.3 | 1 |
| 209 | Turbulent thermal convection over rough surfaces. AIP Conference Proceedings, 2005, , . | 0.3 | 1 |
| 210 | Mixing in thermally stratified nonlinear spin-up with uniform boundary fluxes. Physics of Fluids, 2014, 26, 096602. | 1.6 | 1 |
| 211 | Low Reynolds Number Flow Around Tori of Different Slenderness Î“. Applied Sciences (Switzerland), 2017, 7, 1108. | 1.3 | 1 |
| 212 | A mathematical model to evaluate hemodynamic effects of the graft anastomosis in coronary surgery. Kardiochirurgia I Torakochirurgia Polska, 2019, 16, 106-108. | 0.1 | 1 |
| 213 | You Were Not Made to Live Like Brutes, But Rather to Follow Virtue and Knowledge. Annals of Thoracic Surgery, 2022, 113, 1756. | 0.7 | 1 |
| 214 | An Improved â€˜Flywheelâ€™ Model for Convective Turbulence in Liquid Metals. Fluid Mechanics and Its Applications, 1998, , 399-402. | 0.1 | 1 |
| 215 | 10.1063/1.3505025.1. , 2010, , . | | 1 |
| 216 | Poster: Direct numerical simulations of turbulent sheared thermal convection. , 0, , . | | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 217 | Shear/Buoyancy Interaction in Wall Bounded Turbulent Flows. Springer Proceedings in Physics, 2019, , 47-54. | 0.1 | 1 |
| 218 | Laboratory-numerical studies of stratified spin-up flows. Environmental Fluid Mechanics, 2008, 8, 535-541. | 0.7 | 0 |
| 219 | Prandtl-, Rayleigh-, and Rossby-number dependence of heat transport in turbulent Rotating Rayleigh-BÃ©nard convection. Springer Proceedings in Physics, 2009, , 529-532. | 0.1 | 0 |
| 220 | Unsteady Conjugate Heat Transfer Analysis of an Air Immersed Solid Particle With Application to an Innovative Heat Exchanger. , 2011, , . | | 0 |
| 221 | Energy dissipation and transfer processes during the breaking of modulated wave trains. Journal of Physics: Conference Series, 2015, 655, 012037. | 0.3 | 0 |
| 222 | On the electrophysiology of the atrial fast conduction system: an uncertain quantification study. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 264-278. | 1.5 | 0 |
| 223 | Largeâ€"Eddyâ€"Simulation of Complex Flows Using the Immersed Boundary Method. , 2005, , 17-30. | | 0 |
| 224 | Heat transfer mechanisms in bubbly Rayleigh-BÃ©nard convection. Springer Proceedings in Physics, 2009, , 355-357. | 0.1 | 0 |
| 225 | Numerical Simulations of Thermal Convection at High Prandtl Numbers. ERCOFTAC Series, 2010, , 389-394. | 0.1 | 0 |
| 226 | Fluid Mechanics of Deformable Aortic Prostheses. , 2010, , . | | 0 |
| 227 | Numerical Experiments on Turbulent Thermal Convection. ERCOFTAC Series, 2010, , 329-336. | 0.1 | 0 |
| 228 | Fluid Mechanics in Aortic Prostheses After a Bentall Procedure. , 2011, , 371-376. | | 0 |
| 229 | Numerical Simulation of Turbulent Low-Prandtl Convection in a Cylindrical Cell. Fluid Mechanics and Its Applications, 1996, , 267-270. | 0.1 | 0 |
| 230 | Numerical Experiments of Turbulent Thermal Convection at High Rayleigh Numbers. , 2007, , 177-180. | | 0 |