

# P K Yeung

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5400578/publications.pdf>

Version: 2024-02-01

68  
papers

3,821  
citations

117453

34  
h-index

123241

61  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1524  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Nonlinear amplification in hydrodynamic turbulence. <i>Journal of Fluid Mechanics</i> , 2022, 930, .  | 1.4 | 0         |
| 2  | Small-Scale Isotropy and Ramp-Cliff Structures in Scalar Turbulence. <i>Physical Review Letters</i> , 2021, 126, 034504.  | 2.9 | 22        |
| 3  | Turbulence is an Ineffective Mixer when Schmidt Numbers Are Large. <i>Physical Review Letters</i> , 2021, 126, 074501.  | 2.9 | 16        |
| 4  | Oscillations Modulating Power Law Exponents in Isotropic Turbulence: Comparison of Experiments with Simulations. <i>Physical Review Letters</i> , 2021, 126, 254501.                      | 2.9 | 9         |
| 5  | Fractal iso-level sets in high-Reynolds-number scalar turbulence. <i>Physical Review Fluids</i> , 2020, 5, .  | 1.0 | 9         |
| 6  | Scaling exponents saturate in three-dimensional isotropic turbulence. <i>Physical Review Fluids</i> , 2020, 5, .  | 1.0 | 44        |
| 7  | Advancing understanding of turbulence through extreme-scale computation: Intermittency and simulations at large problem sizes. <i>Physical Review Fluids</i> , 2020, 5, .                 | 1.0 | 19        |
| 8  | Extreme velocity gradients in turbulent flows. <i>New Journal of Physics</i> , 2019, 21, 043004.  | 1.2 | 76        |
| 9  | Cancellation exponents in isotropic turbulence and magnetohydrodynamic turbulence. <i>Physical Review E</i> , 2019, 99, 023102.   | 0.8 | 5         |
| 10 | GPU acceleration of a petascale application for turbulent mixing at high Schmidt number using OpenMP 4.5. <i>Computer Physics Communications</i> , 2018, 228, 100-114.                    | 3.0 | 15        |
| 11 | Steep Cliffs and Saturated Exponents in Three-Dimensional Scalar Turbulence. <i>Physical Review Letters</i> , 2018, 121, 264501.  | 2.9 | 23        |
| 12 | Effects of finite spatial and temporal resolution in direct numerical simulations of incompressible isotropic turbulence. <i>Physical Review Fluids</i> , 2018, 3, .                      | 1.0 | 55        |
| 13 | Reynolds number scaling of velocity increments in isotropic turbulence. <i>Physical Review E</i> , 2017, 95, 021101.  | 0.8 | 42        |
| 14 | A dual communicator and dual grid-resolution algorithm for petascale simulations of turbulent mixing at high Schmidt number. <i>Computer Physics Communications</i> , 2017, 219, 313-328. | 3.0 | 10        |
| 15 | A Lagrangian study of turbulent mixing: forward and backward dispersion of molecular trajectories in isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2016, 799, 352-382.        | 1.4 | 27        |
| 16 | A numerical study of turbulence under temporally evolving axisymmetric contraction and subsequent relaxation. <i>Journal of Fluid Mechanics</i> , 2016, 805, 460-493.                     | 1.4 | 8         |
| 17 | Refined similarity hypothesis using three-dimensional local averages. <i>Physical Review E</i> , 2015, 92, 063024.  | 0.8 | 9         |
| 18 | Characteristics of backward and forward two-particle relative dispersion in turbulence at different Reynolds numbers. <i>Physics of Fluids</i> , 2015, 27, .                              | 1.6 | 43        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 19 | Direct numerical simulation studies of Lagrangian intermittency in turbulence. <i>Physics of Fluids</i> , 2015, 27, .  | 1.6 | 17        |
| 20 | Extreme events in computational turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 12633-12638.                             | 3.3 | 119       |
| 21 | The Turbulent Schmidt Number. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2014, 136, .  | 0.8 | 19        |
| 22 | Direct numerical simulation of turbulent mixing at very low Schmidt number with a uniform mean gradient. <i>Physics of Fluids</i> , 2014, 26, .  | 1.6 | 18        |
| 23 | Structure functions and applicability of Yaglom's relation in passive-scalar turbulent mixing at low Schmidt numbers with uniform mean gradient. <i>Physics of Fluids</i> , 2014, 26, .  | 1.6 | 10        |
| 24 | Spectrum of passive scalars of high molecular diffusivity in turbulent mixing. <i>Journal of Fluid Mechanics</i> , 2013, 716, .  | 1.4 | 19        |
| 25 | Gaussian Lagrangian stochastic models for multi-particle dispersion. <i>Physics of Fluids</i> , 2013, 25, .  | 1.6 | 13        |
| 26 | Dissipation, enstrophy and pressure statistics in turbulence simulations at high Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2012, 700, 5-15.                                  | 1.4 | 113       |
| 27 | Multi-particle and tetrad statistics in numerical simulations of turbulent relative dispersion. <i>Physics of Fluids</i> , 2011, 23, .   | 1.6 | 27        |
| 28 | Kolmogorov similarity scaling for one-particle Lagrangian statistics. <i>Physics of Fluids</i> , 2011, 23, 091704.   | 1.6 | 50        |
| 29 | On the role of vortical structures for turbulent mixing using direct numerical simulation and wavelet-based coherent vorticity extraction. <i>Journal of Turbulence</i> , 2011, 12, N20. | 0.5 | 9         |
| 30 | Conditional Relative Acceleration Statistics and Relative Dispersion Modelling. <i>Flow, Turbulence and Combustion</i> , 2010, 85, 345-362.  | 1.4 | 5         |
| 31 | The Batchelor Spectrum for Mixing of Passive Scalars in Isotropic Turbulence. <i>Flow, Turbulence and Combustion</i> , 2010, 85, 549-566.  | 1.4 | 71        |
| 32 | Resolution effects and scaling in numerical simulations of passive scalar mixing in turbulence. <i>Physica D: Nonlinear Phenomena</i> , 2010, 239, 1278-1287.                            | 1.3 | 82        |
| 33 | Dissipation and enstrophy in isotropic turbulence: Resolution effects and scaling in direct numerical simulations. <i>Physics of Fluids</i> , 2008, 20, .                                | 1.6 | 165       |
| 34 | Reynolds number dependence of relative dispersion statistics in isotropic turbulence. <i>Physics of Fluids</i> , 2008, 20, .   | 1.6 | 59        |
| 35 | Lagrangian conditional statistics, acceleration and local relative motion in numerically simulated isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2007, 582, 399-422.         | 1.4 | 39        |
| 36 | A conditionally cubic-Gaussian stochastic Lagrangian model for acceleration in isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2007, 582, 423-448.                             | 1.4 | 29        |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 37 | Reynolds number dependence of Lagrangian statistics in large numerical simulations of isotropic turbulence. <i>Journal of Turbulence</i> , 2006, 7, N58.                 | 0.5  | 87        |
| 38 | Scalar dissipation rate and dissipative anomaly in isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2005, 532, 199-216.   | 1.4  | 109       |
| 39 | Very fine structures in scalar mixing. <i>Journal of Fluid Mechanics</i> , 2005, 531, 113-122.   | 1.4  | 94        |
| 40 | Effects of rotation on turbulent mixing: Nonpremixed passive scalars. <i>Physics of Fluids</i> , 2004, 16, 93-103.   | 1.6  | 11        |
| 41 | High Schmidt number scalars in turbulence: Structure functions and Lagrangian theory. <i>Physics of Fluids</i> , 2004, 16, 3888-3899.                                    | 1.6  | 35        |
| 42 | Simulations of Three-Dimensional Turbulent Mixing for Schmidt Numbers of the Order 1000. <i>Flow, Turbulence and Combustion</i> , 2004, 72, 333-347.                     | 1.4  | 95        |
| 43 | Relative dispersion in isotropic turbulence. Part 1. Direct numerical simulations and Reynolds-number dependence. <i>Journal of Fluid Mechanics</i> , 2004, 503, 93-124. | 1.4  | 59        |
| 44 | Relative dispersion in isotropic turbulence. Part 2. A new stochastic model with Reynolds-number dependence. <i>Journal of Fluid Mechanics</i> , 2004, 503, 125-160.     | 1.4  | 59        |
| 45 | Schmidt number dependence of derivative moments for quasi-static straining motion. <i>Journal of Fluid Mechanics</i> , 2003, 479, 221-230.                               | 1.4  | 12        |
| 46 | Improved Lagrangian mixing models for passive scalars in isotropic turbulence. <i>Physics of Fluids</i> , 2003, 15, 961-985.   | 1.6  | 31        |
| 47 | Derivative moments in turbulent shear flows. <i>Physics of Fluids</i> , 2003, 15, 84-90.   | 1.6  | 45        |
| 48 | Random-sweeping hypothesis for passive scalars in isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2002, 459, 129-138.  | 1.4  | 28        |
| 49 | LAGRANGIAN INVESTIGATIONS OF TURBULENCE. <i>Annual Review of Fluid Mechanics</i> , 2002, 34, 115-142.  | 10.8 | 296       |
| 50 | Lagrangian characteristics of turbulence and scalar transport in direct numerical simulations. <i>Journal of Fluid Mechanics</i> , 2001, 427, 241-274.                   | 1.4  | 117       |
| 51 | Dynamics of scalar dissipation in isotropic turbulence: a numerical and modelling study. <i>Journal of Fluid Mechanics</i> , 2001, 433, 29-60.                           | 1.4  | 95        |
| 52 | Lagrangian statistics in uniform shear flow: Direct numerical simulation and Lagrangian stochastic models. <i>Physics of Fluids</i> , 2001, 13, 2627-2634.               | 1.6  | 55        |
| 53 | Random Taylor hypothesis and the behavior of local and convective accelerations in isotropic turbulence. <i>Physics of Fluids</i> , 2001, 13, 1974-1984.                 | 1.6  | 56        |
| 54 | Direct numerical simulation of differential diffusion with Schmidt numbers up to 4.0. <i>Physics of Fluids</i> , 2000, 12, 1601-1604.                                    | 1.6  | 27        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | Eulerian acceleration statistics as a discriminator between Lagrangian stochastic models in uniform shear flow. <i>Physics of Fluids</i> , 2000, 12, 2033-2045.                     | 1.6 | 30        |
| 56 | Similarity scaling of acceleration and pressure statistics in numerical simulations of isotropic turbulence. <i>Physics of Fluids</i> , 1999, 11, 1208-1220.                        | 1.6 | 168       |
| 57 | Conditional Fluid-Particle Accelerations in Turbulence. <i>Theoretical and Computational Fluid Dynamics</i> , 1998, 11, 69-93.  | 0.9 | 22        |
| 58 | Correlations and conditional statistics in differential diffusion: Scalars with uniform mean gradients. <i>Physics of Fluids</i> , 1998, 10, 2621-2635.                             | 1.6 | 35        |
| 59 | One- and two-particle Lagrangian acceleration correlations in numerically simulated homogeneous turbulence. <i>Physics of Fluids</i> , 1997, 9, 2981-2990.                          | 1.6 | 66        |
| 60 | Fluid particle dispersion in homogeneous turbulent shear flow. <i>Physics of Fluids</i> , 1997, 9, 3472-3484.   | 1.6 | 21        |
| 61 | Direct numerical simulations of passive scalars with $Pr > 1$ advected by turbulent flow. <i>Journal of Fluid Mechanics</i> , 1997, 343, 111-130.                                   | 1.4 | 98        |
| 62 | Multi-scalar triadic interactions in differential diffusion with and without mean scalar gradients. <i>Journal of Fluid Mechanics</i> , 1996, 321, 235-278.                         | 1.4 | 41        |
| 63 | Dynamics of direct large-small scale couplings in coherently forced turbulence: concurrent physical- and Fourier-space views. <i>Journal of Fluid Mechanics</i> , 1995, 283, 43-95. | 1.4 | 80        |
| 64 | Spectral transfer of self-similar passive scalar fields in isotropic turbulence. <i>Physics of Fluids</i> , 1994, 6, 2245-2247.   | 1.6 | 11        |
| 65 | Direct numerical simulation of two-particle relative diffusion in isotropic turbulence. <i>Physics of Fluids</i> , 1994, 6, 3416-3428.  | 1.6 | 73        |
| 66 | Differential diffusion of passive scalars in isotropic turbulence. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 2467-2478.   | 1.6 | 52        |
| 67 | The curvature of material surfaces in isotropic turbulence. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989, 1, 2010-2018.  | 1.6 | 69        |
| 68 | Lagrangian statistics from direct numerical simulations of isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 1989, 207, 531-586.  | 1.4 | 448       |