Diego A Donzis

List of Publications by Year
in descending order

40
papers

917
citations

471509

17
h-index

454955

30
g-index

40
all docs

40
docs citations

40
times ranked

560
citing authors

#	Article	IF	Citations
1	Reynolds and Mach number scaling in solenoidally-forced compressible turbulence using high-resolution direct numericalÂsimulations. Journal of Fluid Mechanics, 2016, 789, 669-707.	3.4	93
2	Small-scale universality in fluid turbulence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10961-10965.	7.1	92
3	Resolution effects and scaling in numerical simulations of passive scalar mixing in turbulence. Physica D: Nonlinear Phenomena, 2010, 239, 1278-1287.	2.8	82
4	Energy transfer and bottleneck effect in turbulence. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 4401-4412.	2.1	71
5	The Batchelor Spectrum for Mixing of Passive Scalars in Isotropic Turbulence. Flow, Turbulence and Combustion, 2010, 85, 549-566.	2.6	71
6	Fluctuations of thermodynamic variables in stationary compressible turbulence. Journal of Fluid Mechanics, 2013, 733, 221-244.	3.4	63
7	Shock structure in shock-turbulence interactions. Physics of Fluids, 2012, 24, .	4.0	35
8	Universality and scaling in homogeneous compressible turbulence. Physical Review Fluids, 2020, 5, .	2.5	34
9	Emergence of Multiscaling in a Random-Force Stirred Fluid. Physical Review Letters, 2017, 119, 044501.	7.8	29
10	Shockâ€“turbulence interactions at high turbulence intensities. Journal of Fluid Mechanics, 2019, 870, 813-847.	3.4	28
11	Energy spectrum in the dissipation range. Physical Review Fluids, 2018, 3, .	2.5	26
12	Vorticity moments in four numerical simulations of the 3D Navierâ€“Stokes equations. Journal of Fluid Mechanics, 2013, 732, 316-331.	3.4	25
13	Amplification factors in shock-turbulence interactions: Effect of shock thickness. Physics of Fluids, 2012, 24, .	4.0	24
14	Asynchronous finite-difference schemes for partial differential equations. Journal of Computational Physics, 2014, 274, 370-392.	3.8	23
15	Some results on the Reynolds number scaling of pressure statistics in isotropic turbulence. Physica D: Nonlinear Phenomena, 2012, 241, 164-168.	2.8	19
16	Regimes of nonlinear depletion and regularity in the 3D Navierâ€“Stokes equations. Nonlinearity, 2014, 27, 2605-2625.	1.4	19
17	The Turbulent Schmidt Number. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	1.5	19
18	Statistically steady states of forced isotropic turbulence in thermal equilibrium and non-equilibrium. Journal of Fluid Mechanics, 2016, 797, 181-200.	3.4	17

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19	Collisional Intermolecular Energy Transfer from a N₂ Bath at Room Temperature to a Vibrationlly â€œColdâ€•C₆F₆ Molecule Using Chemical Dynamics Simulations. Journal of Physical Chemistry A, 2017, 121, 4049-4057.	2.5	15
20	Anomalous exponents in strong turbulence. Physica D: Nonlinear Phenomena, 2018, 384-385, 12-17.	2.8	13
21	Asymptotic behaviour at the wall in compressible turbulent channels. Journal of Fluid Mechanics, 2022, 933, .	3.4	12
22	Decaying compressible turbulence with thermal non-equilibrium. Physics of Fluids, 2019, 31, .	4.0	11
23	Does dissipative anomaly hold for compressible turbulence?. Journal of Fluid Mechanics, 2021, 920, .	3.4	11
24	A Parallel Multigrid Finite-Volume Solver on a Collocated Grid for Incompressible Navier-Stokes Equations. Numerical Heat Transfer, Part B: Fundamentals, 2015, 67, 376-409.	0.9	10
25	Solenoidal Scaling Laws for Compressible Mixing. Physical Review Letters, 2019, 123, 224501.	7.8	10
26	Velocity and temperature fluctuations in a high-speed shockâ€"turbulence interaction. Journal of Fluid Mechanics, 2021, 913, .	3.4	9
27	High-order asynchrony-tolerant finite difference schemes for partial differential equations. Journal of Computational Physics, 2017, 350, 550-572.	3.8	8
28	Massively parallel direct numerical simulations of forced compressible turbulence. , 2012, , .		7
29	Comparison of intermolecular energy transfer from vibrationally excited benzene in mixed nitrogenâ€"benzene baths at 140 K and 300 K. Journal of Chemical Physics, 2020, 153, 144116.	3.0	6
30	Compressibility Effects on the Scalar Dissipation Rate. Combustion Science and Technology, 2020, 192, 1320-1333.	2.3	6
31	Direct numerical simulations of turbulent flows using high-order asynchrony-tolerant schemes: Accuracy and performance. Journal of Computational Physics, 2020, 419, 109626.	3.8	5
32	On the Relation between Small-scale Intermittency and Shocks in Turbulent Flows. Procedia IUTAM, 2013, 9, 3-15.	1.2	4
33	Slow spectral transfer and energy cascades in isotropic turbulence. Journal of Fluid Mechanics, 2021, 908, .	3.4	4
34	Turbulence generation through intense kinetic energy sources. Physics of Fluids, 2016, 28, .	4.0	3
35	A generalized von Neumann analysis for multi-level schemes: Stability and spectral accuracy. Journal of Computational Physics, 2021, 424, 109868.	3.8	3
36	A unified framework to generate optimized compact finite difference schemes. Journal of Computational Physics, 2021, 432, 110157.	3.8	3

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37	Laws of turbulence decay from direct numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210089.	3.4	3
38	A unified approach for deriving optimal finite differences. Journal of Computational Physics, 2019, 399, 108957.	3.8	2
39	Poster: Asynchronous Computing for Partial Differential Equations at Extreme Scales. , 2012, , .		1
40	Characteristic Locations in Shock-Turbulence Interactions. , 2020, , .		1