

Gaetano Sardina

List of Publications by Year in descending order

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56
papers

1,227
citations

394421

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361022

35
g-index

58
all docs

58
docs citations

58
times ranked

836
citing authors

#	ARTICLE	IF	CITATIONS
1	Wall accumulation and spatial localization in particle-laden wall flows. Journal of Fluid Mechanics, 2012, 699, 50-78.	3.4	123
2	Exact regularized point particle method for multiphase flows in the two-way coupling regime. Journal of Fluid Mechanics, 2015, 773, 520-561.	3.4	108
3	Spatial development of particle-laden turbulent pipe flow. Physics of Fluids, 2009, 21, .	4.0	88
4	Clustering and turbulence modulation in particle-laden shear flows. Journal of Fluid Mechanics, 2013, 715, 134-162.	3.4	78
5	Continuous Growth of Droplet Size Variance due to Condensation in Turbulent Clouds. Physical Review Letters, 2015, 115, 184501.	7.8	71
6	The effect of the Basset history force on particle clustering in homogeneous and isotropic turbulence. Physics of Fluids, 2014, 26, .	4.0	65
7	Accumulation of motile elongated micro-organisms in turbulence. Journal of Fluid Mechanics, 2014, 739, 22-36.	3.4	60
8	Dispersion of swimming algae in laminar and turbulent channel flows: consequences for photobioreactors. Journal of the Royal Society Interface, 2013, 10, 20121041.	3.4	59
9	Effects of roughness on particle dynamics in turbulent channel flows: a DNS analysis. Journal of Fluid Mechanics, 2014, 739, 465-478.	3.4	41
10	Interaction between turbulent structures and particles in roughened channel. International Journal of Multiphase Flow, 2016, 78, 117-131.	3.4	40
11	Clustering and turbulence modulation in particle laden shear flows. Journal of Physics: Conference Series, 2011, 333, 012007.	0.4	39
12	Reduced particle settling speed in turbulence. Journal of Fluid Mechanics, 2016, 808, 153-167.	3.4	39
13	Sedimentation of inertia-less prolate spheroids in homogenous isotropic turbulence with application to non-motile phytoplankton. Journal of Fluid Mechanics, 2017, 831, 655-674.	3.4	38
14	Anomalous memory effects on transport of inertial particles in turbulent jets. Physics of Fluids, 2010, 22, .	4.0	37
15	Numerical simulations of aggregate breakup in bounded and unbounded turbulent flows. Journal of Fluid Mechanics, 2015, 766, 104-128.	3.4	36
16	Self-similar transport of inertial particles in a turbulent boundary layer. Journal of Fluid Mechanics, 2012, 706, 584-596.	3.4	35
17	Particle transport in turbulent curved pipe flow. Journal of Fluid Mechanics, 2016, 793, 248-279.	3.4	32
18	Large Scale Accumulation Patterns of Inertial Particles in Wall-Bounded Turbulent Flow. Flow, Turbulence and Combustion, 2011, 86, 519-532.	2.6	28

#	ARTICLE	IF	CITATIONS
19	Broadening of Cloud Droplet Size Spectra by Stochastic Condensation: Effects of Mean Updraft Velocity and CCN Activation. <i>Journals of the Atmospheric Sciences</i> , 2018, 75, 451-467.	1.7	24
20	Dynamics of inertial particles in free jets. <i>Physica Scripta</i> , 2010, T142, 014001.	2.5	19
21	Statistics of particle pair relative velocity in the homogeneous shear flow. <i>Physica D: Nonlinear Phenomena</i> , 2012, 241, 245-250.	2.8	18
22	Modelling the direct virus exposure risk associated with respiratory events. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210819.	3.4	15
23	Turbophoresis attenuation in a turbulent channel flow with polymer additives. <i>Journal of Fluid Mechanics</i> , 2013, 732, 706-719.	3.4	14
24	Numerical study of laminar-turbulent transition in particle-laden channel flow. <i>Physical Review E</i> , 2013, 87, 043011.	2.1	12
25	Particle Velocity and Acceleration in Turbulent Bent Pipe Flows. <i>Flow, Turbulence and Combustion</i> , 2015, 95, 539-559.	2.6	12
26	Role of large-scale advection and small-scale turbulence on vertical migration of gyrotactic swimmers. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	10
27	Corrections for one- and two-point statistics measured with coarse-resolution particle image velocimetry. <i>Experiments in Fluids</i> , 2014, 55, 1.	2.4	9
28	Buoyancy-Driven Flow through a Bed of Solid Particles Produces a New Form of Rayleigh-Taylor Turbulence. <i>Physical Review Letters</i> , 2018, 121, 224501.	7.8	9
29	Statistics of Particle Accumulation in Spatially Developing Turbulent Boundary Layers. <i>Flow, Turbulence and Combustion</i> , 2014, 92, 27-40.	2.6	8
30	Assessing the ability of the Eulerian-Eulerian and the Eulerian-Lagrangian frameworks to capture meso-scale dynamics in bubbly flows. <i>Chemical Engineering Science</i> , 2019, 201, 58-73.	3.8	8
31	Water transport and absorption in pharmaceutical tablets “a numerical study. <i>Meccanica</i> , 2020, 55, 421-433.	2.0	8
32	Solids back-mixing in the transport zone of circulating fluidized bed boilers. <i>Chemical Engineering Journal</i> , 2022, 428, 130976.	12.7	7
33	A continuum-based multiphase DNS method for studying the Brownian dynamics of soot particles in a rarefied gas. <i>Chemical Engineering Science</i> , 2019, 210, 115229.	3.8	6
34	DNS of a free turbulent jet laden with small inertial particles. <i>ERCOFTAC Series</i> , 2011, , 189-194.	0.1	5
35	Key parameters for droplet evaporation and mixing at the cloud edge. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2021, 147, 2160-2172.	2.7	5
36	On the time scales and structure of Lagrangian intermittency in homogeneous isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2019, 867, 438-481.	3.4	4

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37	The Knudsen Paradox in Micro-Channel Poiseuille Flows with a Symmetric Particle. Applied Sciences (Switzerland), 2021, 11, 351.	2.5	4
38	Laser-induced vapour bubble as a means for crystal nucleation in supersaturated solutionsâ€”Formulation of a numerical framework. Experimental and Computational Multiphase Flow, 2019, 1, 242-254.	3.9	3
39	Assessment of hindered diffusion in arbitrary geometries using a multiphase DNS framework. Chemical Engineering Science, 2021, 230, 116074.	3.8	2
40	A hydrodynamic basis for off-axis Brownian diffusion under intermediate confinements in micro-channels. International Journal of Multiphase Flow, 2021, 143, 103772.	3.4	2
41	A multiscale methodology for small-scale bubble dynamics in turbulence. International Journal of Multiphase Flow, 2022, 150, 103976.	3.4	2
42	Transport of inertial particles in turbulent boundary layers. Journal of Physics: Conference Series, 2011, 318, 052020.	0.4	1
43	Transition delay and its implications for drag reduction in particle-laden channel flow. AIP Conference Proceedings, 2015, , .	0.4	1
44	Preface of the â€œSymposium on Advanced Engineering Systems and Computer Applications: Theory and Practiceâ€ AIP Conference Proceedings, 2016, , .	0.4	1
45	An efficient-high performance code for particle transport in homogeneous turbulence. AIP Conference Proceedings, 2016, , .	0.4	1
46	Inertial particles in a turbulent pipe flow: spatial evolution. Springer Proceedings in Physics, 2009, , 351-354.	0.2	0
47	Particle-laden jets: particle distribution and back-reaction on the flow. Journal of Physics: Conference Series, 2011, 318, 052018.	0.4	0
48	The effects of back-reaction on turbulence modulation in shear flows: a new exact regularized point-particle method. Journal of Physics: Conference Series, 2011, 318, 092015.	0.4	0
49	Transport of Inertial Particles in Turbulent Jets. Springer Proceedings in Physics, 2012, , 71-74.	0.2	0
50	Particle-Laden Turbulent Channel Flow with Wall-Roughness. ERCOFTAC Series, 2015, , 655-661.	0.1	0
51	Direct and Large Eddy Simulations of Droplet Condensation in Turbulent Warm Clouds. ERCOFTAC Series, 2018, , 475-481.	0.1	0
52	Anisotropic clustering and particles velocity statistics in shear turbulence. Springer Proceedings in Physics, 2009, , 339-342.	0.2	0
53	Large scale accumulation patterns of inertial particles in wall-bounded turbulent flow. , 2009, , .		0
54	Development of a particle laden pipe flow: implications for evaporation. ERCOFTAC Series, 2011, , 213-218.	0.1	0

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55	Statistics of particle accumulation in spatially developing turbulent boundary layers. , 2012, , .		0
56	Exact regularized point particle method for particle-laden flows in the two-way coupling regime. , 2012, , .		0