Michael Manhart

List of Publications by Year
in descending order

53	1,510	394421	315739
papers	citations	19 h-index	38 g-index

53	53	53	977
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A zonal grid algorithm for DNS of turbulent boundary layers. Computers and Fluids, 2004, 33, 435-461.	2.5	178
2	High-order stable interpolations for immersed boundary methods. International Journal for Numerical Methods in Fluids, 2006, 52, 1175-1193.	1.6	152
3	Precipitation of nanoparticles in a T-mixer: Coupling the particle population dynamics with hydrodynamics through direct numerical simulation. Chemical Engineering and Processing: Process Intensification, 2006, 45, 908-916.	3.6	120
4	DNS of turbulent flow in a rod-roughened channel. International Journal of Heat and Fluid Flow, 2004, 25, 373-383.	2.4	110
5	Predictive simulation of nanoparticle precipitation based on the population balance equation. Chemical Engineering Science, 2006, 61, 167-181.	3.8	98
6	DNS of passive scalar transport in turbulent channel flow at high Schmidt numbers. International Journal of Heat and Fluid Flow, 2007, 28, 1204-1214.	2.4	81
7	Vortex Shedding from a Hemisphere in a Turbulent Boundary Layer. Theoretical and Computational Fluid Dynamics, 1998, 12, 1-28.	2.2	63
8	Compact fourth-order finite volume method for numerical solutions of Navierâ€“Stokes equations on staggered grids. Journal of Computational Physics, 2010, 229, 7545-7570.	3.8	63
9	Rheology of suspensions of rigid-rod like particles in turbulent channel flow. Journal of Non-Newtonian Fluid Mechanics, 2003, 112, 269-293.	2.4	56
10	DNS of a turbulent boundary layer with separation. International Journal of Heat and Fluid Flow, 2002, 23, 572-581.	2.4	49
11	Lattice Boltzmann methods in porous media simulations: From laminar to turbulent flow. Computers and Fluids, 2016, 140, 247-259.	2.5	48
12	The structure and budget of turbulent kinetic energy in front of a wall-mounted cylinder. Journal of Fluid Mechanics, 2017, 827, 285-321.	3.4	43
13	The low Reynolds number turbulent flow and mixing in a confined impinging jet reactor. International Journal of Heat and Fluid Flow, 2007, 28, 1429-1442.	2.4	37
14	Near-wall scaling for turbulent boundary layers with adverse pressure gradient. Theoretical and Computational Fluid Dynamics, 2008, 22, 243-260.	2.2	34
15	Analysis and low-order modeling of the inhomogeneous transitional flow inside a T-mixer. Physics of Fluids, 2004, 16, 2717-2731.	4.0	32
16	A Study of the Time Constant in Unsteady Porous Media Flow Using Direct Numerical Simulation. Transport in Porous Media, 2014, 104, 161-179.	2.6	28
17	Subgrid modelling for particle-LES by Spectrally Optimised Interpolation (SOI). Journal of Computational Physics, 2011, 230, 7796-7820.	3.8	23
18	Direct Monte Carlo simulation of turbulent drag reduction by rigid fibers in a channel flow. Acta Mechanica, 2013, 224, 2385-2413.	2.1	21

#	Article	IF	Citations
19	An algebraic closure model for the DNS of turbulent drag reduction by Brownian microfiber additives in a channel flow. Journal of Non-Newtonian Fluid Mechanics, 2015, 226, 60-66.	2.4	21
20	Reliability of wall shear stress estimations of the flow around a wall-mounted cylinder. Computers and Fluids, 2016, 128, 16-29.	2.5	19
21	An algebraic closure for the DNS of fiber-induced turbulent drag reduction in a channel flow. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 1190-1197.	2.4	16
22	Oscillatory Darcy Flow in Porous Media. Transport in Porous Media, 2016, 111, 521-539.	2.6	16
23	Near-Wall Stress Balance in Front of a Wall-Mounted Cylinder. Flow, Turbulence and Combustion, 2017, 99, 665-684.	2.6	16
24	Discussion of â€œCoherent Structures in the Flow Field around a Circular Cylinder with Scour Holeâ€•by G. Kirkil, S. G. Constaninescu, and R. Ettema. Journal of Hydraulic Engineering, 2010, 136, 82-84.	1.5	14
25	A bi-directional coupling of 2D shallow water and 3D Reynolds-averaged Navierâ€“Stokes models. Journal of Hydraulic Research/De Recherches Hydrauliques, 2018, 56, 771-785.	1.7	13
26	Flow around a scoured bridge pier: a stereoscopic PIV analysis. Experiments in Fluids, 2020, 61, 1.	2.4	13
27	Numerical simulation of flow-induced fiber orientation using normalization of second moment. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 551-554.	2.4	12
28	Visco-elastic behaviour of suspensions of rigid-rod like particles in turbulent channel flow. European Journal of Mechanics, B/Fluids, 2004, 23, 461-474.	2.5	11
29	A priori analysis of a closure model using the reconstruction of the orientation distribution function in flow of fiber suspensions. Computational Mechanics, 2011, 48, 451-459.	4.0	11
30	On the numerical solution of a convectionâ€“diffusion equation for particle orientation dynamics on geodesic grids. Applied Numerical Mathematics, 2012, 62, 1554-1566.	2.1	11
31	Influence of spanwise no-slip boundary conditions on the flow around a cylinder. Computers and Fluids, 2017, 156, 48-57.	2.5	11
32	Dissipation of Turbulent Kinetic Energy in a Cylinder Wall Junction Flow. Flow, Turbulence and Combustion, 2018, 101, 499-519.	2.6	9
33	On the structure of vorticity and near-wall partial enstrophy in fibrous drag-reduced turbulent channel flow. Journal of Non-Newtonian Fluid Mechanics, 2015, 223, 249-256.	2.4	8
34	Compact Fourth-Order Finite-Volume Method for Numerical Solutions of Navierâ€“Stokes Equations on Staggered Grids. ERCOFTAC Series, 2010, , 125-130.	0.1	8
35	On the pressure-strain correlation in fibrous drag-reduced turbulent channel flow. Physics of Fluids, 2016, 28, .	4.0	7
36	Assessment of eddy resolving techniques for the flow over periodically arranged hills up to Re=37,000. ERCOFTAC Series, 2011, , 361-370.	0.1	7

#	Article	IF	Citations
37	Improving spatial resolution characteristics of finite difference and finite volume schemes by approximate deconvolution pre-processing. Computers and Fluids, 2008, 37, 1092-1102.	2.5	6
38	Numerical investigation of semifilled-pipe flow. Journal of Fluid Mechanics, 2022, 932, .	3.4	6
39	Analysis of the Temporal Evolution of the Sediment Movement in the Vicinity of a Cylindrical Bridge Pier. , 2010, , .		5
40	A Direct Numerical Simulation Method for Flow of Brownian Fiber Suspensions in Complex Geometries. Journal of Dispersion Science and Technology, 2013, 34, 427-440.	2.4	5
41	The viscous sublayer in front of a wall-mounted cylinder. Journal of Fluid Mechanics, 2021, 919, .	3.4	5
42	Analysis of Inertial Particle Drift Dispersion by Direct Numerical Simulation of Two-Phase Wall-Bounded Turbulent Flows. Engineering Applications of Computational Fluid Mechanics, 2011, 5, 341-348.	3.1	4
43	Two-phase micro- and macro-time scales in particle-laden turbulent channel flows. Acta Mechanica Sinica/Lixue Xuebao, 2012, 28, 595-604.	3.4	4
44	A Simulationâ€“Optimization Technique to Estimate Discharge in Open Channels Based on Water Level Data Alone: Gradually Varied Flow Condition. Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2019, 43, 215-229.	1.9	4
45	Onset of nonlinearity in oscillatory flow through a hexagonal sphere pack. Journal of Fluid Mechanics, 2022, 944, .	3.4	4
46	Performance Optimisation of the Parallel CFD Code MGLET across Different HPC Platforms. , 2019, , .		2
47	DNS and LES of Scalar Transport in a Turbulent Plane Channel Flow at Low Reynolds Number. Lecture Notes in Computer Science, 2008, , 251-258.	1.3	2
48	Numerical Simulation of Transport in Porous Media: Some Problems from Micro to Macro Scale. Lecture Notes in Computational Science and Engineering, 2013, , 57-80.	0.3	2
49	The structure and budget of turbulent kinetic energy in front of a wall-mounted cylinder â€“ CORRIGENDUM. Journal of Fluid Mechanics, 2018, 847, 907-911.	3.4	1
50	Wall Scaling and Wall Models for Complex Turbulent Flows. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2009, , 283-308.	0.3	1
51	Development of a DNS-FDF Approach to Inhomogeneous Non-Equilibrium Mixing for High Schmidt Number Flows. ERCOFTAC Series, 2010, , 149-155.	0.1	0
52	On large eddy simulation of particle laden flow: taking advantage of spectral properties of interpolation schemes for modeling SGS effects. ERCOFTAC Series, 2011, , 183-188.	0.1	0
53	Reliability of Wall Shear Stress Estimations in Front of a Wall-Mounted Cylinder. ERCOFTAC Series, 2018, , 71-77.	0.1	0