George Papadakis

List of Publications by Year in descending order

66 papers	1,272 citations	361045 20 h-index	377514 34 g-index
66 all docs	66 docs citations	66 times ranked	962 citing authors

#	Article	IF	Citations
1	Numerical Simulation of Turbulent Flow Characteristics in a Stirred Vessel Using the LES and RANS Approaches with the Sliding/Deforming Mesh Methodology. Chemical Engineering Research and Design, 2004, 82, 834-848.	2.7	109
2	Determination of mixing time and degree of homogeneity in stirred vessels with large eddy simulation. Chemical Engineering Science, 2005, 60, 2293-2302.	1.9	89
3	Molecular-Level Simulations of Turbulence and Its Decay. Physical Review Letters, 2017, 118, 064501.	2.9	72
4	The turbulence cascade in the near wake of aÂsquare prism. Journal of Fluid Mechanics, 2017, 825, 315-352.	1.4	67
5	Numerical evaluation of alternate tube configurations for particle deposition rate reduction in heat exchanger tube bundles. International Journal of Heat and Fluid Flow, 2001, 22, 525-536.	1.1	57
6	Large eddy simulation of cross-flow through a staggered tube bundle at subcritical Reynolds number. Journal of Fluids and Structures, 2007, 23, 1215-1230.	1.5	50
7	Effect of tube spacing on the vortex shedding characteristics of laminar flow past an inline tube array: A numerical study. Computers and Fluids, 2009, 38, 950-964.	1.3	50
8	Effect of trailing edge shape on the separated flow characteristics around an airfoil at low Reynolds number: A numerical study. Physics of Fluids, 2017, 29, .	1.6	49
9	A locally modified second order upwind scheme for convection terms discretization. International Journal of Numerical Methods for Heat and Fluid Flow, 1995, 5, 49-62.	1.6	46
10	Large eddy simulation of pulsating flow over a circular cylinder at subcritical Reynolds number. Computers and Fluids, 2007, 36, 299-312.	1.3	44
11	On Spatial and Temporal Variations and Estimates of Energy Dissipation in Stirred Reactors. Chemical Engineering Research and Design, 2004, 82, 1188-1198.	2.7	40
12	Buckling of thick cylindrical shells under external pressure: A new analytical expression for the critical load and comparison with elasticity solutions. International Journal of Solids and Structures, 2008, 45, 5308-5321.	1.3	37
13	Reduced power consumption in stirred vessels by means of fractal impellers. AICHE Journal, 2018, 64, 1485-1499.	1.8	36
14	Investigation of laminar flow in a stirred vessel at low Reynolds numbers. Chemical Engineering Science, 2006, 61, 2762-2770.	1.9	33
15	Genesis and evolution of velocity gradients in near-field spatially developing turbulence. Journal of Fluid Mechanics, 2017, 815, 295-332.	1.4	33
16	Large Eddy Simulation of Turbulent Flow in a Rushton Impeller Stirred Reactor with Sliding-Deforming Mesh Methodology. Chemical Engineering and Technology, 2004, 27, 257-263.	0.9	32
17	A linear state-space representation of plane Poiseuille flow for control design: a tutorial. International Journal of Modelling, Identification and Control, 2006, 1, 272.	0.2	25
18	Linear quadratic control of plane Poiseuille flowâ€“the transient behaviour. International Journal of Control, 2007, 80, 1912-1930.	1.2	22

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19	Nonlinear optimal control of bypass transition in a boundary layer flow. Physics of Fluids, 2017, 29, .	1.6	22
20	An experimental and numerical study of the flow past elliptic cylinder arrays. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2001, 215, 1287-1301.	1.1	21
21	A novel pressureâ€“velocity formulation and solution method for fluidâ€“structure interaction problems. Journal of Computational Physics, 2008, 227, 3383-3404.	1.9	20
22	The role of coherent structures and inhomogeneity in near-field interscale turbulent energy transfers. Journal of Fluid Mechanics, 2020, 896, .	1.4	20
23	Coupling 3D and 1D fluidâ€“structureâ€interaction models for wave propagation in flexible vessels using a finite volume pressureâ€correction scheme. Communications in Numerical Methods in Engineering, 2009, 25, 533-551.	1.3	17
24	Resolvent analysis of separated and attached flows around an airfoil at transitional Reynolds number. Physical Review Fluids, 2018, 3, .	1.0	17
25	Computational analysis of flow structure and particle deposition in a single asthmatic human airway bifurcation. Journal of Biomechanics, 2010, 43, 2453-2459.	0.9	16
26	Nonlinear optimal control of transition due to a pair of vortical perturbations using a receding horizon approach. Journal of Fluid Mechanics, 2019, 861, 524-555.	1.4	16
27	Reconstruction of largeâ€scale flow structures in a stirred tank from limited sensor data. AICHE Journal, 2021, 67, e17348.	1.8	15
28	Reduced mixing time in stirred vessels by means of irregular impellers. Physical Review Fluids, 2018, 3, .	1.0	15
29	DNS investigation of the dynamical behaviour of trailing vortices in unbaffled stirred vessels at transitional Reynolds numbers. Physics of Fluids, 2017, 29, .	1.6	13
30	Gas-kinetic simulation of sustained turbulence in minimal Couette flow. Physical Review Fluids, 2018, 3, .	1.0	12
31	A local grid refinement method for three-dimensional turbulent recirculating flows. International Journal for Numerical Methods in Fluids, 1999, 31, 1157-1172.	0.9	11
32	Turbulence dissipation and the role of coherent structures in the near wake of a square prism. Physical Review Fluids, 2018, 3, .	1.0	11
33	Direct numerical simulation of heat transfer from a cylinder immersed in the production and decay regions of grid-element turbulence. Journal of Fluid Mechanics, 2018, 847, 452-488.	1.4	10
34	Analysis of interscale energy transfer in a boundary layer undergoing bypass transition. Journal of Fluid Mechanics, 2022, 941, .	1.4	10
35	Minimizing transient energy growth in plane Poiseuille flow. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2008, 222, 323-331.	0.7	9
36	An iterative method for the computation of the response of linearised Navierâ€“Stokes equations to harmonic forcing and application to forced cylinder wakes. International Journal for Numerical Methods in Fluids, 2014, 74, 794-817.	0.9	9

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37	A preconditioned Multiple Shooting Shadowing algorithm for the sensitivity analysis of chaotic systems. Journal of Computational Physics, 2019, 398, 108861.	1.9	9
38	Wave propagation in stenotic vessels; theoretical analysis and comparison between 3D and 1D fluidâ€“structure-interaction models. Journal of Fluids and Structures, 2019, 88, 352-366.	1.5	9
39	Closed-loop control of boundary layer streaks induced by free-stream turbulence. Physical Review Fluids, 2016, 1, .	1.0	9
40	Numerical simulation of the flow and heat transfer around a cylinder with a pulsating approaching flow at a low Reynolds number. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2001, 215, 105-119.	1.1	8
41	New analytic solutions for wave propagation in flexible, tapered vessels with reference to mammalian arteries. Journal of Fluid Mechanics, 2011, 689, 465-488.	1.4	8
42	On the interaction of turbulence with nucleation and growth in reaction crystallisation. Journal of Fluid Mechanics, 2022, 944, .	1.4	8
43	Uncertainty quantification of sensitivities of time-average quantities in chaotic systems. Physical Review E, 2020, 101, 022223.	0.8	7
44	Study of the Effect of Flow Pulsation on the Flow Field and Heat Transfer Over an Inline Cylinder Array Using LES. , 2005, , 813-822.		6
45	Investigation of the effect of external periodic flow pulsation on a cylinder wake using linear stability analysis. Physics of Fluids, 2011, 23, .	1.6	6
46	A methodology for coupling DNS and discretised population balance for modelling turbulent precipitation. International Journal of Heat and Fluid Flow, 2020, 86, 108689.	1.1	6
47	Data-based, reduced-order, dynamic estimator for reconstruction of nonlinear flows exhibiting limit-cycle oscillations. Physical Review Fluids, 2019, 4, .	1.0	6
48	Analysis of turbulent coagulation in a jet with discretised population balance and DNS. Journal of Fluid Mechanics, 2022, 937, .	1.4	6
49	Evolution of conditionally averaged second-order structure functions in a transitional boundary layer. Physical Review Fluids, 2020, 5, .	1.0	5
50	Fractional fourier-based filter for denoising elastograms. , 2010, 2010, 4028-31.		4
51	Evolution of passive scalar statistics in a spatially developing turbulence. Physical Review Fluids, 2018, 3, .	1.0	4
52	Linear and nonâ€linear simulations of feedback control in plane Poiseuille flow. International Journal for Numerical Methods in Fluids, 2009, 59, 907-925.	0.9	3
53	Analysis of wall mass transfer in turbulent pipe flow combining extended proper orthogonal decomposition and Fukagata-Iwamoto-Kasagi identity. Physical Review Fluids, 2022, 7, .	1.0	3
54	Linear Stability Analysis and Application of a New Solution Method of the Elastodynamic Equations Suitable for a Unified Fluid-Structure-Interaction Approach. Journal of Pressure Vessel Technology, Transactions of the ASME, 2008, 130, .	0.4	2

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55	Wave Propagation in Tapered Vessels: New Analytic Solutions That Account for Vessel Distensibility and Fluid Compressibility. Journal of Pressure Vessel Technology, Transactions of the ASME, 2014, 136, .	0.4	2
56	Near-Wall Modification of an Explicit Algebraic Reynolds Stress Model Using Elliptic Blending. Flow, Turbulence and Combustion, 2006, 77, 257-275.	1.4	1
57	Design of poiseuille flow controllers using the method of inequalities. International Journal of Automation and Computing, 2009, 6, 14-21.	4.5	1
58	Linear Stability Analysis and Buckling of Two-Layered Shells Under External Circumferential Loading: A Numerical Investigation. Journal of Pressure Vessel Technology, Transactions of the ASME, 2010, 132, .	0.4	1
59	Optimal state feedback control of streaks and görtler vortices induced by free-stream vortical disturbances. , 2014, , .		1
60	Application of Generalized Polynomial Chaos for Quantification of Uncertainties of Time Averages and Their Sensitivities in Chaotic Systems. Algorithms, 2020, 13, 90.	1.2	1
61	Feedback control of chaotic systems using multiple shooting shadowing and application to Kuramotoâ€“Sivashinsky equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200322.	1.0	1
62	Linear Stability Analysis and Buckling of Two-Layered Shells Under External Circumferential Loading: A Numerical Investigation. , 2009, , .		0
63	Wave Propagation in Tapered Vessels: New Analytic Solutions That Account for Vessel Distensibility and Fluid Compressibility. , 2013, , .		0
64	Performance Limits for Control of Boundary Layer Streaks Induced by Free Stream Turbulence. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7007-7012.	0.4	0
65	DSMC simulations of turbulent flows at moderate Reynolds numbers. AIP Conference Proceedings, 2019, , .	0.3	0
66	Simulations of Feedback Control of Early Transition in Poiseuille Flow. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2008, , 345-348.	0.1	0