Jordi Pallares

List of Publications by Year in descending order

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Version: 2024-02-01

112 papers	1,578 citations	361413 20 h-index	345221 36 g-index
118 all docs	118 docs citations	118 times ranked	1320 citing authors

#	Article	IF	Citations
1	Variability of Computational Fluid Dynamics Solutions for Pressure and Flow in a Giant Aneurysm: The ASME 2012 Summer Bioengineering Conference CFD Challenge. Journal of Biomechanical Engineering, 2013, 135, 021016.	1.3	109
2	Real-World Variability in the Prediction of Intracranial Aneurysm Wall Shear Stress: The 2015 International Aneurysm CFD Challenge. Cardiovascular Engineering and Technology, 2018, 9, 544-564.	1.6	78
3	The Computational Fluid Dynamics Rupture Challenge 2013â€"Phase II: Variability of Hemodynamic Simulations in Two Intracranial Aneurysms. Journal of Biomechanical Engineering, 2015, 137, 121008.	1.3	74
4	Flow transitions in laminar Rayleighâ€"BÃ©nard convection in a cubical cavity at moderate Rayleigh numbers. International Journal of Heat and Mass Transfer, 1999, 42, 753-769.	4.8	71
5	Chronic pain in the spinal cord injured: statistical approach and pharmacological treatment. Spinal Cord, 1993, 31, 722-729.	1.9	66
6	A Bayesian machine scientist to aid in the solution of challenging scientific problems. Science Advances, 2020, 6, eaav6971.	10.3	64
7	Natural convection in a cubical cavity heated from below at low rayleigh numbers. International Journal of Heat and Mass Transfer, 1996, 39, 3233-3247.	4.8	60
8	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH): Phase I: Segmentation. Cardiovascular Engineering and Technology, 2018, 9, 565-581.	1.6	59
9	Large-eddy simulations of turbulent flow in a rotating square duct. Physics of Fluids, 2000, 12, 2878.	4.0	58
10	Large-eddy simulations of turbulent heat transfer in stationary and rotating square ducts. Physics of Fluids, 2002, 14, 2804-2816.	4.0	54
11	Laminar and turbulent Rayleighâ€"BÃ©nard convection in a perfectly conducting cubical cavity. International Journal of Heat and Fluid Flow, 2002, 23, 346-358.	2.4	49
12	Experimental laminar Rayleigh-BÃ©nard convection in a cubical cavity at moderate Rayleigh and Prandtl numbers. Experiments in Fluids, 2001, 31, 208-218.	2.4	41
13	Turbulent Rayleighâ€"BÃ©nard convection of water in cubical cavities: A numerical and experimental study. International Journal of Heat and Mass Transfer, 2007, 50, 3203-3215.	4.8	39
14	A modification of a Nusselt number correlation for forced convection in porous media. International Communications in Heat and Mass Transfer, 2010, 37, 1187-1190.	5.6	39
15	Direct numerical simulation of the turbulent flow generated during a violent expiratory event. Physics of Fluids, 2021, 33, 035122.	4.0	39
16	Numerical simulation of the flow in a rotating disk filtration module. Desalination, 2009, 235, 122-138.	8.2	37
17	CFD simulation of a rotating disk flat membrane module. Desalination, 2006, 200, 453-455.	8.2	24
18	Direct numerical simulation of turbulent dispersion of evaporative aerosol clouds produced by an intense expiratory event. Physics of Fluids, 2021, 33, 033329.	4.0	24

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19	Turbulent large-scale structures in natural convection vertical channel flow. International Journal of Heat and Mass Transfer, 2010, 53, 4168-4175.	4.8	23
20	Heat transfer and boundary layer analyses of laminar and turbulent natural convection in a cubical cavity with differently heated opposed walls. International Journal of Heat and Mass Transfer, 2020, 151, 119409.	4.8	23
21	Band structure calculation in two-dimensional Kerr-nonlinear photonic crystals. Optics Communications, 2005, 248, 469-477.	2.1	21
22	RAYLEIGH-BÃ‰NARD CONVECTION OF WATER IN A PERFECTLY CONDUCTING CUBICAL CAVITY: EFFECTS OF TEMPERATURE-DEPENDENT PHYSICAL PROPERTIES IN LAMINAR AND TURBULENT REGIMES. Numerical Heat Transfer; Part A: Applications, 2005, 47, 333-352.	2.1	21
23	Steady and unsteady mixed convection flow in a cubical open cavity with the bottom wall heated. International Journal of Heat and Mass Transfer, 2016, 101, 682-691.	4.8	20
24	Visualization and measurement of capillary-driven blood flow using spectral domain optical coherence tomography. Microfluidics and Nanofluidics, 2012, 13, 227-237.	2.2	19
25	Radial and axial flux superconducting motors in a levitating rotor configuration. IEEE Transactions on Applied Superconductivity, 1999, 9, 1249-1252.	1.7	18
26	Small-scale characteristics and turbulent statistics of the flow in an external gear pump by time-resolved PIV. Flow Measurement and Instrumentation, 2013, 29, 52-60.	2.0	18
27	Visualization and measurement of two-phase flows in horizontal pipelines. Experimental and Computational Multiphase Flow, 2020, 2, 41-51.	3.9	18
28	Flow of CO2â€“ethanol and of CO2â€“methanol in a non-adiabatic microfluidic T-junction at high pressures. Microfluidics and Nanofluidics, 2012, 12, 927-940.	2.2	17
29	Accuracy and Reproducibility of Patient-Specific Hemodynamic Models of Stented Intracranial Aneurysms: Report on the Virtual Intracranial Stenting Challenge 2011. Annals of Biomedical Engineering, 2015, 43, 154-167.	2.5	17
30	Numerical simulation of the liquid distribution in a trickle-bed reactor. Chemical Engineering Science, 2012, 76, 49-57.	3.8	16
31	Pressure drop and heat transfer rates in forced convection rotating square duct flows at high rotation rates. Physics of Fluids, 2005, 17, 075102.	4.0	14
32	Characterization of the reacting laminar flow in a cylindrical cavity with a rotating endwall using numerical simulations and a combined PIV/PLIF technique. International Journal of Heat and Mass Transfer, 2016, 93, 155-166.	4.8	14
33	A 3D isogeometric BEâ€“FE analysis with dynamic remeshing for the simulation of a deformable particle in shear flows. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 70-101.	6.6	14
34	Numerical simulation of wall mass transfer rates in capillary-driven flow in microchannels. International Communications in Heat and Mass Transfer, 2012, 39, 1066-1072.	5.6	11
35	Comparative ISS accelerometric analyses. Acta Astronautica, 2014, 94, 681-689.	3.2	11
36	Mass transfer rate of a first-order chemical reaction on a wall at high Schmidt numbers. International Journal of Heat and Mass Transfer, 2014, 69, 438-442.	4.8	11

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37	Some considerations on the vibrational environment of the DSC-DCMIX1 experiment onboard ISS. Acta Astronautica, 2016, 129, 345-356.	3.2	11
38	On the accuracy of the interdiffusion measurements at low and moderate Rayleigh numbers. Some computational considerations. International Journal of Heat and Mass Transfer, 2010, 53, 3708-3720.	4.8	10
39	Numerical simulations of a second-order chemical reaction in a plane turbulent channel flow. International Journal of Heat and Mass Transfer, 2010, 53, 4248-4263.	4.8	10
40	A simple model to predict mass transfer rates and kinetics of biochemical and biomedical Michaelisâ€“Menten surface reactions. International Journal of Heat and Mass Transfer, 2015, 80, 192-198.	4.8	10
41	On the impact of the ISS reboosting maneuvers during thermodiffusion experiments of ternary liquid systems: Pure diffusion. International Journal of Thermal Sciences, 2018, 132, 186-198.	4.9	10
42	Effect of reboosting manoeuvres on the determination of the Soret coefficients of DCMIX ternary systems. International Journal of Thermal Sciences, 2019, 142, 205-219.	4.9	10
43	Eduction of near wall flow structures responsible for large deviations of the momentumâ€“heat transfer analogy and fluctuations of wall transfer rates in turbulent channel flow. Computers and Fluids, 2007, 36, 1327-1334.	2.5	9
44	Frequency response of an electrochemical probe to the wall shear stress fluctuations of a turbulent channel flow. International Journal of Heat and Mass Transfer, 2008, 51, 4753-4758.	4.8	9
45	Numerical simulation of incompressible laminar flow in a three-dimensional channel with a cubical open cavity with a bottom wall heated. Journal of Physics: Conference Series, 2012, 395, 012099.	0.4	9
46	An unsteady 3D Isogeometrical Boundary Element Analysis applied to nonlinear gravity waves. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 112-133.	6.6	9
47	Solutal natural convection flows in ternary mixtures. International Journal of Heat and Mass Transfer, 2017, 106, 232-243.	4.8	9
48	Particle dispersion in a turbulent natural convection channel flow. Journal of Aerosol Science, 2012, 43, 45-56.	3.8	8
49	Experimental and numerical study of turbulent mixing in a model of a polymerization reactor. Journal of Industrial and Engineering Chemistry, 2013, 19, 1251-1256.	5.8	7
50	Characterization of a new open jet wind tunnel to optimize and test vertical axis wind turbines. Journal of Renewable and Sustainable Energy, 2017, 9, .	2.0	7
51	Advances in interferometric techniques for the analysis of the three-dimensional flow in a lid-driven cylindrical cavity. Experiments in Fluids, 2020, 61, 1.	2.4	7
52	A model to predict the short-term turbulent indoor dispersion of small droplets and droplet nuclei released from coughs and sneezes. Indoor and Built Environment, 2022, 31, 1393-1404.	2.8	7
53	Ironless armature for high speed HTS disk shaped rotor in self levitating configuration. Physica C: Superconductivity and its Applications, 2002, 372-376, 1520-1523.	1.2	6
54	Dispersion of a buoyant plume in a turbulent pressure-driven channel flow. International Journal of Heat and Mass Transfer, 2009, 52, 1827-1842.	4.8	6

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55	Identification of near-wall flow structures producing large wall transfer rates in turbulent mixed convection channel flow. Computers and Fluids, 2010, 39, 15-24.	2.5	6
56	Electro-thermal simulation and characterization of preconcentration membranes. Sensors and Actuators A: Physical, 2011, 172, 124-128.	4.1	6
57	Transient natural convection cooling of a high Prandtl number fluid in a cubical cavity. Meccanica, 2011, 46, 989-1006.	2.0	6
58	On the accuracy of the interdiffusion coefficient measurements of high-temperature binary mixtures under ISS conditions. Comptes Rendus - Mecanique, 2013, 341, 405-416.	2.1	6
59	Dynamics of a capsule flowing in a tube under pulsatile flow. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 90, 441-450.	3.1	6
60	Effect of solid particles on the slug frequency, bubble velocity and bubble length of intermittent gasâ€“liquid two-phase flows in horizontal pipelines. International Journal of Multiphase Flow, 2022, 149, 103985.	3.4	6
61	A conditional sampling method based on fuzzy clustering for the analysis of large-scale dynamics in turbulent flows. European Journal of Mechanics, B/Fluids, 2006, 25, 172-191.	2.5	5
62	On the accuracy of the diffusion coefficient measurements using different initial shear cell configurations at low and moderate Rayleigh numbers. International Journal of Heat and Mass Transfer, 2012, 55, 6966-6978.	4.8	5
63	Effect of the instantaneous turbulent flow structures on the particle distribution near the wall of a channel. European Journal of Mechanics, B/Fluids, 2014, 46, 144-153.	2.5	5
64	Numerical simulation of natural convection of a water-based nanofluid. Progress in Computational Fluid Dynamics, 2010, 10, 218.	0.2	4
65	A Multiple Actuator Block model for vertical axis wind turbines. Renewable Energy, 2016, 99, 592-601.	8.9	4
66	Clustering of long flexible fibers in two-dimensional flow fields for different Stokes numbers. International Journal of Heat and Mass Transfer, 2017, 111, 532-539.	4.8	4
67	Woven Coronary Disease. Circulation: Cardiovascular Interventions, 2019, 12, e008087.	3.9	4
68	Prediction of particle deposition on the walls of a cubical cavity with differentially heated opposed walls using heat and mass transfer laminar mixed convection boundary layer models. International Journal of Heat and Mass Transfer, 2021, 165, 120691.	4.8	4
69	Experimental Analysis of Gasâ€“Liquidâ€“Solid Three-Phase Flows in Horizontal Pipelines. Flow, Turbulence and Combustion, 2020, 105, 1035-1054.	2.6	4
70	Comparison between fully resolved and time-averaged simulations of particle cloud dispersion produced by a violent expiratory event. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	3.4	4
71	Free surfaces and interdiffusion coefficient measurements in space using shear cells. International Communications in Heat and Mass Transfer, 2010, 37, 463-468.	5.6	3
72	Identification of vortex cores of three-dimensional large-vortical structures. Archive of Applied Mechanics, 2013, 83, 1383-1391.	2.2	3

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73	A comprehensive study on different modelling approaches to predict platelet deposition rates in a perfusion chamber. Scientific Reports, 2015, 5, 13606.	3.3	3
74	Local mass transfer rates of a first-order chemical reaction on a wall: Application to the prediction of local platelet deposition in a perfusion chamber. International Journal of Heat and Mass Transfer, 2015, 90, 254-258.	4.8	3
75	Numerical and experimental modelization of the two-phase mixing in a small scale stirred vessel. Journal of Industrial and Engineering Chemistry, 2018, 60, 286-296.	5.8	3
76	Bayesian Machine Scientist to Compare Data Collapses for the Nikuradse Dataset. Physical Review Letters, 2020, 124, 084503.	7.8	3
77	A Criterion for the Complete Deposition of Magnetic Beads on the Walls of Microchannels. PLoS ONE, 2016, 11, e0151053.	2.5	3
78	Shape evolution of long flexible fibers in viscous flows. Acta Mechanica, 2022, 233, 2077-2091.	2.1	3
79	Compact modeling of nanoscale MOSFETs in the ballistic limit. , 0, , .		2
80	Influence of the fabrication process on the light emission of macroporous silicon. , 2005, , .		2
81	Investigation of photonic band gaps in triangular lattices of metallic square rods in dielectric background. , 0, , .		2
82	Identification of boundary planes in three-dimensional flows. European Journal of Mechanics, B/Fluids, 2008, 27, 290-296.	2.5	2
83	Diffusion Coefficient Measurements Under Reduced Gravity Conditions by Means of the Shear Cell Technique. The Impact of Free Surfaces. Microgravity Science and Technology, 2011, 23, 173-180.	1.4	2
84	Comparative study of turbulent mass transfer in the viscous sublayer using electrochemical method and direct numerical simulations. Russian Journal of Electrochemistry, 2012, 48, 810-816.	0.9	2
85	NUMERICAL STUDY OF THE EFFECT OF THE WALL ON THE DISTRIBUTION OF ISOTHERMAL TWO-PHASE FLOW IN THE BED OF A HYDRODESULFURIZATION REACTOR. Chemical Engineering Communications, 2014, 201, 1555-1567.	2.6	2
86	On the impact of free surfaces on the measurement of diffusion coefficients in metallic binary alloys using shear cells. International Journal of Heat and Mass Transfer, 2015, 81, 602-617.	4.8	2
87	Turbulent Schmidt numbers for CFD simulations using the k-Îµ and k-Ï‰ models. Progress in Computational Fluid Dynamics, 2016, 16, 356.	0.2	2
88	Experimental Study of the Deposition of Magnetic Particles on the Walls of Microchannels. Micromachines, 2021, 12, 712.	2.9	2
89	Experimental and numerical investigation of the flow in a cylindrical cavity with an unsteady rotating lid. Acta Mechanica, 2022, 233, 1107-1124.	2.1	2
90	Dispersion characteristics of the nonlinear photonic crystal directional coupler. , 0, , .		1

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91	Macro- and micromixing in a plane turbulent channel flow with a second-order chemical reaction. Computers and Fluids, 2013, 88, 156-164.	2.5	1
92	Collisions and caustics frequencies of long flexible fibers in two-dimensional flow fields. Acta Mechanica, 2020, 231, 2979-2987.	2.1	1
93	On the space diffusion coefficient measurements. , 2006, , .		1
94	Transport and wall surface deposition of airborne particles in enclosed, buoyancy-driven turbulent flows using fully-resolved numerical simulations. International Communications in Heat and Mass Transfer, 2022, 134, 106048.	5.6	1
95	Injection system based on silicon oxide microneedles. , 0, , .		0
96	Growth of 2D KTP photonic crystals for efficient second order nonlinear optical processes. , 2006, , .		0
97	Analysis of surface-tension-driven blood flow using spectral domain optical coherence tomography. , 2008, , .		0
98	Identification of boundary surfaces in flows. Applied Mathematics and Mechanics (English Edition), 2010, 31, 1097-1104.	3.6	0
99	Electro-thermal simulation and characterization of preconcentration membranes. Procedia Engineering, 2010, 5, 1264-1267.	1.2	0
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109	Second-order chemical reaction micro- and macromixing in a plane turbulent channel. , 2012, , .		0
110	Turbulent Schmidt numbers for CFD simulations using the k-Îµ and k-Ï‰ models. Progress in Computational Fluid Dynamics, 2016, 16, 356.	0.2	0
111	Flow analysis of a set of ornamental chimney caps designed by Antoni GaudÃ. Heritage Science, 2020, 8, .	2.3	0
112	Double path digital inline holography set-up to record simultaneously two different volume transversal sections.. , 2021, , .		0