Christian Poelma

List of Publications by Year
in descending order

56 papers	1,971 citations	218677 26 h-index	243625 44 g-index
57 all docs	57 docs citations	57 times ranked	2069 citing authors

#	Article	IF	Citations
1	Time-resolved reconstruction of the full velocity field around a dynamically-scaled flapping wing. Experiments in Fluids, 2006, 41, 213-225.	2.4	158
2	Three-dimensional vorticity patterns of cylinder wakes. Experiments in Fluids, 2009, 47, 69.	2.4	150
3	Eulerian and Lagrangian views of a turbulent boundary layer flow using time-resolved tomographic PIV. Experiments in Fluids, 2011, 50, 1071-1091.	2.4	95
4	Ultrasound Imaging Velocimetry: a review. Experiments in Fluids, 2017, 58, 1.	2.4	92
5	Zebrafish embryo development in a microfluidic flow-through system. Lab on A Chip, 2011, 11, 1815.	6.0	87
6	In vivo blood flow and wall shear stress measurements in the vitelline network. Experiments in Fluids, 2008, 45, 703-713.	2.4	82
7	Measurements of the wall shear stress distribution in the outflow tract of an embryonic chicken heart. Journal of the Royal Society Interface, 2010, 7, 91-103.	3.4	82
8	Particleâ€“fluid interactions in grid-generated turbulence. Journal of Fluid Mechanics, 2007, 589, 315-351.	3.4	76
9	Complex flow patterns in a realâ€size intracranial aneurysm phantom: phase contrast MRI compared with particle image velocimetry and computational fluid dynamics. NMR in Biomedicine, 2012, 25, 14-26.	2.8	71
10	Dynamics of partial cavitation in an axisymmetric converging-diverging nozzle. International Journal of Multiphase Flow, 2018, 106, 34-45.	3.4	69
11	Turbulence statistics from optical whole-field measurements in particle-laden turbulence. Experiments in Fluids, 2006, 40, 347-363.	2.4	62
12	An experimental study of transitional pulsatile pipe flow. Physics of Fluids, 2012, 24, .	4.0	57
13	Tgfî²/Alk5 signaling is required for shear stress induced klf2 expression in embryonic endothelial cells. Developmental Dynamics, 2011, 240, 1670-1680.	1.8	55
14	Fluid Shear Stress and Inner Curvature Remodeling of the Embryonic Heart. Choosing the Right Lane!. Scientific World Journal, The, 2008, 8, 212-222.	2.1	53
15	Transitional flow in aneurysms and the computation of haemodynamic parameters. Journal of the Royal Society Interface, 2015, 12, 20141394.	3.4	52
16	Investigation of cavitation and vapor shedding mechanisms in a Venturi nozzle. Physics of Fluids, 2020, 32, .	4.0	51
17	Particle-Turbulence Interaction in a Homogeneous, Isotropic Turbulent Suspension. Applied Mechanics Reviews, 2006, 59, 78-90.	10.1	50
18	Flow rate estimation in large depth-of-field micro-PIV. Experiments in Fluids, 2011, 50, 1587-1599.	2.4	48

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19	Ultrasound imaging velocimetry: Toward reliable wall shear stress measurements. European Journal of Mechanics, B/Fluids, 2012, 35, 70-75.	2.5	48
20	Accurate Blood Flow Measurements: Are Artificial Tracers Necessary?. PLoS ONE, 2012, 7, e45247.	2.5	48
21	3D Flow reconstruction using ultrasound PIV. Experiments in Fluids, 2011, 50, 777-785.	2.4	46
22	Measurement in opaque flows: a review of measurement techniques for dispersed multiphase flows. Acta Mechanica, 2020, 231, 2089-2111.	2.1	44
23	Quantitative measurement of the lifetime of localized turbulence in pipe flow. Journal of Fluid Mechanics, 2010, 645, 529-539.	3.4	37
24	Tracking of vortices in a turbulent boundary layer. Journal of Fluid Mechanics, 2012, 697, 273-295.	3.4	34
25	Void fraction measurements in partial cavitation regimes by X-ray computed tomography. International Journal of Multiphase Flow, 2019, 120, 103085.	3.4	30
26	Fluid shear stress-induced TGF-Î²/ALK5 signaling in renal epithelial cells is modulated by MEK1/2. Cellular and Molecular Life Sciences, 2017, 74, 2283-2298.	5.4	27
27	Ultrasound Imaging Velocimetry: Effect of Beam Sweeping on Velocity Estimation. Ultrasound in Medicine and Biology, 2013, 39, 1672-1681.	1.5	26
28	Measurement of turbulence statistics in single-phase and two-phase flows using ultrasound imaging velocimetry. Experiments in Fluids, 2016, 57, 1.	2.4	24
29	Particle-Laden Pipe Flows at High Volume Fractions Show Transition Without Puffs. Physical Review Letters, 2018, 121, 194501.	7.8	18
30	Magnetic resonance velocimetry in high-speed turbulent flows: sources of measurement errors and a new approach for higher accuracy. Experiments in Fluids, 2020, 61, 1.	2.4	18
31	Particle-laden Taylorâ€“Couette flows: higher-order transitions and evidence for azimuthally localized wavy vortices. Journal of Fluid Mechanics, 2020, 903, .	3.4	17
32	Quantification of Blood Flow and Topology in Developing Vascular Networks. PLoS ONE, 2014, 9, e96856.	2.5	15
33	Nanoscale contact line visualization based on total internal reflection fluorescence microscopy. Optics Express, 2013, 21, 26093.	3.4	14
34	Fluid dynamics during Random Positioning Machine micro-gravity experiments. Advances in Space Research, 2017, 59, 3045-3057.	2.6	14
35	Annular two-phase flow in vertical smooth and corrugated pipes. International Journal of Multiphase Flow, 2018, 109, 150-163.	3.4	14
36	Enhancing the dynamic range of ultrasound imaging velocimetry using interleaved imaging. Measurement Science and Technology, 2013, 24, 115701.	2.6	13

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37	Generalized displacement estimation for averages of non-stationary flows. Experiments in Fluids, 2011, 50, 1421-1427.	2.4	11
38	Scanning stereo-PLIF method for free surface measurements in large 3D domains. Experiments in Fluids, 2020, 61, 1.	2.4	11
39	The structure of near-wall re-entrant flow and its influence on cloud cavitation instability. Experiments in Fluids, 2022, 63, 77.	2.4	8
40	Comparison between theoretical predictions and direct numerical simulation results for a decaying turbulent suspension. Physical Review E, 2004, 69, 056311.	2.1	7
41	Exploring the potential of blood flow network data. Meccanica, 2017, 52, 489-502.	2.0	7
42	Direct comparison of shadowgraphy and x-ray imaging for void fraction determination. Measurement Science and Technology, 2018, 29, 125303.	2.6	7
43	On the influence of the particlesâ€“fluid interaction on the turbulent diffusion in a suspension. International Journal of Multiphase Flow, 2002, 28, 177-197.	3.4	5
44	Experimental investigation of wave tip variability of impacting waves. Physics of Fluids, 2020, 32, 082110.	4.0	5
45	Pixelâ€wise assessment of cardiovascular magnetic resonance firstâ€pass perfusion using a cardiac phantom mimicking transmural myocardial perfusion gradients. Magnetic Resonance in Medicine, 2020, 84, 2871-2884.	3.0	4
46	Suspension dynamics in transitional pipe flow. Physical Review Fluids, 2021, 6, .	2.5	4
47	Eulerian and Lagrangian Insights into a Turbulent Boundary Layer Flow Using Time Resolved Tomographic PIV. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2010, , 307-314.	0.3	4
48	Influence of hydrodynamic interactions between particles on the turbulent flow in a suspension. Experimental Thermal and Fluid Science, 2002, 26, 653-659.	2.7	3
49	Verification of a model to predict the influence of particle inertia and gravity on a decaying turbulent particle-laden flow. International Journal of Multiphase Flow, 2008, 34, 29-41.	3.4	3
50	Laminar-turbulent transition of a non-Newtonian fluid flow. Journal of Hydraulic Research/De Recherches Hydrauliques, 2021, 59, 235-249.	1.7	3
51	Tomographic PIV for Investigation of Unsteady Flows with High Spatial and Temporal Resolution. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2009, , 73-82.	0.3	2
52	Application of digital holography to filament size analysis. Measurement Science and Technology, 2010, 21, 075301.	2.6	1
53	Gas flow dynamics over a plunging breaking wave prior to impact on a vertical wall. European Journal of Mechanics, B/Fluids, 2021, 91, 52-52.	2.5	1
54	Title is missing!. Journal of Medical and Biological Engineering, 2014, 34, 56.	1.8	1

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55	Onset of turbulence in particle-laden pipe flows. Physical Review Fluids, 2022, 7, .	2.5	1
56	Micro-PIV as a research tool for in vivo studies of vascular remodeling. IFMBE Proceedings, 2009, , 1972-1974.	0.3	0