Juan C Del Alamo

List of Publications by Year
in descending order

72 papers	5,279 citations	117625 34 h-index	95266 68 g-index
80 all docs	80 docs citations	80 times ranked	5495 citing authors

#	Article	IF	Citations
1	Scaling of the energy spectra of turbulent channels. Journal of Fluid Mechanics, 2004, 500, 135-144.	3.4	574
2	Spectra of the very large anisotropic scales in turbulent channels. Physics of Fluids, 2003, 15, L41.	4.0	408
3	Self-similar vortex clusters in the turbulent logarithmic region. Journal of Fluid Mechanics, 2006, 561, 329.	3.4	312
4	Estimation of turbulent convection velocities and corrections to Taylor's approximation. Journal of Fluid Mechanics, 2009, 640, 5-26.	3.4	306
5	High-throughput screening of tyrosine kinase inhibitor cardiotoxicity with human induced pluripotent stem cells. Science Translational Medicine, 2017, 9, .	12.4	297
6	Linear energy amplification in turbulent channels. Journal of Fluid Mechanics, 2006, 559, 205.	3.4	282
7	Mesenchymal stem cell durotaxis depends on substrate stiffness gradient strength. Biotechnology Journal, 2013, 8, 472-484.	3.5	219
8	Spatio-temporal analysis of eukaryotic cell motility by improved force cytometry. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13343-13348.	7.1	183
9	Two-Dimensional Intraventricular Flow Mapping by Digital Processing Conventional Color-Doppler Echocardiography Images. IEEE Transactions on Medical Imaging, 2010, 29, 1701-1713.	8.9	177
10	The large-scale dynamics of near-wall turbulence. Journal of Fluid Mechanics, 2004, 505, 179-199.	3.4	157
11	Turbulence modification by stable stratification in channel flow. Physics of Fluids, 2011, 23, .	4.0	113
12	Roles of cell confluency and fluid shear in 3-dimensional intracellular forces in endothelial cells. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11110-11115.	7.1	109
13	Contribution of the Diastolic Vortex Ring to Left Ventricular Filling. Journal of the American College of Cardiology, 2014, 64, 1711-1721.	2.8	102
14	Use of human induced pluripotent stem cellâ€“derived cardiomyocytes to assess drug cardiotoxicity. Nature Protocols, 2018, 13, 3018-3041.	12.0	102
15	Rickettsia Sca4 Reduces Vinculin-Mediated Intercellular Tension to Promote Spread. Cell, 2016, 167, 670-683.e10.	28.9	101
16	In situ mechanotransduction via vinculin regulates stem cell differentiation. Stem Cells, 2013, 31, 2467-2477.	3.2	100
17	High throughput physiological screening of iPSC-derived cardiomyocytes for drug development. Biochimica Et Biophysica Acta - Molecular Cell Research, 2016, 1863, 1717-1727.	4.1	99
18	Three-Dimensional Quantification of Cellular Traction Forces and Mechanosensing of Thin Substrata by Fourier Traction Force Microscopy. PLoS ONE, 2013, 8, e69850.	2.5	93

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19	Myosin II Is Essential for the Spatiotemporal Organization of Traction Forces during Cell Motility. Molecular Biology of the Cell, 2010, 21, 405-417.	2.1	81
20	Topology of Blood Transport in the Human Left Ventricle by Novel Processing of Doppler Echocardiography. Annals of Biomedical Engineering, 2013, 41, 2603-2616.	2.5	79
21	3D Traction Stresses Activate Protease-Dependent Invasion of Cancer Cells. Biophysical Journal, 2014, 107, 2528-2537.	0.5	77
22	Intraventricular vortex properties in nonischemic dilated cardiomyopathy. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 306, H718-H729.	3.2	77
23	Anisotropic rheology and directional mechanotransduction in vascular endothelial cells. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15411-15416.	7.1	76
24	The mechanics of the adhesive locomotion of terrestrial gastropods. Journal of Experimental Biology, 2010, 213, 3920-3933.	1.7	71
25	Vorticity organization in the outer layer of turbulent channels with disturbed walls. Journal of Fluid Mechanics, 2007, 591, 145-154.	3.4	62
26	Coordination of contractility, adhesion and flow in migratingPhysarumamoebae. Journal of the Royal Society Interface, 2015, 12, 20141359.	3.4	60
27	Both contractile axial and lateral traction force dynamics drive amoeboid cell motility. Journal of Cell Biology, 2014, 204, 1045-1061.	5.2	58
28	Cyclic stretch of embryonic cardiomyocytes increases proliferation, growth, and expression while repressing Tgf-Î² signaling. Journal of Molecular and Cellular Cardiology, 2015, 79, 133-144.	1.9	56
29	The Clinical Assessment of Intraventricular Flows. Annual Review of Fluid Mechanics, 2015, 47, 315-342.	25.0	55
30	A clinical method for mapping and quantifying blood stasis in the left ventricle. Journal of Biomechanics, 2016, 49, 2152-2161.	2.1	54
31	Demonstration of Patient-Specific Simulations to Assess Left Atrial Appendage Thrombogenesis Risk. Frontiers in Physiology, 2021, 12, 596596.	2.8	51
32	Three-Dimensional Balance of Cortical Tension and Axial Contractility Enables Fast Amoeboid Migration. Biophysical Journal, 2015, 108, 821-832.	0.5	49
33	Dynamic and reversible surface topography influences cell morphology. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2313-2321.	4.0	47
34	Three-dimensional forces exerted by leukocytes and vascular endothelial cells dynamically facilitate diapedesis. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 133-138.	7.1	42
35	Shp2 plays a crucial role in cell structural orientation and force polarity in response to matrix rigidity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2840-2845.	7.1	34
36	MiR-145 mediates cell morphology-regulated mesenchymal stem cell differentiation to smooth muscle cells. Biomaterials, 2019, 204, 59-69.	11.4	32

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37	Three-Dimensional Monolayer Stress Microscopy. Biophysical Journal, 2019, 117, 111-128.	0.5	30
38	GEF-H1 controls focal adhesion signaling that regulates mesenchymal stem cell lineage commitment. Journal of Cell Science, 2014, 127, 4186-200.	2.0	29
39	Self-organized mechano-chemical dynamics in amoeboid locomotion ofPhysarumfragments. Journal Physics D: Applied Physics, 2017, 50, 204004.	2.8	26
40	miR-486 is modulated by stretch and increases ventricular growth. JCI Insight, 2019, 4, .	5.0	26
41	From imaging to prediction: Emerging non-invasive methods in pediatric cardiology. Progress in Pediatric Cardiology, 2010, 30, 81-89.	0.4	25
42	Bio- chemical and physical characterizations of mesenchymal stromal cells along the time course of directed differentiation. Scientific Reports, 2016, 6, 31547.	3.3	25
43	Two-Layer Elastographic 3-D Traction Force Microscopy. Scientific Reports, 2017, 7, 39315.	3.3	23
44	The SCAR/WAVE complex is necessary for proper regulation of traction stresses during amoeboid motility. Molecular Biology of the Cell, 2011, 22, 3995-4003.	2.1	22
45	Stasis Mapping Using Ultrasound. JACC: Cardiovascular Imaging, 2018, 11, 514-515.	5.3	20
46	Mechanosensitive Adhesion Explains Stepping Motility in Amoeboid Cells. Biophysical Journal, 2017, 112, 2672-2682.	0.5	19
47	<scp>Nonâ€Newtonian</scp> blood rheology impacts left atrial stasis in <scp>patientâ€specific</scp> simulations. International Journal for Numerical Methods in Biomedical Engineering, 2022, 38, e3597.	2.1	19
48	Blood Stasis Imaging Predicts Cerebral Microembolism during Acute Myocardial Infarction. Journal of the American Society of Echocardiography, 2020, 33, 389-398.	2.8	18
49	Elucidating the Biomechanics of Leukocyte Transendothelial Migration by Quantitative Imaging. Frontiers in Cell and Developmental Biology, 2021, 9, 635263.	3.7	17
50	Mitral Valve Prosthesis Design Affects Hemodynamic Stasis and Shear In The Dilated Left Ventricle. Annals of Biomedical Engineering, 2019, 47, 1265-1280.	2.5	16
51	The role of elastic restoring forces in right-ventricular filling. Cardiovascular Research, 2015, 107, 45-55.	3.8	15
52	Intraventricular Flow Patterns in Patients Treated with Left Ventricular Assist Devices. ASAIO Journal, 2021, 67, 74-83.	1.6	14
53	Age-Dependence of Flow Homeostasis in the Left Ventricle. Frontiers in Physiology, 2019, 10, 485.	2.8	13
54	Quantifying the mechanics of locomotion of the schistosome pathogen with respect to changes in its physical environment. Journal of the Royal Society Interface, 2019, 16, 20180675.	3.4	13

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55	Cooperative cell motility during tandem locomotion of amoeboid cells. Molecular Biology of the Cell, 2016, 27, 1262-1271.	2.1	12
56	Clinical assessment of intraventricular blood transport in patients undergoing cardiac resynchronization therapy. Meccanica, 2017, 52, 563-576.	2.0	12
57	Cytoskeletal Mechanics Regulating Amoeboid Cell Locomotion. Applied Mechanics Reviews, 2014, 66, .	10.1	11
58	How Computation Is Helping Unravel the Dynamics of Morphogenesis. Frontiers in Physics, 2020, 8, .	2.1	11
59	An Oscillatory Contractile Pole-Force Component Dominates the Traction Forces Exerted by Migrating Amoeboid Cells. Cellular and Molecular Bioengineering, 2011, 4, 603-615.	2.1	10
60	The interplay between matrix deformation and the coordination of turning events governs directed neutrophil migration in 3D matrices. Science Advances, 2021, 7, .	10.3	10
61	Recent Advances in the Application of Computational Mechanics to the Diagnosis and Treatment of Cardiovascular Disease. Revista Espanola De Cardiologia (English Ed), 2009, 62, 781-805.	0.6	8
62	The Effect of Enterohemorrhagic E. coli Infection on the Cell Mechanics of Host Cells. PLoS ONE, 2014, 9, e112137.	2.5	8
63	Symmetry breaking transition towards directional locomotion inPhysarummicroplasmodia. Journal Physics D: Applied Physics, 2019, 52, 494004.	2.8	7
64	Assessment of Blood Flow Transport in the Left Ventricle Using Ultrasound. Validation Against 4-D Flow Cardiac Magnetic Resonance. Ultrasound in Medicine and Biology, 2022, 48, 1822-1832.	1.5	4
65	Turbulence and Internal Waves in a Stably-Stratified Channel Flow. , 2009, , 217-227.		3
66	MicroMotility: State of the art, recent accomplishments and perspectives on the mathematical modeling of bio-motility at microscopic scales. Mathematics in Engineering, 2020, 2, 230-252.	0.9	3
67	Biomechanical interactions of Schistosoma mansoni eggs with vascular endothelial cells facilitate egg extravasation. PLoS Pathogens, 2022, 18, e1010309.	4.7	3
68	THE NEAR-WALL STRUCTURES OF TURBULENT WALL FLOWS. , 2006, , 53-70.		2
69	Healthy vs Diseased Transport and Mixing in the Human Left Ventricle. , 2012, , .		2
70	Reply. Journal of the American College of Cardiology, 2015, 65, 2574-2575.	2.8	1
71	Corrections to Taylorâ€™s Approximation fromÂComputed Turbulent Convection Velocities. ERCOFTAC Series, 2011, , 211-218.	0.1	0
72	Closure to â€œDiscussion of â€˜Cytoskeletal Mechanics Regulating Amoeboid Cell Locomotionâ€™â€• (Ãlvarez-GonzÃ¡lez, B., Bastounis, E., Meili, R., del Alamo, J. C., Firtel, R. A., and Lasheras, J. C., 2014, ASME) Tj ETQq1 1 0.1 rgBT /Overlock 1		