Juan Carlos Del Ãlamo

List of Publications by Year
in descending order

124 papers	5,591 citations	117625 34 h-index	82547 72 g-index
141 all docs	141 docs citations	141 times ranked	5817 citing authors

#	Article	IF	Citations
1	Biomechanical interactions of Schistosoma mansoni eggs with vascular endothelial cells facilitate egg extravasation. PLoS Pathogens, 2022, 18, e1010309.	4.7	3
2	<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
3	Cyclic Mechanical Stresses Alter Erythrocyte Membrane Composition and Microstructure and Trigger Macrophage Phagocytosis. Advanced Science, 2022, 9, e2201481.	11.2	14
4	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
5	Fibrosis, atrial fibrillation and stroke: clinical updates and emerging mechanistic models. Heart, 2021, 107, 99-105.	2.9	33
6	Hierarchical Bayesian 3D Traction Force Microscopy with Local Regularization Based on Image Quality. Biophysical Journal, 2021, 120, 193a.	0.5	0
7	Demonstration of Patient-Specific Simulations to Assess Left Atrial Appendage Thrombogenesis Risk. Frontiers in Physiology, 2021, 12, 596596.	2.8	51
8	Elucidating the Biomechanics of Leukocyte Transendothelial Migration by Quantitative Imaging. Frontiers in Cell and Developmental Biology, 2021, 9, 635263.	3.7	17
9	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
10	Intraventricular Flow Patterns in Patients Treated with Left Ventricular Assist Devices. ASAIO Journal, 2021, 67, 74-83.	1.6	14
11	Blood Stasis Imaging Predicts Cerebral Microembolism during Acute Myocardial Infarction. Journal of the American Society of Echocardiography, 2020, 33, 389-398.	2.8	18
12	Biomechanics of JAM-C-Mediated Neutrophil Reverse Transendothelial Migration. Biophysical Journal, 2020, 118, 282a.	0.5	0
13	A Balance between Turning and Persistent Motion is Critical for Fast and Efficient 3-Dimensional Neutrophil Migration. Biophysical Journal, 2020, 118, 602a.	0.5	0
14	In vitro Characterization and Numerical Simulations of Red Blood Cell Transmigration Through Splenic Inter-Endothelial Slits. Biophysical Journal, 2020, 118, 621a.	0.5	0
15	A Capillary Controlled Hydrogel Microchannel for Isotropic Compressive Stress Quantification. Biophysical Journal, 2020, 118, 601a.	0.5	0
16	How Computation Is Helping Unravel the Dynamics of Morphogenesis. Frontiers in Physics, 2020, 8, .	2.1	11
17	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
18	Kindlinâ€3 organizes a ring of clustered high affinity Î² 2 integrins during human neutrophil spreading under flow. FASEB Journal, 2020, 34, 1-1.	0.5	0

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19	Symmetry breaking transition towards directional locomotion inPhysarummicroplasmodia. Journal Physics D: Applied Physics, 2019, 52, 494004.	2.8	7
20	The natural matching of harmonic responses in the pulmonary circulation. Journal of Physiology, 2019, 597, 3853-3865.	2.9	4
21	Age-Dependence of Flow Homeostasis in the Left Ventricle. Frontiers in Physiology, 2019, 10, 485.	2.8	13
22	Three-Dimensional Monolayer Stress Microscopy. Biophysical Journal, 2019, 117, 111-128.	0.5	30
23	MiR-145 mediates cell morphology-regulated mesenchymal stem cell differentiation to smooth muscle cells. Biomaterials, 2019, 204, 59-69.	11.4	32
24	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
25	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
26	miR-486 is modulated by stretch and increases ventricular growth. JCI Insight, 2019, 4, .	5.0	26
27	Hemodynamic-mediated endocardial signaling controls in vivo myocardial reprogramming. ELife, 2019, 8, .	6.0	30
28	Regional dynamics of fractal dimension of the left ventricular endocardium from cine computed tomography images. Journal of Medical Imaging, 2019, 6, 1.	1.5	5
29	High-Throughput Functional Screening Assay of Force and Stiffness in IPSC Derived Cardiomyocytes. Biophysical Journal, 2018, 114, 312a.	0.5	4
30	Lis1 dysfunction leads to traction force reduction and cytoskeletal disorganization during cell migration. Biochemical and Biophysical Research Communications, 2018, 497, 869-875.	2.1	27
31	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
32	Stasis Mapping Using Ultrasound. JACC: Cardiovascular Imaging, 2018, 11, 514-515.	5.3	20
33	Use of human induced pluripotent stem cellâ€“derived cardiomyocytes to assess drug cardiotoxicity. Nature Protocols, 2018, 13, 3018-3041.	12.0	102
34	Investigating the Effect of Matrix Porosity on the Mechanics of Neutrophil Migration in Three-Dimensional Extracellular Matrices. Biophysical Journal, 2018, 114, 371a.	0.5	0
35	Clinical assessment of intraventricular blood transport in patients undergoing cardiac resynchronization therapy. Meccanica, 2017, 52, 563-576.	2.0	12
36	Intraventricular thrombus formation in the LVAD-assisted heart studied in a mock circulatory loop. Meccanica, 2017, 52, 515-528.	2.0	22

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37	High-throughput screening of tyrosine kinase inhibitor cardiotoxicity with human induced pluripotent stem cells. Science Translational Medicine, 2017, 9, .	12.4	297
38	Two-Layer Elastographic 3-D Traction Force Microscopy. Scientific Reports, 2017, 7, 39315.	3.3	23
39	Understanding the Mechanics of Neutrophil Migration in Three-Dimensional Extracellular Matrices. Biophysical Journal, 2017, 112, 125a.	0.5	0
40	Self-organized mechano-chemical dynamics in amoeboid locomotion ofPhysarumfragments. Journal Physics D: Applied Physics, 2017, 50, 204004.	2.8	26
41	Mechanosensitive Adhesion Explains Stepping Motility in Amoeboid Cells. Biophysical Journal, 2017, 112, 2672-2682.	0.5	19
42	Three-Dimensional Monolayer Stress Cytometry. Biophysical Journal, 2017, 112, 271a.	0.5	1
43	Mechanosensitive Adhesion Explains Stepping Motility in Amoeboid Cells. Biophysical Journal, 2017, 112, 433a.	0.5	0
44	Non-Invasive Mapping of Intraventricular Flow Patterns in Patients Treated with Left Ventricular Assist Devices. Journal of Cardiac Failure, 2017, 23, S24.	1.7	0
45	Abstract 21097: Three-Dimensional Traction Stresses Facilitate Leukocyte Diapedesis. Circulation, 2017, 136, .	1.6	0
46	Three-Dimensional Monolayer Stress Microscopy. Biophysical Journal, 2016, 110, 330a.	0.5	1
47	Validation of a Novel Experimental and Computational Methodology to Measure Intercellular Forces during Tissue Morphogenesis. Biophysical Journal, 2016, 110, 309a.	0.5	0
48	Cooperative cell motility during tandem locomotion of amoeboid cells. Molecular Biology of the Cell, 2016, 27, 1262-1271.	2.1	12
49	Rickettsia Sca4 Reduces Vinculin-Mediated Intercellular Tension to Promote Spread. Cell, 2016, 167, 670-683.e10.	28.9	101
50	Bio- chemical and physical characterizations of mesenchymal stromal cells along the time course of directed differentiation. Scientific Reports, 2016, 6, 31547.	3.3	25
51	Mechanics of Adhesion Dependent and Independent Neutrophil Migration in Three-Dimensional Extra-Cellular Matrices. Biophysical Journal, 2016, 110, 512a.	0.5	2
52	Two-point particle tracking microrheology of nematic complex fluids. Soft Matter, 2016, 12, 5758-5779.	2.7	15
53	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
54	A clinical method for mapping and quantifying blood stasis in the left ventricle. Journal of Biomechanics, 2016, 49, 2152-2161.	2.1	54

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55	Coordinations of Intracellular Flow, Calcium Signal and Cellular Contraction in Migrating Physarum. , 2016, , .		0
56	Coordination of Contractility, Adhesion and Flow in Migrating Physarum Amoebae : Experiments and Modeling. , 2016, , .		1
57	Three-Dimensional Balance of Cortical Tension and Axial Contractility Enables Fast Amoeboid Migration. Biophysical Journal, 2015, 108, 494a.	0.5	0
58	Mechanics of Neutrophil Migration in Three-Dimensional Matrices. Biophysical Journal, 2015, 108, 455a.	0.5	0
59	Three-Dimensional Fourier Monolayer Stress Microscopy. Biophysical Journal, 2015, 108, 307a.	0.5	0
60	Coordination of contractility, adhesion and flow in migratingPhysarumamoebae. Journal of the Royal Society Interface, 2015, 12, 20141359.	3.4	60
61	Three-Dimensional Traction Forces Exerted by Filopodia and Membrane Protrusions Drive Neutrophil Invasion. Biophysical Journal, 2015, 108, 307a.	0.5	0
62	Three-Dimensional Balance of Cortical Tension and Axial Contractility Enables Fast Amoeboid Migration. Biophysical Journal, 2015, 108, 821-832.	0.5	49
63	The role of elastic restoring forces in right-ventricular filling. Cardiovascular Research, 2015, 107, 45-55.	3.8	15
64	Reply. Journal of the American College of Cardiology, 2015, 65, 2574-2575.	2.8	1
65	The Clinical Assessment of Intraventricular Flows. Annual Review of Fluid Mechanics, 2015, 47, 315-342.	25.0	55
66	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
67	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 0.784314 rgBT /Overlock	10.1	0
68	GEF-H1 controls focal adhesion signaling that regulates mesenchymal stem cell lineage commitment. Journal of Cell Science, 2014, 127, 4186-200.	2.0	29
69	Cytoskeletal Mechanics Regulating Amoeboid Cell Locomotion. Applied Mechanics Reviews, 2014, 66, .	10.1	11
70	3D Traction Stresses Activate Protease-Dependent Invasion of Cancer Cells. Biophysical Journal, 2014, 107, 2528-2537.	0.5	77
71	Intraventricular flow patterns and stasis in the LVAD-assisted heart. Journal of Biomechanics, 2014, 47, 1485-1494.	2.1	60
72	Intraventricular vortex properties in nonischemic dilated cardiomyopathy. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 306, H718-H729.	3.2	77

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73	Contribution of the Diastolic Vortex Ring to Left Ventricular Filling. Journal of the American College of Cardiology, 2014, 64, 1711-1721.	2.8	102
74	Traction Stress Dynamics During Chemotactic Amoeboid Cell Migration. Biophysical Journal, 2014, 106, 787a-788a.	0.5	0
75	Both contractile axial and lateral traction force dynamics drive amoeboid cell motility. Journal of Cell Biology, 2014, 204, 1045-1061.	5.2	58
76	Cortical and Cytoskeletal Structural Network regulates the Three-Dimensional Traction Forces Exerted by Migrating Amoeboid Cells. Biophysical Journal, 2014, 106, 360a.	0.5	0
77	The Effect of Enterohemorrhagic E. coli Infection on the Cell Mechanics of Host Cells. PLoS ONE, 2014, 9, e112137.	2.5	8
78	GEF-H1 controls focal adhesion signaling that regulates mesenchymal stem cell lineage commitment. Development (Cambridge), 2014, 141, e2005-e2005.	2.5	0
79	In situ mechanotransduction via vinculin regulates stem cell differentiation. Stem Cells, 2013, 31, 2467-2477.	3.2	100
80	Dynamic and reversible surface topography influences cell morphology. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2313-2321.	4.0	47
81	Flow of a viscous nematic fluid around a sphere. Journal of Fluid Mechanics, 2013, 725, 299-331.	3.4	10
82	Amoeboid Cells Migrate by Alternating Between Modes with Distinct Adhesion Dynamics and Contractility. Biophysical Journal, 2013, 104, 148a.	0.5	0
83	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
84	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
85	Bicuspid Aortic Valves Experience Increased Strain as Compared to Tricuspid Aortic Valves. World Journal for Pediatric & Congenital Heart Surgery, 2013, 4, 362-366.	0.8	16
86	Mesenchymal stem cell durotaxis depends on substrate stiffness gradient strength. Biotechnology Journal, 2013, 8, 472-484.	3.5	219
87	In Vivo Measurements of Blood Transport Patterns and Stasis in the Human Left Ventricle. , 2013, , .		0
88	Diastolic chamber properties of the left ventricle assessed by global fitting of pressure-volume data: improving the gold standard of diastolic function. Journal of Applied Physiology, 2013, 115, 556-568.	2.5	19
89	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
90	Focal Adhesion Mechanotransduction Regulates Stiffness-Directed Differentiation. , 2013, , .		1

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91	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
92	QUANTITATIVE ASSESSMENT OF INTRAVENTRICULAR VORTICITY USING CONVENTIONAL COLOR-DOPPLER ULTRASOUND. HEAD TO HEAD CLINICAL VALIDATION AGAINST PHASE-CONTRAST MAGNETIC RESONANCE IMAGING. Journal of the American College of Cardiology, 2012, 59, E1128.	2.8	2
93	Viscoelastic Properties of Vascular Endothelial Cells Exposed to Uniaxial Stretch. Biophysical Journal, 2012, 102, 564a.	0.5	0
94	Dynamics of a Microsphere in an Anisotropic Gel: a Frontier in Intracellular Microrheology. Biophysical Journal, 2012, 102, 565a.	0.5	0
95	Three Dimensional Traction Forces Exerted by Migrating Amoeboid Cells. Biophysical Journal, 2012, 102, 704a.	0.5	0
96	Deciphering Cellular Forces during Myoblast Fusion. Biophysical Journal, 2012, 102, 704a.	0.5	0
97	Mechanosensitive Vinculin Signaling Regulates Stem Cell Fate. Biophysical Journal, 2012, 102, 177a.	0.5	0
98	Cell Aspect Ratio Alters Stem Cell Traction Stresses and Lineage. Biophysical Journal, 2012, 102, 716a.	0.5	1
99	Healthy vs Diseased Transport and Mixing in the Human Left Ventricle. , 2012, , .		2
100	Probing the Directional Structure and Intracellular Microrheology of Vascular Endothelial Cells. Biophysical Journal, 2011, 100, 489a.	0.5	0
101	The Role of the Scar/WAVE Complex in the Mechanics of Cell Migration. Biophysical Journal, 2011, 100, 441a.	0.5	0
102	Corrections to Taylorâ€™s Approximation fromÂComputed Turbulent Convection Velocities. ERCOFTAC Series, 2011, , 211-218.	0.1	0
103	Turbulence modification by stable stratification in channel flow. Physics of Fluids, 2011, 23, .	4.0	113
104	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
105	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
106	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
107	From imaging to prediction: Emerging non-invasive methods in pediatric cardiology. Progress in Pediatric Cardiology, 2010, 30, 81-89.	0.4	25
108	Resolution and uniqueness of estimated parameters of a model of thin filament regulation in solution. Computational Biology and Chemistry, 2010, 34, 19-33.	2.3	17

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109	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
110	The mechanics of the adhesive locomotion of terrestrial gastropods. Journal of Experimental Biology, 2010, 213, 3920-3933.	1.7	71
111	Distribution of traction forces associated with shape changes during amoeboid cell migration. , 2009, 2009, 3346-9.		5
112	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
113	Estimation of turbulent convection velocities and corrections to Taylor's approximation. Journal of Fluid Mechanics, 2009, 640, 5-26.	3.4	306
114	Turbulence and Internal Waves in a Stably-Stratified Channel Flow. , 2009, , 217-227.		3
115	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
116	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
117	Vorticity organization in the outer layer of turbulent channels with disturbed walls. Journal of Fluid Mechanics, 2007, 591, 145-154.	3.4	62
118	Self-similar vortex clusters in the turbulent logarithmic region. Journal of Fluid Mechanics, 2006, 561, 329.	3.4	312
119	Linear energy amplification in turbulent channels. Journal of Fluid Mechanics, 2006, 559, 205.	3.4	282
120	THE NEAR-WALL STRUCTURES OF TURBULENT WALL FLOWS. , 2006, , 53-70.		2
121	The large-scale dynamics of near-wall turbulence. Journal of Fluid Mechanics, 2004, 505, 179-199.	3.4	157
122	Scaling of the energy spectra of turbulent channels. Journal of Fluid Mechanics, 2004, 500, 135-144.	3.4	574
123	Spectra of the very large anisotropic scales in turbulent channels. Physics of Fluids, 2003, 15, L41.	4.0	408
124	Very Large Anisotropic Scales in Turbulent Wall-Bounded Flows. , 2003, , 105-112.		0