

Umberto Morbiducci

List of Publications by Year in descending order

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Version: 2024-02-01

169
papers

5,242
citations

101384

36
h-index

114278

63
g-index

172
all docs

172
docs citations

172
times ranked

5380
citing authors

#	ARTICLE	IF	CITATIONS
1	In Vivo Quantification of Helical Blood Flow in Human Aorta by Time-Resolved Three-Dimensional Cine Phase Contrast Magnetic Resonance Imaging. <i>Annals of Biomedical Engineering</i> , 2009, 37, 516-531.	1.3	191
2	Mechanistic insight into the physiological relevance of helical blood flow in the human aorta: an in vivo study. <i>Biomechanics and Modeling in Mechanobiology</i> , 2011, 10, 339-355.	1.4	190
3	Platelet Activation Due to Hemodynamic Shear Stresses: Damage Accumulation Model and Comparison to In Vitro Measurements. <i>ASAIO Journal</i> , 2008, 54, 64-72.	0.9	188
4	Inflow boundary conditions for image-based computational hemodynamics: Impact of idealized versus measured velocity profiles in the human aorta. <i>Journal of Biomechanics</i> , 2013, 46, 102-109.	0.9	187
5	Atherosclerosis at arterial bifurcations: evidence for the role of haemodynamics and geometry. <i>Thrombosis and Haemostasis</i> , 2016, 115, 484-492.	1.8	172
6	Machine learning-based prediction of adverse events following an acute coronary syndrome (PRAISE): a modelling study of pooled datasets. <i>Lancet, The</i> , 2021, 397, 199-207.	6.3	164
7	Helical flow as fluid dynamic signature for atherogenesis risk in aortocoronary bypass. A numeric study. <i>Journal of Biomechanics</i> , 2007, 40, 519-534.	0.9	157
8	Helical flow in carotid bifurcation as surrogate marker of exposure to disturbed shear. <i>Journal of Biomechanics</i> , 2012, 45, 2398-2404.	0.9	145
9	Numerical simulation of the dynamics of a bileaflet prosthetic heart valve using a fluid-structure interaction approach. <i>Journal of Biomechanics</i> , 2008, 41, 2539-2550.	0.9	119
10	A novel formulation for blood trauma prediction by a modified power-law mathematical model. <i>Biomechanics and Modeling in Mechanobiology</i> , 2005, 4, 249-260.	1.4	118
11	ZebraBeat: a flexible platform for the analysis of the cardiac rate in zebrafish embryos. <i>Scientific Reports</i> , 2014, 4, .	1.6	112
12	Computational fluid dynamic simulations of image-based stented coronary bifurcation models. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20130193.	1.5	104
13	The Power-law Mathematical Model for Blood Damage Prediction: Analytical Developments and Physical Inconsistencies. <i>Artificial Organs</i> , 2004, 28, 467-475.	1.0	103
14	Optical Vibrocardiography: A Novel Tool for the Optical Monitoring of Cardiac Activity. <i>Annals of Biomedical Engineering</i> , 2007, 35, 45-58.	1.3	95
15	On the importance of blood rheology for bulk flow in hemodynamic models of the carotid bifurcation. <i>Journal of Biomechanics</i> , 2011, 44, 2427-2438.	0.9	93
16	Non-contact cardiac monitoring from carotid artery using optical vibrocardiography. <i>Medical Engineering and Physics</i> , 2008, 30, 490-497.	0.8	82
17	Outflow Conditions for Image-Based Hemodynamic Models of the Carotid Bifurcation: Implications for Indicators of Abnormal Flow. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 091005.	0.6	80
18	A Survey of Methods for the Evaluation of Tissue Engineering Scaffold Permeability. <i>Annals of Biomedical Engineering</i> , 2013, 41, 2027-2041.	1.3	74

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19	A rational approach to defining principal axes of multidirectional wall shear stress in realistic vascular geometries, with application to the study of the influence of helical flow on wall shear stress directionality in aorta. <i>Journal of Biomechanics</i> , 2015, 48, 899-906.	0.9	71
20	A mathematical description of blood spiral flow in vessels: application to a numerical study of flow in arterial bending. <i>Journal of Biomechanics</i> , 2005, 38, 1375-1386.	0.9	68
21	Shape of glucose, insulin, C-peptide curves during a 3-h oral glucose tolerance test: any relationship with the degree of glucose tolerance?. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2011, 300, R941-R948.	0.9	68
22	Blood damage safety of prosthetic heart valves. Shear-induced platelet activation and local flow dynamics: A fluid-structure interaction approach. <i>Journal of Biomechanics</i> , 2009, 42, 1952-1960.	0.9	66
23	An Insight into the Mechanistic Role of the Common Carotid Artery on the Hemodynamics at the Carotid Bifurcation. <i>Annals of Biomedical Engineering</i> , 2015, 43, 68-81.	1.3	60
24	Computational model of the fluid dynamics of a cannula inserted in a vessel: incidence of the presence of side holes in blood flow. <i>Journal of Biomechanics</i> , 2002, 35, 1599-1612.	0.9	58
25	The Atheroprotective Nature of Helical Flow in Coronary Arteries. <i>Annals of Biomedical Engineering</i> , 2019, 47, 425-438.	1.3	58
26	Healthy and diseased coronary bifurcation geometries influence near-wall and intravascular flow: A computational exploration of the hemodynamic risk. <i>Journal of Biomechanics</i> , 2017, 58, 79-88.	0.9	57
27	Insights into the co-localization of magnitude-based versus direction-based indicators of disturbed shear at the carotid bifurcation. <i>Journal of Biomechanics</i> , 2016, 49, 2413-2419.	0.9	54
28	Quantitative Analysis of Bulk Flow in Image-Based Hemodynamic Models of the Carotid Bifurcation: The Influence of Outflow Conditions as Test Case. <i>Annals of Biomedical Engineering</i> , 2010, 38, 3688-3705.	1.3	50
29	Role of the sinuses of Valsalva on the opening of the aortic valve. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2013, 145, 999-1003.	0.4	50
30	When Stiffness Matters: Mechanosensing in Heart Development and Disease. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 334.	1.8	50
31	Segment-specific associations between local haemodynamic and imaging markers of early atherosclerosis at the carotid artery: an <i>in vivo</i> human study. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20180352.	1.5	49
32	A Noncontact Approach for the Evaluation of Large Artery Stiffness: A Preliminary Study. <i>American Journal of Hypertension</i> , 2008, 21, 1280-1283.	1.0	47
33	A Versatile Bioreactor for Dynamic Suspension Cell Culture. Application to the Culture of Cancer Cell Spheroids. <i>PLoS ONE</i> , 2016, 11, e0154610.	1.1	45
34	Automated Segmentation of Fluorescence Microscopy Images for 3D Cell Detection in human-derived Cardiospheres. <i>Scientific Reports</i> , 2019, 9, 6644.	1.6	44
35	Comparison of Symmetric Hemodialysis Catheters Using Computational Fluid Dynamics. <i>Journal of Vascular and Interventional Radiology</i> , 2015, 26, 252-259.e2.	0.2	42
36	The combined role of sinuses of Valsalva and flow pulsatility improves energy loss of the aortic valve. <i>European Journal of Cardio-thoracic Surgery</i> , 2016, 49, 1222-1227.	0.6	42

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37	Cell penetrating peptide modulation of membrane biomechanics by Molecular dynamics. <i>Journal of Biomechanics</i> , 2018, 73, 137-144.	0.9	40
38	Bioreactors as Engineering Support to Treat Cardiac Muscle and Vascular Disease. <i>Journal of Healthcare Engineering</i> , 2013, 4, 329-370.	1.1	38
39	Uncertainty propagation of phase contrast-MRI derived inlet boundary conditions in computational hemodynamics models of thoracic aorta. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017, 20, 1104-1112.	0.9	38
40	On the quantification and visualization of transient periodic instabilities in pulsatile flows. <i>Journal of Biomechanics</i> , 2017, 52, 179-182.	0.9	37
41	P2Y12 inhibitors in acute coronary syndrome patients with renal dysfunction: an analysis from the RENAMI and BleeMACS projects. <i>European Heart Journal - Cardiovascular Pharmacotherapy</i> , 2020, 6, 31-42.	1.4	37
42	Three-Dimensional Numeric Simulation of Flow Through an Aortic Bileaflet Valve in a Realistic Model of Aortic Root. <i>ASAIO Journal</i> , 2005, 51, 176-183.	0.9	35
43	The impact of helical flow on coronary atherosclerotic plaque development. <i>Atherosclerosis</i> , 2020, 300, 39-46.	0.4	34
44	Biomechanics of actin filaments: A computational multi-level study. <i>Journal of Biomechanics</i> , 2011, 44, 630-636.	0.9	33
45	Blood pressure waveform analysis by means of wavelet transform. <i>Medical and Biological Engineering and Computing</i> , 2009, 47, 165-173.	1.6	32
46	Shear-induced platelet activation and its relationship with blood flow topology in a numerical model of stenosed carotid bifurcation. <i>European Journal of Mechanics, B/Fluids</i> , 2012, 35, 92-101.	1.2	31
47	Multiscale impact of nucleotides and cations on the conformational equilibrium, elasticity and rheology of actin filaments and crosslinked networks. <i>Biomechanics and Modeling in Mechanobiology</i> , 2015, 14, 1143-1155.	1.4	31
48	Multiscale modeling of cellular actin filaments: From atomistic molecular to coarse-grained dynamics. <i>Proteins: Structure, Function and Bioinformatics</i> , 2012, 80, 1598-1609.	1.5	30
49	Conformational fluctuations of the AXH monomer of Ataxin-1. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 52-59.	1.5	30
50	Stem Cell Spheroids and Ex Vivo Niche Modeling: Rationalization and Scaling-Up. <i>Journal of Cardiovascular Translational Research</i> , 2017, 10, 150-166.	1.1	30
51	Conformational Dynamics and Stability of U-Shaped and S-Shaped Amyloid β Assemblies. <i>International Journal of Molecular Sciences</i> , 2018, 19, 571.	1.8	30
52	A Eulerian method to analyze wall shear stress fixed points and manifolds in cardiovascular flows. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020, 19, 1403-1423.	1.4	29
53	Investigation of the Josephin Domain Protein-Protein Interaction by Molecular Dynamics. <i>PLoS ONE</i> , 2014, 9, e108677.	1.1	28
54	Long versus short dual antiplatelet therapy in acute coronary syndrome patients treated with prasugrel or ticagrelor and coronary revascularization: Insights from the RENAMI registry. <i>European Journal of Preventive Cardiology</i> , 2020, 27, 696-705.	0.8	28

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55	Genetic algorithms for parameter estimation in mathematical modeling of glucose metabolism. <i>Computers in Biology and Medicine</i> , 2005, 35, 862-874.	3.9	27
56	A Computational Model for the Optimization of Transport Phenomena in a Rotating Hollow-Fiber Bioreactor for Artificial Liver. <i>Tissue Engineering - Part C: Methods</i> , 2009, 15, 41-55.	1.1	27
57	Wall Shear Stress Topological Skeleton Independently Predicts Long-Term Restenosis After Carotid Bifurcation Endarterectomy. <i>Annals of Biomedical Engineering</i> , 2020, 48, 2936-2949.	1.3	27
58	Average daily ischemic versus bleeding risk in patients with ACS undergoing PCI: Insights from the BleMACS and RENAMI registries. <i>American Heart Journal</i> , 2020, 220, 108-115.	1.2	26
59	Comparative external validation of the PRECISE-DAPT and PARIS risk scores in 4424 acute coronary syndrome patients treated with prasugrel or ticagrelor. <i>International Journal of Cardiology</i> , 2020, 301, 200-206.	0.8	26
60	Reduction of Cardiac Fibrosis by Interference With YAP-Dependent Transactivation. <i>Circulation Research</i> , 2022, 131, 239-257.	2.0	26
61	Innovative technologies for the assessment of cardiovascular medical devices: state-of-the-art techniques for artificial heart valve testing. <i>Expert Review of Medical Devices</i> , 2004, 1, 81-93.	1.4	25
62	Numerical and experimental characterization of a novel modular passive micromixer. <i>Biomedical Microdevices</i> , 2012, 14, 849-862.	1.4	25
63	Deciphering ascending thoracic aortic aneurysm hemodynamics in relation to biomechanical properties. <i>Medical Engineering and Physics</i> , 2020, 82, 119-129.	0.8	25
64	Risk of myocardial infarction based on endothelial shear stress analysis using coronary angiography. <i>Atherosclerosis</i> , 2022, 342, 28-35.	0.4	25
65	3-D simulation of the St. Jude Medical bileaflet valve opening process: fluid-structure interaction study and experimental validation. <i>Journal of Heart Valve Disease</i> , 2004, 13, 804-13.	0.5	25
66	Computational modeling for the optimization of a cardiogenic 3D bioprocess of encapsulated embryonic stem cells. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012, 11, 261-277.	1.4	24
67	Analysis of thoracic aorta hemodynamics using 3D particle tracking velocimetry and computational fluid dynamics. <i>Journal of Biomechanics</i> , 2014, 47, 3149-3155.	0.9	23
68	Insights into the Effect of the G245S Single Point Mutation on the Structure of p53 and the Binding of the Protein to DNA. <i>Molecules</i> , 2017, 22, 1358.	1.7	23
69	Bubble Tracking Through Computational Fluid Dynamics in Arterial Line Filters for Cardiopulmonary Bypass. <i>ASAIO Journal</i> , 2009, 55, 438-444.	0.9	22
70	Josephin Domain Structural Conformations Explored by Metadynamics in Essential Coordinates. <i>PLoS Computational Biology</i> , 2016, 12, e1004699.	1.5	22
71	Left Ventricle Segmentation in Cardiac MRI Images. <i>American Journal of Biomedical Engineering</i> , 2012, 2, 131-135.	0.9	22
72	Characterization of the <sc>AXH</sc> domain of Ataxin-1 using enhanced sampling and functional mode analysis. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 666-673.	1.5	21

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73	Natural polymeric microspheres for modulated drug delivery. <i>Materials Science and Engineering C</i> , 2017, 75, 408-417.	3.8	21
74	Prediction of Long Term Restenosis Risk After Surgery in the Carotid Bifurcation by Hemodynamic and Geometric Analysis. <i>Annals of Biomedical Engineering</i> , 2019, 47, 1129-1140.	1.3	21
75	The Role of Structural Polymorphism in Driving the Mechanical Performance of the Alzheimer's Beta Amyloid Fibrils. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 83.	2.0	21
76	Does the inflow velocity profile influence physiologically relevant flow patterns in computational hemodynamic models of left anterior descending coronary artery?. <i>Medical Engineering and Physics</i> , 2020, 82, 58-69.	0.8	21
77	Early Atherosclerotic Changes in Coronary Arteries are Associated with Endothelium Shear Stress Contraction/Expansion Variability. <i>Annals of Biomedical Engineering</i> , 2021, 49, 2606-2621.	1.3	21
78	Impact of Final Kissing Balloon and of Imaging on Patients Treated on Unprotected Left Main Coronary Artery With Thin-Strut Stents (From the RAIN-CARDIOGROUP VII Study). <i>American Journal of Cardiology</i> , 2019, 123, 1610-1619.	0.7	20
79	Bioreactor Platform for Biomimetic Culture and in situ Monitoring of the Mechanical Response of in vitro Engineered Models of Cardiac Tissue. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 733.	2.0	20
80	Doppler derived quantitative flow estimate in coronary artery bypass graft: A computational multiscale model for the evaluation of the current clinical procedure. <i>Medical Engineering and Physics</i> , 2008, 30, 809-816.	0.8	19
81	Image-Based Three-Dimensional Analysis to Characterize the Texture of Porous Scaffolds. <i>BioMed Research International</i> , 2014, 2014, 1-8.	0.9	19
82	Anemia in patients with acute coronary syndromes treated with prasugrel or ticagrelor: Insights from the RENAMI registry. <i>Thrombosis Research</i> , 2018, 167, 142-148.	0.8	19
83	Abdominal Aortic Aneurysm Endovascular Repair: Profiling Postimplantation Morphometry and Hemodynamics With Image-Based Computational Fluid Dynamics. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	19
84	Synthetic dataset generation for the analysis and the evaluation of image-based hemodynamics of the human aorta. <i>Medical and Biological Engineering and Computing</i> , 2012, 50, 145-154.	1.6	18
85	What is needed to make low-density lipoprotein transport in human aorta computational models suitable to explore links to atherosclerosis? Impact of initial and inflow boundary conditions. <i>Journal of Biomechanics</i> , 2018, 68, 33-42.	0.9	18
86	Wall Shear Stress Topological Skeleton Analysis in Cardiovascular Flows: Methods and Applications. <i>Mathematics</i> , 2021, 9, 720.	1.1	18
87	A patient-specific follow up study of the impact of thoracic endovascular repair (TEVAR) on aortic anatomy and on post-operative hemodynamics.. <i>Computers and Fluids</i> , 2016, 141, 54-61.	1.3	17
88	A laser Doppler approach to cardiac motion monitoring: effects of surface and measurement position. , 2006, , .		16
89	Real-World Data of Prasugrel vs. Ticagrelor in Acute Myocardial Infarction: Results from the RENAMI Registry. <i>American Journal of Cardiovascular Drugs</i> , 2019, 19, 381-391.	1.0	16
90	Identification of a model of non-esterified fatty acids dynamics through genetic algorithms: The case of women with a history of gestational diabetes. <i>Computers in Biology and Medicine</i> , 2011, 41, 146-153.	3.9	15

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91	A Computational Study of the Hemodynamic Impact of Open- Versus Closed-Cell Stent Design in Carotid Artery Stenting. <i>Artificial Organs</i> , 2013, 37, E96-E106.	1.0	15
92	Automatic extraction of three-dimensional thoracic aorta geometric model from phase contrast MRI for morphometric and hemodynamic characterization. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 873-882.	1.9	15
93	Thermodynamic and kinetic stability of the Josephin Domain closed arrangement: evidences from replica exchange molecular dynamics. <i>Biology Direct</i> , 2017, 12, 2.	1.9	15
94	Incidence and predictors of bleeding in ACS patients treated with PCI and prasugrel or ticagrelor: An analysis from the RENAMI registry. <i>International Journal of Cardiology</i> , 2018, 273, 29-33.	0.8	15
95	Prasugrel or ticagrelor in patients with acute coronary syndrome and diabetes: a propensity matched substudy of RENAMI. <i>European Heart Journal: Acute Cardiovascular Care</i> , 2019, 8, 536-542.	0.4	15
96	Impact of structural features of very thin stents implanted in unprotected left main or coronary bifurcations on clinical outcomes. <i>Catheterization and Cardiovascular Interventions</i> , 2020, 96, 1-9.	0.7	15
97	Compact and tunable stretch bioreactor advancing tissue engineering implementation. Application to engineered cardiac constructs. <i>Medical Engineering and Physics</i> , 2020, 84, 1-9.	0.8	15
98	In silico biomechanical design of the metal frame of transcatheter aortic valves: multi-objective shape and cross-sectional size optimization. <i>Structural and Multidisciplinary Optimization</i> , 2021, 64, 1825-1842.	1.7	15
99	Destabilizing the AXH Tetramer by Mutations: Mechanisms and Potential Antiaggregation Strategies. <i>Biophysical Journal</i> , 2018, 114, 323-330.	0.2	14
100	Impact of strut thickness and number of crown and connectors on clinical outcomes on patients treated with second-generation drug eluting stent. <i>Catheterization and Cardiovascular Interventions</i> , 2020, 96, 1417-1422.	0.7	14
101	Improved usability of the minimal model of insulin sensitivity based on an automated approach and genetic algorithms for parameter estimation. <i>Clinical Science</i> , 2007, 112, 257-263.	1.8	13
102	Improved management of systemic venous anomalies in a single ventricle: New rationale. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2009, 138, 1154-1159.	0.4	13
103	Daily risk of adverse outcomes in patients undergoing complex lesions revascularization: A subgroup analysis from the RAIN-CARDIOGROUP VII study (veRy thin stents for patients with left main or Tj ETQq1 1 0.78430.4rgBT / Overlock	0.8	13
104	Cardiovascular morphometry with high-resolution 3D magnetic resonance: First application to left ventricle diastolic dysfunction. <i>Medical Engineering and Physics</i> , 2017, 47, 64-71.	0.8	12
105	Virtual screening using covalent docking to find activators for G245S mutant p53. <i>PLoS ONE</i> , 2018, 13, e0200769.	1.1	12
106	Efficacy and Safety of Clopidogrel, Prasugrel and Ticagrelor in ACS Patients Treated with PCI: A Propensity Score Analysis of the RENAMI and BleeMACS Registries. <i>American Journal of Cardiovascular Drugs</i> , 2020, 20, 259-269.	1.0	12
107	Hemodynamics of the aortic valve and root: implications for surgery. <i>Annals of Cardiothoracic Surgery</i> , 2013, 2, 40-3.	0.6	12
108	Time-Resolved PIV Technique for High Temporal Resolution Measurement of Mechanical Prosthetic Aortic Valve Fluid Dynamics. <i>International Journal of Artificial Organs</i> , 2007, 30, 153-162.	0.7	11

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109	Modelling coronary flows: impact of differently measured inflow boundary conditions on vessel-specific computational hemodynamic profiles. <i>Computer Methods and Programs in Biomedicine</i> , 2022, 221, 106882.	2.6	11
110	Time Dependent Non-Newtonian Numerical Study of the Flow Field in a Realistic Model of Aortic Arch. <i>International Journal of Artificial Organs</i> , 2006, 29, 709-718.	0.7	10
111	The Evolution of Computational Hemodynamics as a Clinical Tool in Decision Making, Patient Specific Treatment and Clinical Management. <i>Annals of Biomedical Engineering</i> , 2015, 43, 1-2.	1.3	10
112	Incidence of Adverse Events at 3 Months Versus at 12 Months After Dual Antiplatelet Therapy Cessation in Patients Treated With Thin Stents With Unprotected Left Main or Coronary Bifurcations. <i>American Journal of Cardiology</i> , 2020, 125, 491-499.	0.7	10
113	Combining shape and intensity dxa-based statistical approaches for osteoporotic HIP fracture risk assessment. <i>Computers in Biology and Medicine</i> , 2020, 127, 104093.	3.9	10
114	Potential Mechanical Blood Trauma in Vascular Access Devices: A Comparison of Case Studies. <i>International Journal of Artificial Organs</i> , 2002, 25, 882-891.	0.7	9
115	Sensitivity of human pluripotent stem cells to insulin precipitation induced by peristaltic pump-based medium circulation: considerations on process development. <i>Scientific Reports</i> , 2017, 7, 3950.	1.6	9
116	Influence of injectable microparticle size on cardiac progenitor cell response. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2018, 16, 241-251.	0.7	9
117	In-stent graft helical flow intensity reduces the risk of migration after endovascular aortic repair. <i>Journal of Biomechanics</i> , 2019, 94, 170-179.	0.9	9
118	Hemodialysis arterio-venous graft design reducing the hemodynamic risk of vascular access dysfunction. <i>Journal of Biomechanics</i> , 2020, 100, 109591.	0.9	9
119	A reduced-order model-based study on the effect of intermittent pneumatic compression of limbs on the cardiovascular system. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2016, 230, 279-287.	1.0	8
120	Aminoacid substitutions in the glycine zipper affect the conformational stability of amyloid beta fibrils. <i>Journal of Biomolecular Structure and Dynamics</i> , 2020, 38, 3908-3915.	2.0	8
121	Ultrasonic waves effect on S-shaped β -amyloids conformational dynamics by non-equilibrium molecular dynamics. <i>Journal of Molecular Graphics and Modelling</i> , 2020, 96, 107518.	1.3	8
122	PIV Measurements of Flows in Artificial Heart Valves. , 2007, , 55-72.		8
123	Exploring wall shear stress spatiotemporal heterogeneity in coronary arteries combining correlation-based analysis and complex networks with computational hemodynamics. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2020, 234, 1209-1222.	1.0	7
124	IGF-1 loaded injectable microspheres for potential repair of the infarcted myocardium. <i>Journal of Biomaterials Applications</i> , 2021, 35, 762-775.	1.2	7
125	Ticagrelor or Clopidogrel After an Acute Coronary Syndrome in the Elderly: A Propensity Score Matching Analysis from 16,653 Patients Treated with PCI Included in Two Large Multinational Registries. <i>Cardiovascular Drugs and Therapy</i> , 2021, 35, 1171-1182.	1.3	7
126	Coronary Artery Stenting Affects Wall Shear Stress Topological Skeleton. <i>Journal of Biomechanical Engineering</i> , 2022, 144, .	0.6	7

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127	Induced movements of giant vesicles by millimeter wave radiation. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 1710-1718.	1.4	6
128	Predicting the Metabolic Condition After Gestational Diabetes Mellitus from Oral Glucose Tolerance Test Curves Shape. <i>Annals of Biomedical Engineering</i> , 2014, 42, 1112-1120.	1.3	6
129	Movement of giant lipid vesicles induced by millimeter wave radiation change when they contain magnetic nanoparticles. <i>Drug Delivery and Translational Research</i> , 2019, 9, 131-143.	3.0	6
130	Combining 4D Flow MRI and Complex Networks Theory to Characterize the Hemodynamic Heterogeneity in Dilated and Non-dilated Human Ascending Aortas. <i>Annals of Biomedical Engineering</i> , 2021, 49, 2441-2453.	1.3	6
131	Comparison of Swine and Human Computational Hemodynamics Models for the Study of Coronary Atherosclerosis. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 731924.	2.0	6
132	Remodeling effects of carotid artery stenting versus endarterectomy with patch angioplasty in terms of morphology and hemodynamics. <i>Computers in Biology and Medicine</i> , 2022, 140, 105072.	3.9	6
133	Numerical Simulation of a Realistic Total Cavo-pulmonary Connection: Effect of Unbalanced Pulmonary Resistances on Hydrodynamic Performance. <i>International Journal of Artificial Organs</i> , 2003, 26, 1005-1014.	0.7	5
134	Multiresolution Analysis of Heart Rate Variability as Investigational Tool in Experimental Fetal Cardiac Surgery. <i>Annals of Biomedical Engineering</i> , 2006, 34, 799-809.	1.3	5
135	Validation of the Carotid Intimaâ€™Media Thickness Variability: Can Manual Segmentations Be Trusted as Ground Truth?. <i>Ultrasound in Medicine and Biology</i> , 2016, 42, 1598-1611.	0.7	5
136	Spatiotemporal Hemodynamic Complexity in Carotid Arteries: an Integrated Computational Hemodynamics & Complex Networks-Based Approach. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 67, 1-1.	2.5	5
137	Computational modelling in congenital heart disease: Challenges and opportunities. <i>International Journal of Cardiology</i> , 2019, 276, 116-117.	0.8	5
138	Improving the Hip Fracture Risk Prediction with a Statistical Shape-and-Intensity Model of the Proximal Femur. <i>Annals of Biomedical Engineering</i> , 2022, 50, 211-221.	1.3	5
139	Beat to beat analysis of mechanical heart valves by means of return map. <i>Journal of Medical Engineering and Technology</i> , 2007, 31, 94-100.	0.8	4
140	Usefulness of the PARIS Score to Evaluate the Ischemic-hemorrhagic Net Benefit With Ticagrelor and Prasugrel After an Acute Coronary Syndrome. <i>Revista Espanola De Cardiologia (English Ed)</i> , 2019, 72, 215-223.	0.4	4
141	Modeling methodology for defining a priori the hydrodynamics of a dynamic suspension bioreactor. Application to human induced pluripotent stem cell culture. <i>Journal of Biomechanics</i> , 2019, 94, 99-106.	0.9	4
142	A low-cost scalable 3D-printed sample-holder for agitation-based decellularization of biological tissues. <i>Medical Engineering and Physics</i> , 2020, 85, 7-15.	0.8	4
143	Noninvasive mechanical ventilation in the COVIDâ€™19 era: Proposal for a continuous positive airway pressure closedâ€™loop circuit minimizing air contamination, oxygen consumption, and noise. <i>Artificial Organs</i> , 2021, 45, 754-761.	1.0	4
144	Mismatch between morphological and functional assessment of the length of coronary artery disease. <i>International Journal of Cardiology</i> , 2021, 334, 1-9.	0.8	4

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145	Template Matching and Matrix Profile for Signal Quality Assessment of Carotid and Femoral Laser Doppler Vibrometer Signals. <i>Frontiers in Physiology</i> , 2021, 12, 775052.	1.3	4
146	Pathological Patient in Protocol Definition for Bench Testing of Mechanical Cardiac Support System. <i>International Journal of Artificial Organs</i> , 2003, 26, 64-72.	0.7	3
147	Nonlinear Analysis of Heart Rate Variability to Assess the Reaction of Ewe Fetuses Undergoing Fetal Cardiac Surgery. <i>International Journal of Artificial Organs</i> , 2012, 35, 376-384.	0.7	3
148	Mechanotransmission of haemodynamic forces by the endothelial glycocalyx in a full-scale arterial model. <i>Royal Society Open Science</i> , 2019, 6, 190607.	1.1	3
149	A Survey of Quantitative Descriptors of Arterial Flows. <i>Lecture Notes in Computational Vision and Biomechanics</i> , 2014, , 1-24.	0.5	3
150	Morphological Analysis of in Vivo Velocity Field in the Alteration of the Vasomotor Tone. <i>International Journal of Artificial Organs</i> , 2004, 27, 868-881.	0.7	2
151	The Evolution of Computational Hemodynamics as a Clinical Tool in Decision Making, Patient Specific Treatment and Clinical Management. Part II. <i>Annals of Biomedical Engineering</i> , 2015, 43, 1273-1274.	1.3	2
152	On the unexplored relationship between kinetic energy and helicity in prosthetic heart valves hemodynamics. <i>International Journal of Engineering Science</i> , 2022, 177, 103702.	2.7	2
153	Endovascular Stents: Market Vigilance and Risk Factors. <i>International Journal of Artificial Organs</i> , 2004, 27, 45-54.	0.7	1
154	Proposal for a Quantitative Description of Blood Spiral Flow in Medical Devices. <i>International Journal of Artificial Organs</i> , 2004, 27, 231-242.	0.7	1
155	Prediction of Shear Induced Platelet Activation in Prosthetic Heart Valves by Integrating Fluid-Structure Interaction Approach and Lagrangian-Based Blood Damage Model. , 2009, , .		1
156	Annual Incidence of Confirmed Stent Thrombosis and Clinical Predictors in Patients With ACS Treated With Ticagrelor or Prasugrel. <i>Revista Espanola De Cardiologia (English Ed)</i> , 2019, 72, 298-304.	0.4	1
157	Magnetic Vascular Positioner for Automatic Coronary Artery Bypass Grafting Does Not Significantly Increase the Risk of Failure Related to Local Fluid Dynamics: A Numeric Study. , 2007, , 721.		0
158	Fluid dynamics studies of cardiovascular medical devices and blood damage prediction. , 2008, 2008, 1419-22.		0
159	A Numerical Multiscale Study of the Haemodynamics in an Image-Based Model of Human Carotid Artery Bifurcation. , 2009, , .		0
160	Effects of Blood Rheology on Flow Topology and Blood-Vessel Interaction in Image-Based Carotid Bifurcation Numerical Model. , 2009, , .		0
161	Scale/Physics/Time Properties and Functions in Bioartificial Systems. <i>Materials Science Forum</i> , 0, 706-709, 121-126.	0.3	0
162	Effect of Common Carotid Artery Inlet Length on Helical Flow at the Carotid Bifurcation: Influence on Exposure to Disturbed Shear. , 2012, , .		0

#	ARTICLE	IF	CITATIONS
163	Patient-Specific Stented Coronary Bifurcations: Numerical Analysis of Near-Wall Quantities and the Bulk Flow. , 2013, , .		0
164	Cover Image, Volume 84, Issue 5. Proteins: Structure, Function and Bioinformatics, 2016, 84, C1-C1.	1.5	0
165	Letter by Steinman et al Regarding Article, "Wall Shear Stress and T1 Contrast Ratio Are Associated With Embolic Signals During Carotid Exposure in Endarterectomy". Stroke, 2018, 49, e341.	1.0	0
166	Carotid Artery Endarterectomy vs. Stenting: Are There Any Relevant Morphological and Hemodynamic Implications?. European Journal of Vascular and Endovascular Surgery, 2019, 58, e635-e636.	0.8	0
167	Searching into the invisible: hunting for present and future ischaemia with fractional flow reserveÅpullback and wall shear stress. European Heart Journal, 2020, 41, 1686-1686.	1.0	0
168	Evolutionary algorithms for beat-by-beat estimation of left ventricular mechanics. Annali Dell'Istituto Superiore Di Sanita, 2004, 40, 401-9.	0.2	0
169	Wall Shear Stress Topological Skeleton Variability Predicts Myocardial Infarction. European Journal of Vascular and Endovascular Surgery, 2022, 63, e39-e40.	0.8	0