Francesco Migliavacca

List of Publications by Year
in descending order

249 papers	9,542 citations	30551 56 h-index	60403 85 g-index
260 all docs	260 docs citations	260 times ranked	6750 citing authors

#	Article	IF	Citations
1	Development of a patient-specific cerebral vasculature fluidâ€“structure-interaction model. Journal of Biomechanics, 2022, 133, 110896.	0.9	2
2	Thrombus mechanics: How can we contribute to improve diagnostics and treatment?. Journal of Biomechanics, 2022, 132, 110935.	0.9	0
3	Semi-Automatic Reconstruction of Patient-Specific Stented Coronaries based on Data Assimilation and Computer Aided Design. Cardiovascular Engineering and Technology, 2022, , .	0.7	0
4	Evaluation of segmentation accuracy and its impact on patient-specific CFD analysis. International Journal on Interactive Design and Manufacturing, 2022, 16, 545-556.	1.3	5
5	Superficial femoral artery stenting: Impact of stent design and overlapping on the local hemodynamics. Computers in Biology and Medicine, 2022, 143, 105248.	3.9	10
6	Virtual Patient-Specific Thrombectomies: The Impact of the Vessel Morphology. European Journal of Vascular and Endovascular Surgery, 2022, 63, e37.	0.8	1
7	A predictive multiscale model of in-stent restenosis in femoral arteries: linking haemodynamics and gene expression with an agent-based model of cellular dynamics. Journal of the Royal Society Interface, 2022, 19, 20210871.	1.5	14
8	Patient-specific multi-scale design optimization of transcatheter aortic valve stents. Computer Methods and Programs in Biomedicine, 2022, 221, 106912.	2.6	4
9	Multiscale agent-based modeling of restenosis after percutaneous transluminal angioplasty: Effects of tissue damage and hemodynamics on cellular activity. Computers in Biology and Medicine, 2022, 147, 105753.	3.9	6
10	Self-expandable stent for thrombus removal modeling: Solid or beam finite elements?. Medical Engineering and Physics, 2022, 106, 103836.	0.8	4
11	The impact of calcification patterns in transcatheter aortic valve performance: a fluid-structure interaction analysis. Computer Methods in Biomechanics and Biomedical Engineering, 2021, 24, 375-383.	0.9	24
12	Nickelâ€“Titanium peripheral stents: Which is the best criterion for the multi-axial fatigue strength assessment?. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 113, 104142.	1.5	12
13	In silico approaches for transcatheter aortic valve replacement inspection. Expert Review of Cardiovascular Therapy, 2021, 19, 61-70.	0.6	10
14	Multimodal Loading Environment Predicts Bioresorbable Vascular Scaffoldsâ€™ Durability. Annals of Biomedical Engineering, 2021, 49, 1298-1307.	1.3	2
15	Applicability assessment of a stent-retriever thrombectomy finite-element model. Interface Focus, 2021, 11, 20190123.	1.5	39
16	Hemodynamic perturbations due to the presence of stents. , 2021, , 251-271.		4
17	Baseline local hemodynamics as predictor of lumen remodeling at 1-year follow-up in stented superficial femoral arteries. Scientific Reports, 2021, 11, 1613.	1.6	16
18	Local fluid dynamics in patients with bifurcated coronary lesions undergoing percutaneous coronary interventions. Cardiology Journal, 2021, 28, 321-329.	0.5	18

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19	In-Stent Restenosis Progression in Human Superficial Femoral Arteries: Dynamics of Lumen Remodeling and Impact of Local Hemodynamics. Annals of Biomedical Engineering, 2021, 49, 2349-2364.	1.3	19
20	Understanding TAVR device expansion as it relates to morphology of the bicuspid aortic valve: A simulation study. PLoS ONE, 2021, 16, e0251579.	1.1	6
21	Three dimensional reconstruction of coronary artery stents from optical coherence tomography: experimental validation and clinical feasibility. Scientific Reports, 2021, 11, 12252.	1.6	6
22	Impact of the Internal Carotid Artery Morphology on in silico Stent-Retriever Thrombectomy Outcome. Frontiers in Medical Technology, 2021, 3, 719909.	1.3	9
23	Selective laser melting of NiTi stents with open-cell and variable diameter. Smart Materials and Structures, 2021, 30, 105010.	1.8	17
24	Patient-specific computational simulation of coronary artery bifurcation stenting. Scientific Reports, 2021, 11, 16486.	1.6	13
25	How to Validate in silico Deployment of Coronary Stents: Strategies and Limitations in the Choice of Comparator. Frontiers in Medical Technology, 2021, 3, 702656.	1.3	12
26	The first virtual patient-specific thrombectomy procedure. Journal of Biomechanics, 2021, 126, 110622.	0.9	25
27	Applicability analysis to evaluate credibility of an in silico thrombectomy procedure. Journal of Biomechanics, 2021, 126, 110631.	0.9	13
28	Multicomponent Mechanical Characterization of Atherosclerotic Human Coronary Arteries: An Experimental and Computational Hybrid Approach. Frontiers in Physiology, 2021, 12, 733009.	1.3	5
29	Quantitative 3D analysis of tissue damage in a rat model of microembolization. Journal of Biomechanics, 2021, 128, 110723.	0.9	6
30	Finite Element Simulations of the ID Venous System to Treat Venous Compression Disorders: From Model Validation to Realistic Implant Prediction. Annals of Biomedical Engineering, 2021, 49, 1493-1506.	1.3	5
31	Modeling the stent deployment in coronary arteries and coronary bifurcations. , 2021, , 563-582.		2
32	3D modelling of drug-coated balloons for the treatment of calcified superficial femoral arteries. PLoS ONE, 2021, 16, e0256783.	1.1	9
33	A computational optimization study of a self-expandable transcatheter aortic valve. Computers in Biology and Medicine, 2021, 139, 104942.	3.9	9
34	Applications of computational fluid dynamics to congenital heart diseases: a practical review for cardiovascular professionals. Expert Review of Cardiovascular Therapy, 2021, 19, 907-916.	0.6	5
35	Multiscale Computational Modeling of Vascular Adaptation: A Systems Biology Approach Using Agent-Based Models. Frontiers in Bioengineering and Biotechnology, 2021, 9, 744560.	2.0	18
36	Computing patient-specific hemodynamics in stented femoral artery models obtained from computed tomography using a validated 3D reconstruction method. Medical Engineering and Physics, 2020, 75, 23-35.	0.8	30

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37	Double-Kissing Nanocrush for Bifurcation Lesions: Development, Bioengineering, Fluid Dynamics, and Initial Clinical Testing. Canadian Journal of Cardiology, 2020, 36, 852-859.	0.8	10
38	Multiscale Modeling of Superior Cavopulmonary Circulation: Hemi-Fontan and Bidirectional Glenn Are Equivalent. Seminars in Thoracic and Cardiovascular Surgery, 2020, 32, 883-892.	0.4	9
39	3D reconstruction of coronary artery bifurcations from coronary angiography and optical coherence tomography: feasibility, validation, and reproducibility. Scientific Reports, 2020, 10, 18049.	1.6	19
40	Biomechanical interpretation of observed fatigue fractures of peripheral Nitinol stents in the superficial femoral arteries through in silico modelling. Medical Hypotheses, 2020, 142, 109771.	0.8	10
41	A numerical investigationÂto evaluate the washout of blood compartments inÂa total artificial heart. Artificial Organs, 2020, 44, 976-986.	1.0	3
42	Nickel-Titanium self-knotting suture wire for deep surgical field: A validated numerical model. Materials Today Communications, 2020, 24, 101038.	0.9	1
43	Application of an OCT-based 3D reconstruction framework to the hemodynamic assessment of an ulcerated coronary artery plaque. Medical Engineering and Physics, 2020, 78, 74-81.	0.8	13
44	A fully coupled computational fluid dynamics â€“ agent-based model of atherosclerotic plaque development: Multiscale modeling framework and parameter sensitivity analysis. Computers in Biology and Medicine, 2020, 118, 103623.	3.9	37
45	Design and functional testing of a novel balloon-expandable cardiovascular stent in CoCr alloy produced by selective laser melting. Journal of Manufacturing Processes, 2020, 55, 161-173.	2.8	57
46	Modeling of braided stents: Comparison of geometry reconstruction and contact strategies. Journal of Biomechanics, 2020, 107, 109841.	0.9	25
47	Does clinical data quality affect fluid-structure interaction simulations of patient-specific stenotic aortic valve models?. Journal of Biomechanics, 2019, 94, 202-210.	0.9	13
48	In vivo and in vitro evaluation of a biodegradable magnesium vascular stent designed by shape optimization strategy. Biomaterials, 2019, 221, 119414.	5.7	81
49	On the Modeling of Patient-Specific Transcatheter Aortic Valve Replacement: A Fluidâ€“Structure Interaction Approach. Cardiovascular Engineering and Technology, 2019, 10, 437-455.	0.7	61
50	Is modeling stents still an important issue?. Procedia Structural Integrity, 2019, 15, 46-50.	0.3	3
51	Expert recommendations on the assessment of wall shear stress in human coronary arteries: existing methodologies, technical considerations, and clinical applications. European Heart Journal, 2019, 40, 3421-3433.	1.0	178
52	Design Rules for Producing Cardiovascular Stents by Selective Laser Melting: Geometrical Constraints and Opportunities. Procedia Structural Integrity, 2019, 15, 16-23.	0.3	30
53	Automatic segmentation of optical coherence tomography pullbacks of coronary arteries treated with bioresorbable vascular scaffolds: Application to hemodynamics modeling. PLoS ONE, 2019, 14, e0213603.	1.1	18
54	Hemocompatibility and safety of the Carmat Total Artifical Heart hybrid membrane. Heliyon, 2019, 5, e02914.	1.4	15

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55	Fatigue behavior of Nitinol medical devices under multi-axial non-proportional loads. MATEC Web of Conferences, 2019, 300, 12001.	0.1	3
56	The Atheroprotective Nature of Helical Flow in Coronary Arteries. Annals of Biomedical Engineering, 2019, 47, 425-438.	1.3	58
57	A Multiscale Model of Atherosclerotic Plaque Development: Toward a Coupling Between an Agent-Based Model and CFD Simulations. Lecture Notes in Computer Science, 2019, , 410-423.	1.0	5
58	Patient-Specific Modeling of Stented Coronary Arteries Reconstructed from Optical Coherence Tomography: Towards a Widespread Clinical Use of Fluid Dynamics Analyses. Journal of Cardiovascular Translational Research, 2018, 11, 156-172.	1.1	25
59	Simultaneous kissing stents to treat unprotected left main stem coronary artery bifurcation disease; stent expansion, vessel injury, hemodynamics, tissue healing, restenosis, and repeat revascularization. Catheterization and Cardiovascular Interventions, 2018, 92, E381-E392.	0.7	31
60	Fatigue Assessment of Nickelâ€“Titanium Peripheral Stents: Comparison of Multi-Axial Fatigue Models. Shape Memory and Superelasticity, 2018, 4, 186-196.	1.1	24
61	Differences in rotational positioning and subsequent distal main branch rewiring of the Tryton stent: An optical coherence tomography and computational study. Catheterization and Cardiovascular Interventions, 2018, 92, 897-906.	0.7	5
62	An interactive simulation tool for patient-specific clinical decision support in single-ventricle physiology. Journal of Thoracic and Cardiovascular Surgery, 2018, 155, 712-721.	0.4	24
63	Vulnerability in regionally ischemic human heart. Effect of the extracellular potassium concentration. Journal of Computational Science, 2018, 24, 160-168.	1.5	4
64	Editorial: Special Issue on Verification, Validation, and Uncertainty Quantification of Cardiovascular Models: Towards Effective VVUQ for Translating Cardiovascular Modelling to Clinical Utility. Cardiovascular Engineering and Technology, 2018, 9, 539-543.	0.7	40
65	A Patient-Specific Study Investigating the Relation between Coronary Hemodynamics and Neo-Intimal Thickening after Bifurcation Stenting with a Polymeric Bioresorbable Scaffold. Applied Sciences (Switzerland), 2018, 8, 1510.	1.3	6
66	Modeling and Experimental Studies of Coating Delamination of Biodegradable Magnesium Alloy Cardiovascular Stents. ACS Biomaterials Science and Engineering, 2018, 4, 3864-3873.	2.6	31
67	Numerical Approach to Study the Behavior of an Artificial Ventricle: Fluidâ€“Structure Interaction Followed By Fluid Dynamics With Moving Boundaries. Artificial Organs, 2018, 42, E315-E324.	1.0	15
68	Effect of working environment and procedural strategies on mechanical performance of bioresorbable vascular scaffolds. Acta Biomaterialia, 2018, 82, 34-43.	4.1	26
69	Biomechanical Impact of Wrong Positioning of a Dedicated Stent for Coronary Bifurcations: A Virtual Bench Testing Study. Cardiovascular Engineering and Technology, 2018, 9, 415-426.	0.7	13
70	The influence of systemic-to-pulmonary arterial shunts and peripheral vasculatures in univentricular circulations: Focus on coronary perfusion and aortic arch hemodynamics through computational multi-domain modeling. Journal of Biomechanics, 2018, 79, 97-104.	0.9	7
71	Study on the Accuracy of Structural and FSI Heart Valves Simulations. Cardiovascular Engineering and Technology, 2018, 9, 723-738.	0.7	28
72	Simplified Multistage Computational Approach to Assess the Fatigue Behavior of a Niti Transcatheter Aortic Valve During In Vitro Tests: A Proof-of-Concept Study. Journal of Medical Devices, Transactions of the ASME, 2017, 11, .	0.4	2

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73	Healthy and diseased coronary bifurcation geometries influence near-wall and intravascular flow: A computational exploration of the hemodynamic risk. Journal of Biomechanics, 2017, 58, 79-88.	0.9	57
74	A robust construction algorithm of the centerline skeleton for complex aortic vascular structure using computational fluid dynamics. Computers in Biology and Medicine, 2017, 86, 6-17.	3.9	5
75	Evaluation of an aortic valve prosthesis: Fluid-structure interaction or structural simulation?. Journal of Biomechanics, 2017, 58, 45-51.	0.9	67
76	The role of inelastic deformations in the mechanical response of endovascular shape memory alloy devices. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 391-404.	1.0	14
77	Patient-specific biomechanical model of hypoplastic left heart to predict post-operative cardio-circulatory behaviour. Medical Engineering and Physics, 2017, 47, 85-92.	0.8	5
78	A framework for computational fluid dynamic analyses of patient-specific stented coronary arteries from optical coherence tomography images. Medical Engineering and Physics, 2017, 47, 105-116.	0.8	30
79	Mathematical modelling of the maternal cardiovascular system in the three stages of pregnancy. Medical Engineering and Physics, 2017, 47, 55-63.	0.8	11
80	Hemodynamics of Stent Implantation Procedures in Coronary Bifurcations: An In Vitro Study. Annals of Biomedical Engineering, 2017, 45, 542-553.	1.3	24
81	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. Annals of Thoracic Surgery, 2017, 103, 645-654.	0.7	26
82	How successful is successful? Aortic arch shape after successful aortic coarctation repair correlates with left ventricular function. Journal of Thoracic and Cardiovascular Surgery, 2017, 153, 418-427.	0.4	61
83	Pledget-Armed Sutures Affect the Haemodynamic Performance of Biologic Aortic Valve Substitutes: A Preliminary Experimental and Computational Study. Cardiovascular Engineering and Technology, 2017, 8, 17-29.	0.7	30
84	Reconstruction of stented coronary arteries from optical coherence tomography images: Feasibility, validation, and repeatability of a segmentation method. PLoS ONE, 2017, 12, e0177495.	1.1	25
85	Impact of plaque type and side branch geometry on side branch compromise after provisional stent implantation: a simulation study. EuroIntervention, 2017, 13, e236-e245.	1.4	13
86	A method for coronary bifurcation centerline reconstruction from angiographic images based on focalization optimization. , 2016, 2016, 4165-4168.		0
87	Numerical model of a valvuloplasty balloon: in vitro validation in a rapid-prototyped phantom. BioMedical Engineering OnLine, 2016, 15, 37.	1.3	6
88	Can finite element models of ballooning procedures yield mechanical response of the cardiovascular site to overexpansion?. Journal of Biomechanics, 2016, 49, 2778-2784.	0.9	9
89	Integrated Stent Models Based on Dimension Reduction: Review and Future Perspectives. Annals of Biomedical Engineering, 2016, 44, 604-617.	1.3	13
90	Computational replication of the patient-specific stenting procedure for coronary artery bifurcations: From OCT and CT imaging to structural and hemodynamics analyses. Journal of Biomechanics, 2016, 49, 2102-2111.	0.9	60

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91	Effects of Vessel Tortuosity on Coronary Hemodynamics: An Idealized and Patient-Specific Computational Study. Annals of Biomedical Engineering, 2016, 44, 2228-2239.	1.3	51
92	Multiscale modelling of single-ventricle hearts for clinical decision support: a Leducq Transatlantic Network of Excellence. European Journal of Cardio-thoracic Surgery, 2016, 49, 365-368.	0.6	10
93	A Computational Approach for the Prediction of Fatigue Behaviour in Peripheral Stents: Application to a Clinical Case. Annals of Biomedical Engineering, 2016, 44, 536-547.	1.3	30
94	Fluidâ€“Structure Interaction Model of a Percutaneous Aortic Valve: Comparison with an In Vitro Test and Feasibility Study in a Patient-Specific Case. Annals of Biomedical Engineering, 2016, 44, 590-603.	1.3	66
95	Computational Modeling to Predict Fatigue Behavior of NiTi Stents: What Do We Need?. Journal of Functional Biomaterials, 2015, 6, 299-317.	1.8	32
96	Local Blood Flow Patterns in Stented Coronary Bifurcations: An Experimental and Numerical Study. Journal of Applied Biomaterials and Functional Materials, 2015, 13, 116-126.	0.7	13
97	Modeling of Blood Flow in Stented Coronary Arteries. , 2015, , 335-370.		3
98	A COMPUTATIONAL STUDY TO INVESTIGATE DEBONDING IN COATED BIORESORBABLE STENTS. Journal of Mechanics in Medicine and Biology, 2015, 15, 1540015.	0.3	4
99	A multiscale model for the study of cardiac biomechanics in single-ventricle surgeries: a clinical case. Interface Focus, 2015, 5, 20140079.	1.5	16
100	Biomechanical Modeling to Improve Coronary Artery Bifurcation Stenting. JACC: Cardiovascular Interventions, 2015, 8, 1281-1296.	1.1	84
101	Moving Along: In biomechanics, rehabilitation engineering, and movement analysis, Italian researchers are making great strides.. IEEE Pulse, 2015, 6, 50-57.	0.1	0
102	Integration of Clinical Data Collected at Different Times for Virtual Surgery in Single Ventricle Patients: A Case Study. Annals of Biomedical Engineering, 2015, 43, 1310-1320.	1.3	15
103	Computational Modeling of Pathophysiologic Responses to Exercise in Fontan Patients. Annals of Biomedical Engineering, 2015, 43, 1335-1347.	1.3	14
104	The assisted bidirectional Glenn: A novel surgical approach for first-stage single-ventricle heart palliation. Journal of Thoracic and Cardiovascular Surgery, 2015, 149, 699-705.	0.4	38
105	First report on free expansion simulations of a dedicated bifurcation stent mounted on a stepped balloon. EuroIntervention, 2015, 10, e1-e3.	1.4	6
106	Virtual bench testing to study coronary bifurcation stenting. EuroIntervention, 2015, 11, V31-V34.	1.4	25
107	Patient-specific computer modelling of coronary bifurcation stenting: the John Doe programme. EuroIntervention, 2015, 11, V35-V39.	1.4	26
108	From Histology and Imaging Data to Models for In-Stent Restenosis. International Journal of Artificial Organs, 2014, 37, 786-800.	0.7	14

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109	Computational Models of Aortic Coarctation in Hypoplastic Left Heart Syndrome: Considerations on Validation of a Detailed 3D model. International Journal of Artificial Organs, 2014, 37, 371-381.	0.7	7
110	A Simulation Protocol for Exercise Physiology in Fontan Patients Using a Closed Loop Lumped-Parameter Model. Journal of Biomechanical Engineering, 2014, 136, .	0.6	50
111	Modeling and Experimental Studies of Peeling of Polymer Coating for Biodegradable Magnesium Alloy Stents. Rare Metal Materials and Engineering, 2014, 43, 2877-2882.	0.8	9
112	Development of biodegradable magnesium alloy stents with coating. Frattura Ed Integrita Strutturale, 2014, 8, 364-375.	0.5	4
113	Biodegradable magnesium coronary stents: material, design and fabrication. International Journal of Computer Integrated Manufacturing, 2014, 27, 936-945.	2.9	35
114	Plaque mechanics. Journal of Biomechanics, 2014, 47, 763-764.	0.9	13
115	Contribution of Mechanical and Fluid Stresses to the Magnitude of In-stent Restenosis at the Level of Individual Stent Struts. Cardiovascular Engineering and Technology, 2014, 5, 164-175.	0.7	20
116	On the necessity of modelling fluidâ€“structure interaction for stented coronary arteries. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 34, 217-230.	1.5	61
117	Numerical blood flow simulation in surgical corrections: what do we need for an accurate analysis?. Journal of Surgical Research, 2014, 186, 44-55.	0.8	27
118	An integrated approach to patient-specific predictive modeling for single ventricle heart palliation. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 1572-1589.	0.9	55
119	Computational Study of Axial Fatigue for Peripheral Nitinol Stents. Journal of Materials Engineering and Performance, 2014, 23, 2606-2613.	1.2	15
120	Influence of plaque calcifications on coronary stent fracture: A numerical fatigue life analysis including cardiac wall movement. Journal of Biomechanics, 2014, 47, 899-907.	0.9	55
121	Ventriculoarterial coupling in palliated hypoplastic left heart syndrome: Noninvasive assessment of the effects of surgical arch reconstruction and shunt type. Journal of Thoracic and Cardiovascular Surgery, 2014, 148, 1526-1533.	0.4	27
122	Fatigue behaviour of Nitinol peripheral stents: The role of plaque shape studied with computational structural analyses. Medical Engineering and Physics, 2014, 36, 842-849.	0.8	55
123	The Effect of Modified Blalock-Taussig Shunt Size and Coarctation Severity on Coronary Perfusion After the Norwood Operation. Annals of Thoracic Surgery, 2014, 98, 648-654.	0.7	11
124	Stent deformation, physical stress, and drug elution obtained with provisional stenting, conventional culotte and Tryton-based culotte to treat bifurcations: a virtual simulation study. EuroIntervention, 2014, 9, 1441-1453.	1.4	25
125	Drug delivery patterns for different stenting techniques in coronary bifurcations: a comparative computational study. Biomechanics and Modeling in Mechanobiology, 2013, 12, 657-669.	1.4	35
126	A novel flow chamber for biodegradable alloy assessment in physiologically realistic environments. Review of Scientific Instruments, 2013, 84, 094301.	0.6	13

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127	Effects of pulmonary artery banding and retrograde aortic arch obstruction on the hybrid palliation of hypoplastic left heart syndrome. Journal of Thoracic and Cardiovascular Surgery, 2013, 146, 1341-1348.	0.4	37
128	Computational fluid dynamic simulations of image-based stented coronary bifurcation models. Journal of the Royal Society Interface, 2013, 10, 20130193.	1.5	104
129	Modeling Stented Coronary Arteries: Where We are, Where to Go. Annals of Biomedical Engineering, 2013, 41, 1428-1444.	1.3	58
130	Coronary stenting: From optical coherence tomography to fluid dynamic simulations. , 2013, , .		1
131	Modeling stent deployment in realistic arterial segment geometries: The effect of the plaque composition. , 2013, , .		6
132	Real time prediction of the fatigue behavior of peripheral stents. , 2013, , .		1
133	Experimental data confirm numerical modeling of the degradation process of magnesium alloys stents. Acta Biomaterialia, 2013, 9, 8730-8739.	4.1	60
134	Patient-specific simulations of stenting procedures in coronary bifurcations: Two clinical cases. Medical Engineering and Physics, 2013, 35, 1272-1281.	0.8	92
135	Predictive modeling of the virtual Hemi-Fontan operation for second stage single ventricle palliation: Two patient-specific cases. Journal of Biomechanics, 2013, 46, 423-429.	0.9	71
136	Computational Modelling of In Vitro Set-Ups for Peripheral Self-Expanding Nitinol Stents: The Importance of Stentâ€“Wall Interaction in the Assessment of the Fatigue Resistance. Cardiovascular Engineering and Technology, 2013, 4, 474-484.	0.7	18
137	Patient-Specific Stented Coronary Bifurcations: Numerical Analysis of Near-Wall Quantities and the Bulk Flow. , 2013, , .		0
138	An Automated Simulation Protocol for Exercise Physiology in Fontan Patients Using a Closed-Loop Lumped-Parameter Model. , 2013, , .		0
139	Feasibility of conductance catheter-derived pressureâ€“volume loops to investigate ventricular mechanics in shunted single ventricles. Cardiology in the Young, 2013, 23, 776-779.	0.4	3
140	Mock Circulatory System of the Fontan Circulation to Study Respiration Effects on Venous Flow Behavior. ASAIO Journal, 2013, 59, 253-260.	0.9	25
141	Simulation of oxygen transfer in stented arteries and correlation with inâ€stent restenosis. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1373-1387.	1.0	29
142	Enhancement of Peripheral Stents Reliability: Developing Interactive Procedure Planning by Means of Numerical Simulations and Clinical Software Development. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.4	0
143	Computational fluid dynamics models and congenital heart diseases. Frontiers in Pediatrics, 2013, 1, 4.	0.9	37
144	An Immersed Boundary Method for Drug Release Applied to Drug Eluting Stents Dedicated to Arterial Bifurcations. , 2013, , 401-409.		1

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145	Optimization of Shunt Placement for the Norwood Surgery Using Multi-Domain Modeling. Journal of Biomechanical Engineering, 2012, 134, 051002.	0.6	54
146	FATIGUE BEHAVIOR CHARACTERIZATION OF NITINOL FOR PERIPHERAL STENTS. Functional Materials Letters, 2012, 05, 1250012.	0.7	30
147	Finite Element Strategies to Satisfy Clinical and Engineering Requirements in the Field of Percutaneous Valves. Annals of Biomedical Engineering, 2012, 40, 2663-2673.	1.3	17
148	Computational fluid dynamics of stented coronary bifurcations studied with a hybrid discretization method. European Journal of Mechanics, B/Fluids, 2012, 35, 76-84.	1.2	39
149	Respiratory effects on hemodynamics in patient-specific CFD models of the Fontan circulation under exercise conditions. European Journal of Mechanics, B/Fluids, 2012, 35, 61-69.	1.2	27
150	Reduced ascending aorta distensibility relates to adverse ventricular mechanics in patients with hypoplastic left heart syndrome: Noninvasive study using wave intensity analysis. Journal of Thoracic and Cardiovascular Surgery, 2012, 144, 1307-1314.	0.4	46
151	FATIGUE BEHAVIOUR OF NITINOL PERIPHERAL STENTS: COMPUTATIONAL SIMULATIONS OF IN VITRO SET-UPS. Journal of Biomechanics, 2012, 45, S640.	0.9	2
152	Patient-specific simulations of transcatheter aortic valve stent implantation. Medical and Biological Engineering and Computing, 2012, 50, 183-192.	1.6	94
153	Virtual and real bench testing of a new percutaneous valve device: a case study. EuroIntervention, 2012, 8, 120-128.	1.4	20
154	Different Finite Element Strategies to Satisfy Clinical and Engineering Requirements in Modeling a Novel Percutaneous Device. , 2012, , .		0
155	Model Reduction Strategies Enable Computational Analysis of Controlled Drug Release from Cardiovascular Stents. SIAM Journal on Applied Mathematics, 2011, 71, 2312-2333.	0.8	25
156	A Coupled Computational Framework for Multiscale Modeling and Optimization of Single Ventricle Repair. , 2011, , .		0
157	Biomedical Applications of Shape Memory Alloys. Journal of Metallurgy, 2011, 2011, 1-15.	1.1	382
158	Virtual surgeries in patients with congenital heart disease: a multi-scale modelling test case. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 4316-4330.	1.6	76
159	Experimental Investigation of the Local Blood Flow Pattern in Stented Coronary Bifurcations. , 2011, , .		0
160	Mechanical Properties of Open-Cell, Self-Expandable Shape Memory Alloy Carotid Stents. Artificial Organs, 2011, 35, 74-80.	1.0	30
161	Finite element analyses for design evaluation of biodegradable magnesium alloy stents in arterial vessels. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1733-1740.	1.7	76
162	Hemodynamics and In-stent Restenosis: Micro-CT Images, Histology, and Computer Simulations. Annals of Biomedical Engineering, 2011, 39, 2615-2626.	1.3	56

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163	Continuum damage model for bioresorbable magnesium alloy devices â€" Application to coronary stents. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 352-365.	1.5	136
164	Multiscale models of the hybrid palliation for hypoplastic left heart syndrome. Journal of Biomechanics, 2011, 44, 767-770.	0.9	29
165	Boundary conditions of patient-specific fluid dynamics modelling of cavopulmonary connections: possible adaptation of pulmonary resistances results in a critical issue for a virtual surgical planning. Interface Focus, 2011, 1, 297-307.	1.5	31
166	Use of Mathematical Modeling to Compare and Predict Hemodynamic Effects Between Hybrid and Surgical Norwood Palliations for Hypoplastic Left Heart Syndrome. Circulation, 2011, 124, S204-10.	1.6	70
167	Trends in biomedical engineering: focus on Smart Bio-Materials and Drug Delivery. Journal of Applied Biomaterials and Biomechanics, 2011, 9, 87-97.	0.4	9
168	Sequential Structural and Fluid Dynamic Numerical Simulations of a Stented Bifurcated Coronary Artery. Journal of Biomechanical Engineering, 2011, 133, 121010.	0.6	60
169	Trends in biomedical engineering: focus on Patient Specific Modeling and Life Support Systems. Journal of Applied Biomaterials and Biomechanics, 2011, 9, 109-117.	0.4	1
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