Alison L Marsden

List of Articles by Year
in descending order

203 PR articles	7,232 PR citations	41546 47 PR h-index	59904 81 g-index
248 documents	8304 doc citations	43055 50 h-index	7897 citing authors

#	Article	IF	Citations
1	Assessment of Aortic Dissection Remodeling With Patient-Specific Fluidâ€“Structure Interaction Models. IEEE Transactions on Biomedical Engineering, 2025, 72, 953-964.	3.2	11
2	Assessing the Impact of Cardiac Output and Valve Orientation on Bioprosthetic Pulmonary Valve Hemodynamics Using In Vitro 4D-Flow MRI and High-Speed Imaging. Cardiovascular Engineering and Technology, 2025, 16, 138-153.	1.5	1
3	A software benchmark for cardiac elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2025, 435, 117485.	6.9	8
4	Bayesian Windkessel calibration using optimized zero-dimensional surrogate models. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2025, 383, .	2.5	3
5	Multiphysics Simulations of a Bioprinted Pulsatile Fontan Conduit. Journal of Biomechanical Engineering, 2025, 147, .	1.4	7
6	Constrained optimization of scaffold behavior for improving tissue engineered vascular grafts. Journal of Biomechanics, 2025, 186, 112670.	2.2	2
7	Experiments and Simulations to Assess Exercise-Induced Pressure Drop Across Aortic Coarctations. Journal of Biomechanical Engineering, 2025, 147, .	1.4	3
8	Personalized and uncertainty-aware coronary hemodynamics simulations: From Bayesian estimation to improved multi-fidelity uncertainty quantification. Computer Methods and Programs in Biomedicine, 2025, 271, 108951.	4.6	2
9	Patient-specific computational flow simulation reveals significant differences in paravisceral aortic hemodynamics between fenestrated and branched endovascular aneurysm repair. JVS Vascular Science, 2024, 5, 100183.	0.7	3
10	Learning reduced-order models for cardiovascular simulations with graph neural networks. Computers in Biology and Medicine, 2024, 168, 107676.	6.3	45
11	A modular framework for implicit 3Dâ€“0D coupling in cardiac mechanics. Computer Methods in Applied Mechanics and Engineering, 2024, 421, 116764.	6.9	17
12	Computational modelling of cardiac resynchronization therapy in congenital heart disease: fantasy or the future?. Europace, 2024, 26, .	2.0	1
13	Virtual Shape-Editing of Patient-Specific Vascular Models Using Regularized Kelvinlets. IEEE Transactions on Biomedical Engineering, 2024, 71, 1913-1925.	3.2	6
14	Tissue engineered vascular grafts are resistant to the formation of dystrophic calcification. Nature Communications, 2024, 15, .	13.7	17
15	A mechanically consistent unified formulation for fluid-porous-structure-contact interaction. Computer Methods in Applied Mechanics and Engineering, 2024, 425, 116942.	6.9	8
16	A probabilistic neural twin for treatment planning in peripheral pulmonary artery stenosis. International Journal for Numerical Methods in Biomedical Engineering, 2024, 40, .	2.2	5
17	Hemodynamics and Wall Mechanics of Vascular Graft Failure. Arteriosclerosis, Thrombosis, and Vascular Biology, 2024, 44, 1065-1085.	6.0	29
18	Effect of graft sizing in valve-sparing aortic root replacement for bicuspid aortic valve: The Goldilocks ratio. JTCVS Techniques, 2024, 25, 1-7.	0.7	4

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19	Personalized coronary and myocardial blood flow models incorporating CT perfusion imaging and synthetic vascular trees. npj Imaging, 2024, 2, .	2.3	15
20	Quantification and Visualization of CT Myocardial Perfusion Imaging to Detect Ischemia-Causing Coronary Arteries. IEEE Transactions on Medical Imaging, 2024, 43, 3690-3697.	7.6	0
21	Improved multifidelity Monte Carlo estimators based on normalizing flows and dimensionality reduction techniques. Computer Methods in Applied Mechanics and Engineering, 2024, 429, 117119.	6.9	13
22	Investigation of a chronic single-stage sheep Fontan model. JTCVS Open, 2024, 21, 268-278.	1.2	4
23	FSGe: A fast and strongly-coupled 3D fluidâ€“solid-growth interaction method. Computer Methods in Applied Mechanics and Engineering, 2024, 431, 117259.	6.9	12
24	Deforming Patient-Specific Models of Vascular Anatomies to Represent Stent Implantation via Extended Position Based Dynamics. Cardiovascular Engineering and Technology, 2024, 15, 760-774.	1.5	2
25	Cardiac MRI Predictors of ArrhythmicÂSudden Cardiac Events in Patients With Fontan Circulation. Journal of the American College of Cardiology, 2024, 84, 2417-2426.	2.3	5
26	svMorph: Interactive Geometry-Editing Tools for Virtual Patient-Specific Vascular Anatomies. Journal of Biomechanical Engineering, 2023, 145, .	1.4	9
27	Recent advances in quantifying the mechanobiology of cardiac development via computational modeling. Current Opinion in Biomedical Engineering, 2023, 25, 100428.	2.8	5
28	Beyond CFD: Emerging methodologies for predictive simulation in cardiovascular health and disease. Biophysics Reviews, 2023, 4, .	3.2	54
29	Predictors of Myocardial Ischemia in Patients with Kawasaki Disease: Insights from Patient-Specific Simulations of Coronary Hemodynamics. Journal of Cardiovascular Translational Research, 2023, 16, 1099-1109.	2.1	13
30	Investigating the hemodynamics of Berlin Heart EXCOR support in Norwood patients across diverse clinical scenarios with computational modeling. Artificial Organs, 2023, 47, 1133-1150.	1.8	4
31	Comparison of Immersed Boundary Simulations of Heart Valve Hemodynamics Against In Vitro 4D Flow MRI Data. Annals of Biomedical Engineering, 2023, 51, 2267-2288.	3.5	11
32	Passive performance evaluation and validation of a viscous impeller pump for subpulmonary fontan circulatory support. Scientific Reports, 2023, 13, .	3.4	13
33	A fluidâ€“solid-growth solver for cardiovascular modeling. Computer Methods in Applied Mechanics and Engineering, 2023, 417, 116312.	6.9	28
34	A computational growth and remodeling framework for adaptive and maladaptive pulmonary arterial hemodynamics. Biomechanics and Modeling in Mechanobiology, 2023, 22, 1935-1951.	2.3	12
35	Assessing Differences in Aortic Haemodynamics Between Two vs. Four Vessel Fenestrated Endovascular Aortic Repair using Patient Specific Computational Flow Simulation. European Journal of Vascular and Endovascular Surgery, 2023, 66, 739-740.	2.0	2
36	Hemodynamic effects of entry and exit tear size in aortic dissection evaluated with in vitro magnetic resonance imaging and fluidâ€“structure interaction simulation. Scientific Reports, 2023, 13, .	3.4	30

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37	Computational Evaluation of Venous Graft Geometries in Coronary Artery Bypass Surgery. Seminars in Thoracic and Cardiovascular Surgery, 2022, 34, 521-532.	1.7	20
38	A Mechanistic Lumped Parameter Model of the Berlin Heart EXCOR to Analyze Device Performance and Physiologic Interactions. Cardiovascular Engineering and Technology, 2022, 13, 603-623.	1.5	3
39	Tissue engineered vascular grafts transform into autologous neovessels capable of native function and growth. Communications Medicine, 2022, 2, .	4.5	45
40	Patient Specific Changes in Aortic Haemodynamics Are Associated with Thrombotic Risk After Fenestrated Endovascular Aneurysm Repair with Large Diameter Endografts. European Journal of Vascular and Endovascular Surgery, 2022, 63, e43-e44.	2.0	0
41	Patient-specific fluidâ€“structure simulations of anomalous aortic origin of right coronary arteries. JTCVS Techniques, 2022, 13, 144-162.	0.7	26
42	Colocalization of Coronary Plaque with Wall Shear Stress in Myocardial Bridge Patients. Cardiovascular Engineering and Technology, 2022, 13, 797-807.	1.5	4
43	Virtual Transcatheter Interventions for Peripheral Pulmonary Artery Stenosis in Williams and Alagille Syndromes. Journal of the American Heart Association, 2022, 11, .	4.0	29
44	A reduced unified continuum formulation for vascular fluidâ€“structure interaction. Computer Methods in Applied Mechanics and Engineering, 2022, 394, 114852.	6.9	6
45	Numerical investigation of abdominal aortic aneurysm hemodynamics using the reduced unified continuum formulation for vascular fluid-structure interaction. Forces in Mechanics, 2022, 7, 100089.	3.1	6
46	Patient-specific changes in aortic hemodynamics is associated with thrombotic risk after fenestrated endovascular aneurysm repair with large diameter endografts. JVS Vascular Science, 2022, 3, 219-231.	0.7	12
47	How viscous is the beating heart? Insights from a computational study. Computational Mechanics, 2022, 70, 565-579.	3.1	9
48	Controlled Comparison of Simulated Hemodynamics Across Tricuspid and Bicuspid Aortic Valves. Annals of Biomedical Engineering, 2022, 50, 1053-1072.	3.5	10
49	Framework for patient-specific simulation of hemodynamics in heart failure with counterpulsation support. Frontiers in Cardiovascular Medicine, 2022, 9, .	2.5	3
50	Blood flow modeling reveals improved collateral artery performance during the regenerative period in mammalian hearts. Nature Cardiovascular Research, 2022, 1, 775-790.	8.4	21
51	Validation of the Reduced Unified Continuum Formulation Against In Vitro 4D-Flow MRI. Annals of Biomedical Engineering, 2022, 51, 377-393.	3.5	19
52	4D flow cardiovascular magnetic resonance recovery profiles following pulmonary endarterectomy in chronic thromboembolic pulmonary hypertension. Journal of Cardiovascular Magnetic Resonance, 2022, 24, 59.	4.3	6
53	Use of patient-specific computational models for optimization of aortic insufficiency after implantation of left ventricular assist device. Journal of Thoracic and Cardiovascular Surgery, 2021, 162, 1556-1563.	2.6	23
54	A note on the accuracy of the generalizedâ€Î± scheme for the incompressible Navierâ€Stokes equations. International Journal for Numerical Methods in Engineering, 2021, 122, 638-651.	2.9	19

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55	On the impact of vessel wall stiffness on quantitative flow dynamics in a synthetic model of the thoracic aorta. Scientific Reports, 2021, 11, .	3.4	28
56	Reprint of: Fluid-structure interaction modeling of blood flow in the pulmonary arteries using the unified continuum and variational multiscale formulation. Mechanics Research Communications, 2021, 112, 103704.	2.0	0
57	Mathematical Modeling of the Vascular System. Notices of the American Mathematical Society, 2021, 68, .	0.2	2
58	On the Periodicity of Cardiovascular Fluid Dynamics Simulations. Annals of Biomedical Engineering, 2021, 49, 3574-3592.	3.5	32
59	Hemodynamic performance of tissue-engineered vascular grafts in Fontan patients. Npj Regenerative Medicine, 2021, 6, .	6.0	34
60	Predictive Modeling of Secondary Pulmonary Hypertension in Left Ventricular Diastolic Dysfunction. Frontiers in Physiology, 2021, 12, .	2.8	13
61	Model order reduction of flow based on a modular geometrical approximation of blood vessels. Computer Methods in Applied Mechanics and Engineering, 2021, 380, 113762.	6.9	32
62	Patient-Specific Computational Fluid Dynamics Reveal Localized Flow Patterns Predictive of Postâ€“Left Ventricular Assist Device Aortic Incompetence. Circulation: Heart Failure, 2021, 14, .	4.4	16
63	Computational modeling of blood component transport related to coronary artery thrombosis in Kawasaki disease. PLoS Computational Biology, 2021, 17, e1009331.	3.1	19
64	A design-based model of the aortic valve for fluid-structure interaction. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2413-2435.	2.3	27
65	Computational simulation-derived hemodynamic and biomechanical properties of the pulmonary arterial tree early in the course of ventricular septal defects. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2471-2489.	2.3	16
66	A continuum and computational framework for viscoelastodynamics: I. Finite deformation linear models. Computer Methods in Applied Mechanics and Engineering, 2021, 385, 114059.	6.9	23
67	Geometric uncertainty in patient-specific cardiovascular modeling with convolutional dropout networks. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114038.	6.9	23
68	Patient-specific computational flow modelling for assessing hemodynamic changes following fenestrated endovascular aneurysm repair. JVS Vascular Science, 2021, 2, 53-69.	0.7	20
69	In Vitro Assessment of Right Ventricular Outflow Tract Anatomy and Valve Orientation Effects on Bioprosthetic Pulmonary Valve Hemodynamics. Cardiovascular Engineering and Technology, 2021, 12, 215-231.	1.5	14
70	Contractile and hemodynamic forces coordinate Notch1b-mediated outflow tract valve formation. JCI Insight, 2021, 4, .	5.4	45
71	Preoperative Computed Tomography Angiography Reveals Leaflet-Specific Calcification and Excursion Patterns in Aortic Stenosis. Circulation: Cardiovascular Imaging, 2021, 14, 1122-1132.	3.0	12
72	Multiscale Modeling of Superior Cavopulmonary Circulation: Hemi-Fontan and Bidirectional Glenn Are Equivalent. Seminars in Thoracic and Cardiovascular Surgery, 2020, 32, 883-892.	1.7	14

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73	Vascular adaptation in the presence of external support - A modeling study. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103943.	3.3	14
74	Neural Network Vessel Lumen Regression for Automated Lumen Cross-Section Segmentation in Cardiovascular Image-Based Modeling. Cardiovascular Engineering and Technology, 2020, 11, 621-635.	1.5	17
75	The effects of clinicallyâ€derived parametric data uncertainty in patientâ€specific coronary simulations with deformable walls. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, .	2.2	41
76	The nested block preconditioning technique for the incompressible Navierâ€“Stokes equations with emphasis on hemodynamic simulations. Computer Methods in Applied Mechanics and Engineering, 2020, 367, 113122.	6.9	21
77	Spontaneous reversal of stenosis in tissue-engineered vascular grafts. Science Translational Medicine, 2020, 12, .	12.5	113
78	Image-based scaling laws for somatic growth and pulmonary artery morphometry from infancy to adulthood. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 319, H432-H442.	3.6	13
79	Fluid-structure interaction modeling of blood flow in the pulmonary arteries using the unified continuum and variational multiscale formulation. Mechanics Research Communications, 2020, 107, 103556.	2.0	40
80	A concurrent implementation of the surrogate management framework with application to cardiovascular shape optimization. Optimization and Engineering, 2020, 21, 1487-1536.	1.2	7
81	Fluidâ€structure interaction simulations of patient-specific aortic dissection. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1607-1628.	2.3	173
82	Exercise MRI highlights heterogeneity in cardiovascular mechanics among patients with Fontan circulation: proposed protocol for routine evaluation. Journal of Thoracic Disease, 2020, 12, 1204-1212.	1.2	4
83	Low Wall Shear Stress Is Associated with Saphenous Vein Graft Stenosis in Patients with Coronary Artery Bypass Grafting. Journal of Cardiovascular Translational Research, 2020, 14, 770-781.	2.1	38
84	Multilevel and multifidelity uncertainty quantification for cardiovascular hemodynamics. Computer Methods in Applied Mechanics and Engineering, 2020, 365, 113030.	6.9	82
85	Validation of Wall Shear Stress Assessment in Non-invasive Coronary CTA versus Invasive Imaging: A Patient-Specific Computational Study. Annals of Biomedical Engineering, 2020, 49, 1151-1168.	3.5	17
86	MULTIFIDELITY ESTIMATORS FOR CORONARY CIRCULATION MODELS UNDER CLINICALLY INFORMED DATA UNCERTAINTY. , 2020, 10, 449-466.		21
87	Integrated Image-Based Computational Fluid Dynamics Modeling Software as an Instructional Tool. Journal of Biomechanical Engineering, 2020, 142, .	1.4	3
88	Intracardiac 4D Flow MRI in Congenital Heart Disease: Recommendations on Behalf of the ISMRM Flow & Motion Study Group. Journal of Magnetic Resonance Imaging, 2019, 50, 677-681.	3.4	41
89	Optimization of Tissue-Engineered Vascular Graft Design Using Computational Modeling. Tissue Engineering - Part C: Methods, 2019, 25, 561-570.	2.5	61
90	An energyâ€stable mixed formulation for isogeometric analysis of incompressible hyperelastodynamics. International Journal for Numerical Methods in Engineering, 2019, 120, 937-963.	2.9	19

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91	Accelerating cardiovascular model building with convolutional neural networks. Medical and Biological Engineering and Computing, 2019, 57, 2319-2335.	2.3	26
92	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.	2.2	269
93	Hemodynamic variables in aneurysms are associated with thrombotic risk in children with Kawasaki disease. International Journal of Cardiology, 2019, 281, 15-21.	2.2	60
94	Patient-Specific Multiscale Modeling of the Assisted Bidirectional Glenn. Annals of Thoracic Surgery, 2019, 107, 1232-1239.	2.3	16
95	Performance of preconditioned iterative linear solvers for cardiovascular simulations in rigid and deformable vessels. Computational Mechanics, 2019, 64, 717-739.	3.1	15
96	A robust and efficient iterative method for hyper-elastodynamics with nested block preconditioning. Journal of Computational Physics, 2019, 383, 72-93.	3.6	16
97	Cavopulmonary assist: Long-term reversal of the Fontan paradox. Journal of Thoracic and Cardiovascular Surgery, 2019, 158, 1627-1636.	2.6	61
98	Uncertainty quantification of simulated biomechanical stimuli in coronary artery bypass grafts. Computer Methods in Applied Mechanics and Engineering, 2019, 345, 402-428.	6.9	31
99	Evolution of hemodynamic forces in the pulmonary tree with progressively worsening pulmonary arterial hypertension in pediatric patients. Biomechanics and Modeling in Mechanobiology, 2019, 18, 779-796.	2.3	52
100	A unified continuum and variational multiscale formulation for fluids, solids, and fluidâ€“structure interaction. Computer Methods in Applied Mechanics and Engineering, 2018, 337, 549-597.	6.9	54
101	Optimization of the Assisted Bidirectional Glenn Procedure for First Stage Single Ventricle Repair. World Journal for Pediatric & Congenital Heart Surgery, 2018, 9, 157-170.	0.8	19
102	Benchmark problems for numerical treatment of backflow at open boundaries. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, .	2.2	50
103	An interactive simulation tool for patient-specific clinical decision support in single-ventricle physiology. Journal of Thoracic and Cardiovascular Surgery, 2018, 155, 712-721.	2.6	32
104	Computational simulation of postoperative pulmonary flow distribution in Alagille patients with peripheral pulmonary artery stenosis. Congenital Heart Disease, 2018, 13, 241-250.	0.0	20
105	Real-World Variability in the Prediction of Intracranial Aneurysm Wall Shear Stress: The 2015 International Aneurysm CFD Challenge. Cardiovascular Engineering and Technology, 2018, 9, 544-564.	1.5	109
106	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH): Phase I: Segmentation. Cardiovascular Engineering and Technology, 2018, 9, 565-581.	1.5	72
107	Right ventricular stroke work correlates with outcomes in pediatric pulmonary arterial hypertension. Pulmonary Circulation, 2018, 8, 1-9.	2.1	19
108	Spatial and temporal variations in hemodynamic forces initiate cardiac trabeculation. JCI Insight, 2018, 3, .	5.4	65

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109	Automated tuning for parameter identification and uncertainty quantification in multi-scale coronary simulations. Computers and Fluids, 2017, 142, 128-138.	2.6	96
110	Patientâ€specific parameter estimation in singleâ€ventricle lumped circulation models under uncertainty. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, .	2.2	68
111	Superior performance of continuous over pulsatile flow ventricular assist devices in the single ventricle circulation: A computational study. Journal of Biomechanics, 2017, 52, 48-54.	2.2	29
112	Gradual loading ameliorates maladaptation in computational simulations of vein graft growth and remodelling. Journal of the Royal Society Interface, 2017, 14, 20160995.	3.2	42
113	Assessment of Coronary Artery Aneurysms Caused by Kawasaki Disease Using Transluminal Attenuation Gradient Analysis of Computerized Tomography Angiograms. American Journal of Cardiology, 2017, 120, 556-562.	1.8	13
114	A generalized multi-resolution expansion for uncertainty propagation with application to cardiovascular modeling. Computer Methods in Applied Mechanics and Engineering, 2017, 314, 196-221.	6.9	27
115	Computed Tomography Fractional Flow Reserve Can Identify Culprit Lesions in Aortoiliac Occlusive Disease Using Minimally Invasive Techniques. Annals of Vascular Surgery, 2017, 38, 151-157.	1.1	7
116	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. Annals of Thoracic Surgery, 2017, 103, 645-654.	2.3	32
117	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.	2.6	77
118	Optimizing fluidâ€“structure interaction systems with immersogeometric analysis and surrogate modeling: Application to a hydraulic arresting gear. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 668-693.	6.9	91
119	A method to quantify mechanobiologic forces during zebrafish cardiac development using 4-D light sheet imaging and computational modeling. PLoS Computational Biology, 2017, 13, e1005828.	3.1	81
120	Uncertainty quantification in virtual surgery hemodynamics predictions for single ventricle palliation. International Journal for Numerical Methods in Biomedical Engineering, 2016, 32, .	2.2	65
121	Atlas-based ventricular shape analysis for understanding congenital heart disease. Progress in Pediatric Cardiology, 2016, 43, 61-69.	0.4	25
122	Patient-Specific Simulations Reveal Significant Differences in Mechanical Stimuli in Venous and Arterial Coronary Grafts. Journal of Cardiovascular Translational Research, 2016, 9, 279-290.	2.1	51
123	On a sparse pressure-flow rate condensation of rigid circulation models. Journal of Biomechanics, 2016, 49, 2174-2186.	2.2	2
124	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.	1.4	13
125	SimVascular: An Open Source Pipeline for Cardiovascular Simulation. Annals of Biomedical Engineering, 2016, 45, 525-541.	3.5	539
126	Computational modeling and engineering in pediatric and congenital heart disease. Current Opinion in Pediatrics, 2015, 27, 587-596.	2.3	53

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127	Multiscale Modeling of Cardiovascular Flows for Clinical Decision Support. Applied Mechanics Reviews, 2015, 67, .	13.7	89
128	Distribution of aerosolized particles in healthy and emphysematous rat lungs: Comparison between experimental and numerical studies. Journal of Biomechanics, 2015, 48, 1147-1157.	2.2	30
129	Does TCPC power loss really affect exercise capacity?. Heart, 2015, 101, 575.1-575.	4.0	3
130	In Vitro Assessment of the Assisted Bidirectional Glenn Procedure for Stage One Single Ventricle Repair. Cardiovascular Engineering and Technology, 2015, 6, 256-267.	1.5	15
131	Simulations Reveal Adverse Hemodynamics in Patients With Multiple Systemic to Pulmonary Shunts. Journal of Biomechanical Engineering, 2015, 137, .	1.4	26
132	Computational Simulation of the Adaptive Capacity of Vein Grafts in Response to Increased Pressure. Journal of Biomechanical Engineering, 2015, 137, .	1.4	34
133	A multiscale model for the study of cardiac biomechanics in single-ventricle surgeries: a clinical case. Interface Focus, 2015, 5, 20140079.	3.0	17
134	Effect of respiration on cardiac filling at rest and during exercise in Fontan patients: A clinical and computational modeling study. IJC Heart and Vasculature, 2015, 9, 100-108.	0.7	16
135	A bi-partitioned iterative algorithm for solving linear systems arising from incompressible flow problems. Computer Methods in Applied Mechanics and Engineering, 2015, 286, 40-62.	6.9	57
136	Hemodynamic effects of left pulmonary artery stenosis after superior cavopulmonary connection: A patient-specific multiscale modeling study. Journal of Thoracic and Cardiovascular Surgery, 2015, 149, 689-696.e3.	2.6	38
137	Technical feasibility and intermediate outcomes of using a handcrafted, area-preserving, bifurcated Y-graft modification of the Fontan procedure. Journal of Thoracic and Cardiovascular Surgery, 2015, 149, 239-245.e1.	2.6	25
138	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.	2.6	46
139	Flow simulations and validation for the first cohort of patients undergoing the Y-graft Fontan procedure. Journal of Thoracic and Cardiovascular Surgery, 2015, 149, 247-255.	2.6	72
140	A Simulation Protocol for Exercise Physiology in Fontan Patients Using a Closed Loop Lumped-Parameter Model. Journal of Biomechanical Engineering, 2014, 136, .	1.4	66
141	Shape optimization of pulsatile ventricular assist devices using FSI to minimize thrombotic risk. Computational Mechanics, 2014, 54, 921-932.	3.1	104
142	In Vitro Validation of Patient-Specific Hemodynamic Simulations in Coronary Aneurysms Caused by Kawasaki Disease. Cardiovascular Engineering and Technology, 2014, 5, 189-201.	1.5	38
143	Numerical blood flow simulation in surgical corrections: what do we need for an accurate analysis?. Journal of Surgical Research, 2014, 186, 44-55.	1.6	32
144	An integrated approach to patient-specific predictive modeling for single ventricle heart palliation. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 1572-1589.	1.9	67

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145	Optimization in Cardiovascular Modeling. Annual Review of Fluid Mechanics, 2014, 46, 519-546.	22.3	101
146	Thrombotic risk stratification using computational modeling in patients with coronary artery aneurysms following Kawasaki disease. Biomechanics and Modeling in Mechanobiology, 2014, 13, 1261-1276.	2.3	68
147	Recent advances in computational methodology for simulation of mechanical circulatory assist devices. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2014, 6, 169-188.	7.5	33
148	Impact of data distribution on the parallel performance of iterative linear solvers with emphasis on CFD of incompressible flows. Computational Mechanics, 2014, 55, 93-103.	3.1	16
149	Integration of Clinical Data Collected at Different Times for Virtual Surgery in Single Ventricle Patients: A Case Study. Annals of Biomedical Engineering, 2014, 43, 1310-1320.	3.5	15
150	Computational Modeling of Pathophysiologic Responses to Exercise in Fontan Patients. Annals of Biomedical Engineering, 2014, 43, 1335-1347.	3.5	16
151	Fluidâ€“structure interaction simulation of pulsatile ventricular assist devices. Computational Mechanics, 2013, 52, 971-981.	3.1	111
152	A new preconditioning technique for implicitly coupled multidomain simulations with applications to hemodynamics. Computational Mechanics, 2013, 52, 1141-1152.	3.1	101
153	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.	2.2	83
154	An efficient framework for optimization and parameter sensitivity analysis in arterial growth and remodeling computations. Computer Methods in Applied Mechanics and Engineering, 2013, 256, 200-210.	6.9	33
155	A modular numerical method for implicit 0D/3D coupling in cardiovascular finite element simulations. Journal of Computational Physics, 2013, 244, 63-79.	3.6	172
156	Variability of Computational Fluid Dynamics Solutions for Pressure and Flow in a Giant Aneurysm: The ASME 2012 Summer Bioengineering Conference CFD Challenge. Journal of Biomechanical Engineering, 2013, 135, .	1.4	123
157	Optimization of a Y-Graft Design for Improved Hepatic Flow Distribution in the Fontan Circulation. Journal of Biomechanical Engineering, 2013, 135, .	1.4	51
158	Lagrangian analysis of hemodynamics data from FSI simulation. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 445-461.	2.2	27
159	A non-discrete method for computation of residence time in fluid mechanics simulations. Physics of Fluids, 2013, 25, .	3.7	56
160	Airflow and Particle Deposition Simulations in Health and Emphysema: From In Vivo to In Silico Animal Experiments. Annals of Biomedical Engineering, 2013, 42, 899-914.	3.5	63
161	Computation of residence time in the simulation of pulsatile ventricular assist devices. Computational Mechanics, 2013, 54, 911-919.	3.1	94
162	Moving Domain Computational Fluid Dynamics to Interface with an Embryonic Model of Cardiac Morphogenesis. PLoS ONE, 2013, 8, e72924.	2.3	58

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163	Optimization of Shunt Placement for the Norwood Surgery Using Multi-Domain Modeling. Journal of Biomechanical Engineering, 2012, 134, .	1.4	60
164	Rat airway morphometry measured from in situ MRI-based geometric models. Journal of Applied Physiology, 2012, 112, 1921-1931.	2.8	30
165	Optimization of Cardiovascular Stent Design Using Computational Fluid Dynamics. Journal of Biomechanical Engineering, 2012, 134, .	1.4	103
166	Fluid Mechanics of Mixing in the Vertebrobasilar System: Comparison of Simulation and MRI. Cardiovascular Engineering and Technology, 2012, 3, 450-461.	1.5	16
167	Patient-Specific Multiscale Modeling of Blood Flow for Coronary Artery Bypass Graft Surgery. Annals of Biomedical Engineering, 2012, 40, 2228-2242.	3.5	217
168	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.	2.5	29
169	Hypoplastic Left Heart Syndrome. Journal of the American College of Cardiology, 2012, 59, S1-S42.	2.3	477
170	Toward a Computational Steering Framework for Large-Scale Composite Structures Based on Continually and Dynamically Injected Sensor Data. Procedia Computer Science, 2012, 9, 1149-1158.	1.5	16
171	Fluidâ€“structure interaction simulations of the Fontan procedure using variable wall properties. International Journal for Numerical Methods in Biomedical Engineering, 2012, 28, 513-527.	2.2	82
172	Hepatic blood flow distribution and performance in conventional and novel Y-graft Fontan geometries: A case series computational fluid dynamics study. Journal of Thoracic and Cardiovascular Surgery, 2012, 143, 1086-1097.	2.6	79
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