

Alison L Marsden

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

169
papers

5,390
citations

42
h-index

66
g-index

217
ext. papers

6,458
ext. citations

3.7
avg, IF

6.03
L-index

#	Paper	IF	Citations
169	Hypoplastic left heart syndrome: current considerations and expectations. <i>Journal of the American College of Cardiology</i> , 2012 , 59, S1-42	15.1	340
168	SimVascular: An Open Source Pipeline for Cardiovascular Simulation. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 525-541	4.7	206
167	Computational fluid-structure interaction: methods and application to a total cavopulmonary connection. <i>Computational Mechanics</i> , 2009 , 45, 77-89	4	184
166	A comparison of outlet boundary treatments for prevention of backflow divergence with relevance to blood flow simulations. <i>Computational Mechanics</i> , 2011 , 48, 277-291	4	177
165	Evaluation of a novel Y-shaped extracardiac Fontan baffle using computational fluid dynamics. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2009 , 137, 394-403.e2	1.5	153
164	Patient-specific multiscale modeling of blood flow for coronary artery bypass graft surgery. <i>Annals of Biomedical Engineering</i> , 2012 , 40, 2228-42	4.7	128
163	Effects of exercise and respiration on hemodynamic efficiency in CFD simulations of the total cavopulmonary connection. <i>Annals of Biomedical Engineering</i> , 2007 , 35, 250-63	4.7	122
162	A modular numerical method for implicit 0D/3D coupling in cardiovascular finite element simulations. <i>Journal of Computational Physics</i> , 2013 , 244, 63-79	4.1	108
161	A computational framework for derivative-free optimization of cardiovascular geometries. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 1890-1905	5.7	99
160	ST and ALE-VMS methods for patient-specific cardiovascular fluid mechanics modeling. <i>Mathematical Models and Methods in Applied Sciences</i> , 2014 , 24, 2437-2486	3.5	98
159	Fluid-structure interaction simulation of pulsatile ventricular assist devices. <i>Computational Mechanics</i> , 2013 , 52, 971-981	4	94
158	A stochastic collocation method for uncertainty quantification and propagation in cardiovascular simulations. <i>Journal of Biomechanical Engineering</i> , 2011 , 133, 031001	2.1	94
157	Shape optimization of pulsatile ventricular assist devices using FSI to minimize thrombotic risk. <i>Computational Mechanics</i> , 2014 , 54, 921-932	4	92
156	Variability of computational fluid dynamics solutions for pressure and flow in a giant aneurysm: the ASME 2012 Summer Bioengineering Conference CFD Challenge. <i>Journal of Biomechanical Engineering</i> , 2013 , 135, 021016	2.1	92
155	Optimal Aeroacoustic Shape Design Using the Surrogate Management Framework. <i>Optimization and Engineering</i> , 2004 , 5, 235-262	2.1	89
154	Trailing-edge noise reduction using derivative-free optimization and large-eddy simulation. <i>Journal of Fluid Mechanics</i> , 2007 , 572, 13-36	3.7	77
153	Computation of residence time in the simulation of pulsatile ventricular assist devices. <i>Computational Mechanics</i> , 2014 , 54, 911-919	4	76

152	Expert recommendations on the assessment of wall shear stress in human coronary arteries: existing methodologies, technical considerations, and clinical applications. <i>European Heart Journal</i> , 2019 , 40, 3421-3433	9.5	70
151	Optimizing fluid-structure interaction systems with immersed geometric analysis and surrogate modeling: Application to a hydraulic arresting gear. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017 , 316, 668-693	5.7	68
150	Virtual surgeries in patients with congenital heart disease: a multi-scale modelling test case. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 4316-303	3	68
149	A new preconditioning technique for implicitly coupled multidomain simulations with applications to hemodynamics. <i>Computational Mechanics</i> , 2013 , 52, 1141-1152	4	65
148	Optimization of cardiovascular stent design using computational fluid dynamics. <i>Journal of Biomechanical Engineering</i> , 2012 , 134, 011002	2.1	65
147	Image-based modeling of hemodynamics in coronary artery aneurysms caused by Kawasaki disease. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012 , 11, 915-32	3.8	61
146	Predictive modeling of the virtual Hemi-Fontan operation for second stage single ventricle palliation: two patient-specific cases. <i>Journal of Biomechanics</i> , 2013 , 46, 423-9	2.9	60
145	Fluid-structure interaction simulations of the Fontan procedure using variable wall properties. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2012 , 28, 513-27	2.6	60
144	Constrained optimization of an idealized Y-shaped baffle for the Fontan surgery at rest and exercise. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010 , 199, 2135-2149	5.7	60
143	Construction of Commutative Filters for LES on Unstructured Meshes. <i>Journal of Computational Physics</i> , 2002 , 175, 584-603	4.1	58
142	Hepatic blood flow distribution and performance in conventional and novel Y-graft Fontan geometries: a case series computational fluid dynamics study. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2012 , 143, 1086-97	1.5	57
141	Optimization in Cardiovascular Modeling. <i>Annual Review of Fluid Mechanics</i> , 2014 , 46, 519-546	22	54
140	Automated Tuning for Parameter Identification and Uncertainty Quantification in Multi-scale Coronary Simulations. <i>Computers and Fluids</i> , 2017 , 142, 128-138	2.8	53
139	Fluid-structure interaction simulations of patient-specific aortic dissection. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020 , 19, 1607-1628	3.8	52
138	Multiscale Modeling of Cardiovascular Flows for Clinical Decision Support. <i>Applied Mechanics Reviews</i> , 2015 , 67,	8.6	52
137	A primer on computational simulation in congenital heart disease for the clinician. <i>Progress in Pediatric Cardiology</i> , 2010 , 30, 3-13	0.4	50
136	An integrated approach to patient-specific predictive modeling for single ventricle heart palliation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014 , 17, 1572-89	2.1	48
135	Uncertainty quantification in virtual surgery hemodynamics predictions for single ventricle palliation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2016 , 32, e02737	2.6	48

134	Airflow and particle deposition simulations in health and emphysema: from in vivo to in silico animal experiments. <i>Annals of Biomedical Engineering</i> , 2014 , 42, 899-914	4.7	47
133	Real-World Variability in the Prediction of Intracranial Aneurysm Wall Shear Stress: The 2015 International Aneurysm CFD Challenge. <i>Cardiovascular Engineering and Technology</i> , 2018 , 9, 544-564	2.2	47
132	Optimization of shunt placement for the Norwood surgery using multi-domain modeling. <i>Journal of Biomechanical Engineering</i> , 2012 , 134, 051002	2.1	45
131	Flow simulations and validation for the first cohort of patients undergoing the Y-graft Fontan procedure. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2015 , 149, 247-55	1.5	44
130	Dense Volume-to-Volume Vascular Boundary Detection. <i>Lecture Notes in Computer Science</i> , 2016 , 371-379	3.9	43
129	A Re-Engineered Software Interface and Workflow for the Open-Source SimVascular Cardiovascular Modeling Package. <i>Journal of Biomechanical Engineering</i> , 2018 , 140,	2.1	43
128	Moving domain computational fluid dynamics to interface with an embryonic model of cardiac morphogenesis. <i>PLoS ONE</i> , 2013 , 8, e72924	3.7	42
127	Spontaneous reversal of stenosis in tissue-engineered vascular grafts. <i>Science Translational Medicine</i> , 2020 , 12,	17.5	40
126	Simulation based planning of surgical interventions in pediatric cardiology. <i>Physics of Fluids</i> , 2013 , 25, 101303	4.4	40
125	Thrombotic risk stratification using computational modeling in patients with coronary artery aneurysms following Kawasaki disease. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014 , 13, 1261-76 ^{3.8}	3.8	39
124	A method for stochastic constrained optimization using derivative-free surrogate pattern search and collocation. <i>Journal of Computational Physics</i> , 2010 , 229, 4664-4682	4.1	39
123	How successful is successful? Aortic arch shape after successful aortic coarctation repair correlates with left ventricular function. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2017 , 153, 418-427	1.5	38
122	A simulation protocol for exercise physiology in Fontan patients using a closed loop lumped-parameter model. <i>Journal of Biomechanical Engineering</i> , 2014 , 136,	2.1	38
121	Patient-specific parameter estimation in single-ventricle lumped circulation models under uncertainty. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2017 , 33, e02799	2.6	37
120	Optimization of a Y-graft design for improved hepatic flow distribution in the fontan circulation. <i>Journal of Biomechanical Engineering</i> , 2013 , 135, 011002	2.1	37
119	A new multiparameter approach to computational simulation for Fontan assessment and redesign. <i>Congenital Heart Disease</i> , 2010 , 5, 104-17	3.1	37
118	A method to quantify mechanobiologic forces during zebrafish cardiac development using 4-D light sheet imaging and computational modeling. <i>PLoS Computational Biology</i> , 2017 , 13, e1005828	5	36
117	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH): Phase I: Segmentation. <i>Cardiovascular Engineering and Technology</i> , 2018 , 9, 565-581	2.2	35

116	The impact of uncertainty on shape optimization of idealized bypass graft models in unsteady flow. <i>Physics of Fluids</i> , 2010 , 22, 121902	4.4	33
115	A non-discrete method for computation of residence time in fluid mechanics simulations. <i>Physics of Fluids</i> , 2013 , 25, 110802	4.4	32
114	Generation of optimal artificial neural networks using a pattern search algorithm: application to approximation of chemical systems. <i>Neural Computation</i> , 2008 , 20, 573-601	2.9	32
113	A bi-partitioned iterative algorithm for solving linear systems arising from incompressible flow problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015 , 286, 40-62	5.7	30
112	Computational modeling and engineering in pediatric and congenital heart disease. <i>Current Opinion in Pediatrics</i> , 2015 , 27, 587-96	3.2	30
111	Imaging and patient-specific simulations for the Fontan surgery: current methodologies and clinical applications. <i>Progress in Pediatric Cardiology</i> , 2010 , 30, 31-44	0.4	30
110	Hemodynamic effects of left pulmonary artery stenosis after superior cavopulmonary connection: a patient-specific multiscale modeling study. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2015 , 149, 689-96.e1-3	1.5	29
109	Optimization of Tissue-Engineered Vascular Graft Design Using Computational Modeling. <i>Tissue Engineering - Part C: Methods</i> , 2019 , 25, 561-570	2.9	29
108	USNCTAM perspectives on mechanics in medicine. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140301	4.1	28
107	Suppression of vortex-shedding noise via derivative-free shape optimization. <i>Physics of Fluids</i> , 2004 , 16, L83-L86	4.4	28
106	The assisted bidirectional Glenn: a novel surgical approach for first-stage single-ventricle heart palliation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2015 , 149, 699-705	1.5	27
105	Respiratory effects on hemodynamics in patient-specific CFD models of the Fontan circulation under exercise conditions. <i>European Journal of Mechanics, B/Fluids</i> , 2012 , 35, 61-69	2.4	27
104	Spatial and temporal variations in hemodynamic forces initiate cardiac trabeculation. <i>JCI Insight</i> , 2018 , 3,	9.9	27
103	Multilevel and multifidelity uncertainty quantification for cardiovascular hemodynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 365,	5.7	27
102	Benchmark problems for numerical treatment of backflow at open boundaries. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018 , 34, e2918	2.6	26
101	Effect of Wall Elasticity on Hemodynamics and Wall Shear Stress in Patient-Specific Simulations in the Coronary Arteries. <i>Journal of Biomechanical Engineering</i> , 2020 , 142,	2.1	26
100	Patient-Specific Simulations Reveal Significant Differences in Mechanical Stimuli in Venous and Arterial Coronary Grafts. <i>Journal of Cardiovascular Translational Research</i> , 2016 , 9, 279-90	3.3	25
99	Lagrangian analysis of hemodynamics data from FSI simulation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2013 , 29, 445-61	2.6	25

98	Cavopulmonary assist: Long-term reversal of the Fontan paradox. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2019 , 158, 1627-1636	1.5	25
97	Gradual loading ameliorates maladaptation in computational simulations of vein graft growth and remodelling. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	24
96	Distribution of aerosolized particles in healthy and emphysematous rat lungs: comparison between experimental and numerical studies. <i>Journal of Biomechanics</i> , 2015 , 48, 1147-57	2.9	24
95	An efficient framework for optimization and parameter sensitivity analysis in arterial growth and remodeling computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013 , 256, 200-210	5.7	24
94	Identification of hemodynamically optimal coronary stent designs based on vessel caliber. <i>IEEE Transactions on Biomedical Engineering</i> , 2012 , 59, 1992-2002	5	23
93	Rat airway morphometry measured from in situ MRI-based geometric models. <i>Journal of Applied Physiology</i> , 2012 , 112, 1921-31	3.7	23
92	Numerical blood flow simulation in surgical corrections: what do we need for an accurate analysis?. <i>Journal of Surgical Research</i> , 2014 , 186, 44-55	2.5	22
91	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. <i>Annals of Thoracic Surgery</i> , 2017 , 103, 645-654	2.7	22
90	Evolution of hemodynamic forces in the pulmonary tree with progressively worsening pulmonary arterial hypertension in pediatric patients. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019 , 18, 779-796	3.8	22
89	Computational simulation of the adaptive capacity of vein grafts in response to increased pressure. <i>Journal of Biomechanical Engineering</i> , 2015 , 137,	2.1	21
88	Recent advances in computational methodology for simulation of mechanical circulatory assist devices. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2014 , 6, 169-88	6.6	21
87	A unified continuum and variational multiscale formulation for fluids, solids, and fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018 , 337, 549-597	5.7	20
86	Intracardiac 4D Flow MRI in Congenital Heart Disease: Recommendations on Behalf of the ISMRM Flow & Motion Study Group. <i>Journal of Magnetic Resonance Imaging</i> , 2019 , 50, spcone-spcone	5.6	20
85	Validation of Patient-Specific Hemodynamic Simulations in Coronary Aneurysms Caused by Kawasaki Disease. <i>Cardiovascular Engineering and Technology</i> , 2014 , 5, 189-201	2.2	20
84	Uncertainty quantification of simulated biomechanical stimuli in coronary artery bypass grafts. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 345, 402-428	5.7	19
83	Hemodynamic variables in aneurysms are associated with thrombotic risk in children with Kawasaki disease. <i>International Journal of Cardiology</i> , 2019 , 281, 15-21	3.2	18
82	Contractile and hemodynamic forces coordinate Notch1b-mediated outflow tract valve formation. <i>JCI Insight</i> , 2019 , 5,	9.9	18
81	Fluid-structure interaction modeling of blood flow in the pulmonary arteries using the unified continuum and variational multiscale formulation. <i>Mechanics Research Communications</i> , 2020 , 107, 103556-103556	2.2	16

80	Intracardiac 4D Flow MRI in Congenital Heart Disease: Recommendations on Behalf of the ISMRM Flow & Motion Study Group. <i>Journal of Magnetic Resonance Imaging</i> , 2019 , 50, 677-681	5.6	16
79	Simulations reveal adverse hemodynamics in patients with multiple systemic to pulmonary shunts. <i>Journal of Biomechanical Engineering</i> , 2015 , 137,	2.1	15
78	Technical feasibility and intermediate outcomes of using a handcrafted, area-preserving, bifurcated Y-graft modification of the Fontan procedure. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2015 , 149, 239-45.e1	1.5	15
77	Superior performance of continuous over pulsatile flow ventricular assist devices in the single ventricle circulation: A computational study. <i>Journal of Biomechanics</i> , 2017 , 52, 48-54	2.9	14
76	The nested block preconditioning technique for the incompressible Navier-Stokes equations with emphasis on hemodynamic simulations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 367, 113122-113122	5.7	14
75	An interactive simulation tool for patient-specific clinical decision support in single-ventricle physiology. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2018 , 155, 712-721	1.5	14
74	Atlas-Based Ventricular Shape Analysis for Understanding Congenital Heart Disease. <i>Progress in Pediatric Cardiology</i> , 2016 , 43, 61-69	0.4	14
73	Accelerating cardiovascular model building with convolutional neural networks. <i>Medical and Biological Engineering and Computing</i> , 2019 , 57, 2319-2335	3.1	13
72	A multiscale model for the study of cardiac biomechanics in single-ventricle surgeries: a clinical case. <i>Interface Focus</i> , 2015 , 5, 20140079	3.9	13
71	Integration of clinical data collected at different times for virtual surgery in single ventricle patients: a case study. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 1310-20	4.7	13
70	Fluid Mechanics of Mixing in the Vertebrobasilar System: Comparison of Simulation and MRI. <i>Cardiovascular Engineering and Technology</i> , 2012 , 3, 450-461	2.2	13
69	Toward a Computational Steering Framework for Large-Scale Composite Structures Based on Continually and Dynamically Injected Sensor Data. <i>Procedia Computer Science</i> , 2012 , 9, 1149-1158	1.6	13
68	A robust and efficient iterative method for hyper-elastodynamics with nested block preconditioning. <i>Journal of Computational Physics</i> , 2019 , 383, 72-93	4.1	12
67	Effect of respiration on cardiac filling at rest and during exercise in Fontan patients: A clinical and computational modeling study. <i>IJC Heart and Vasculature</i> , 2015 , 9, 100-108	2.4	12
66	The effects of clinically-derived parametric data uncertainty in patient-specific coronary simulations with deformable walls. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2020 , 36, e3351	2.6	12
65	A generalized multi-resolution expansion for uncertainty propagation with application to cardiovascular modeling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017 , 314, 196-221	5.7	12
64	Avances en mecánica computacional para el diagnóstico y tratamiento de la enfermedad cardiovascular. <i>Revista Espanola De Cardiologia</i> , 2009 , 62, 781-805	1.5	12
63	Impact of data distribution on the parallel performance of iterative linear solvers with emphasis on CFD of incompressible flows. <i>Computational Mechanics</i> , 2015 , 55, 93-103	4	11

62	Computational modeling of pathophysiologic responses to exercise in Fontan patients. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 1335-47	4.7	11
61	Computational simulation of postoperative pulmonary flow distribution in Alagille patients with peripheral pulmonary artery stenosis. <i>Congenital Heart Disease</i> , 2018 , 13, 241-250	3.1	11
60	Right ventricular stroke work correlates with outcomes in pediatric pulmonary arterial hypertension. <i>Pulmonary Circulation</i> , 2018 , 8, 2045894018780534	2.7	11
59	Assessment of Coronary Artery Aneurysms Caused by Kawasaki Disease Using Transluminal Attenuation Gradient Analysis of Computerized Tomography Angiograms. <i>American Journal of Cardiology</i> , 2017 , 120, 556-562	3	10
58	Patient-Specific Multiscale Modeling of the Assisted Bidirectional Glenn. <i>Annals of Thoracic Surgery</i> , 2019 , 107, 1232-1239	2.7	10
57	Performance of preconditioned iterative linear solvers for cardiovascular simulations in rigid and deformable vessels. <i>Computational Mechanics</i> , 2019 , 64, 717-739	4	10
56	Towards inverse modeling of turbidity currents: The inverse lock-exchange problem. <i>Computers and Geosciences</i> , 2011 , 37, 521-529	4.5	10
55	In Vitro Assessment of the Assisted Bidirectional Glenn Procedure for Stage One Single Ventricle Repair. <i>Cardiovascular Engineering and Technology</i> , 2015 , 6, 256-67	2.2	9
54	Structural Edge Detection for Cardiovascular Modeling. <i>Lecture Notes in Computer Science</i> , 2015 , 735-742	2.9	9
53	Optimization of the Assisted Bidirectional Glenn Procedure for First Stage Single Ventricle Repair. <i>World Journal for Pediatric & Congenital Heart Surgery</i> , 2018 , 9, 157-170	1.1	9
52	An energy-stable mixed formulation for isogeometric analysis of incompressible hyper-elastodynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2019 , 120, 937-963	2.4	8
51	A note on the accuracy of the generalized- β scheme for the incompressible Navier-Stokes equations. <i>International Journal for Numerical Methods in Engineering</i> , 2021 , 122, 638-651	2.4	8
50	Recent advances in the application of computational mechanics to the diagnosis and treatment of cardiovascular disease. <i>Revista Espanola De Cardiologia (English Ed)</i> , 2009 , 62, 781-805	0.7	7
49	Neural Network Vessel Lumen Regression for Automated Lumen Cross-Section Segmentation in Cardiovascular Image-Based Modeling. <i>Cardiovascular Engineering and Technology</i> , 2020 , 11, 621-635	2.2	7
48	Low Wall Shear Stress Is Associated with Saphenous Vein Graft Stenosis in Patients with Coronary Artery Bypass Grafting. <i>Journal of Cardiovascular Translational Research</i> , 2021 , 14, 770-781	3.3	6
47	Simulating Developmental Cardiac Morphology in Virtual Reality Using a Deformable Image Registration Approach. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 2177-2188	4.7	6
46	Patient-Specific Cardiovascular Fluid Mechanics Analysis with the ST and ALE-VMS Methods. <i>Computational Methods in Applied Sciences (Springer)</i> , 2014 , 71-102	0.4	6
45	Optimization of computationally expensive simulations with Gaussian processes and parameter uncertainty: Application to cardiovascular surgery 2012 ,		6

44	Computational blood flow simulations in Kawasaki disease patients: Insight into coronary artery aneurysm hemodynamics. <i>Global Cardiology Science & Practice</i> , 2017 , 2017, e201729	0.7	6
43	Validation of Wall Shear Stress Assessment in Non-invasive Coronary CTA versus Invasive Imaging: A Patient-Specific Computational Study. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 1151-1168	4.7	6
42	Use of patient-specific computational models for optimization of aortic insufficiency after implantation of left ventricular assist device. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2021 , 162, 1556-1563	1.5	5
41	A concurrent implementation of the surrogate management framework with application to cardiovascular shape optimization. <i>Optimization and Engineering</i> , 2020 , 21, 1487-1536	2.1	5
40	Multiscale Modeling of Superior Cavopulmonary Circulation: Hemi-Fontan and Bidirectional Glenn Are Equivalent. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , 2020 , 32, 883-892	1.7	5
39	Hemodynamic performance of tissue-engineered vascular grafts in Fontan patients. <i>Npj Regenerative Medicine</i> , 2021 , 6, 38	15.8	5
38	Computed Tomography Fractional Flow Reserve Can Identify Culprit Lesions in Aortoiliac Occlusive Disease Using Minimally Invasive Techniques. <i>Annals of Vascular Surgery</i> , 2017 , 38, 151-157	1.7	4
37	MULTIFIDELITY ESTIMATORS FOR CORONARY CIRCULATION MODELS UNDER CLINICALLY INFORMED DATA UNCERTAINTY 2020 , 10, 449-466		4
36	Computational Evaluation of Venous Graft Geometries in Coronary Artery Bypass Surgery. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , 2021 ,	1.7	4
35	Does TCPC power loss really affect exercise capacity?. <i>Heart</i> , 2015 , 101, 575	5.1	3
34	2017 ,		3
33	Creating shape templates for patient specific biventricular modeling in congenital heart disease. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 679-82	0.9	3
32	Low entropy data mapping for sparse iterative linear solvers 2013 ,		3
31	Vascular adaptation in the presence of external support - A modeling study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020 , 110, 103943	4.1	3
30	A design-based model of the aortic valve for fluid-structure interaction. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021 , 20, 2413-2435	3.8	3
29	A continuum and computational framework for viscoelastodynamics: I. Finite deformation linear models. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 385, 114059	5.7	3
28	Image-based scaling laws for somatic growth and pulmonary artery morphometry from infancy to adulthood. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2020 , 319, H432-H442	5.2	2
27	On a sparse pressure-flow rate condensation of rigid circulation models. <i>Journal of Biomechanics</i> , 2016 , 49, 2174-2186	2.9	2

26	Tissue engineered vascular grafts transform into autologous neovessels capable of native function and growth. <i>Communications Medicine</i> , 2022 , 2,		2
25	Predictive Modeling of Secondary Pulmonary Hypertension in Left Ventricular Diastolic Dysfunction. <i>Frontiers in Physiology</i> , 2021 , 12, 666915	4.6	2
24	On the impact of vessel wall stiffness on quantitative flow dynamics in a synthetic model of the thoracic aorta. <i>Scientific Reports</i> , 2021 , 11, 6703	4.9	2
23	Model order reduction of flow based on a modular geometrical approximation of blood vessels. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 380, 113762-113762	5.7	2
22	Geometric Uncertainty in Patient-Specific Cardiovascular Modeling with Convolutional Dropout Networks. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 386,	5.7	2
21	Patient-specific computational flow modelling for assessing hemodynamic changes following fenestrated endovascular aneurysm repair. <i>JVS Vascular Science</i> , 2021 , 2, 53-69	1.3	2
20	Exercise MRI highlights heterogeneity in cardiovascular mechanics among patients with Fontan circulation: proposed protocol for routine evaluation. <i>Journal of Thoracic Disease</i> , 2020 , 12, 1204-1212	2.6	1
19	Immersive volume rendering of blood vessels 2012 ,		1
18	Computational Modeling and Personalized Surgery 2020 , 155-175		1
17	On the Periodicity of Cardiovascular Fluid Dynamics Simulations. <i>Annals of Biomedical Engineering</i> , 2021 , 1	4.7	1
16	Computational modeling of blood component transport related to coronary artery thrombosis in Kawasaki disease. <i>PLoS Computational Biology</i> , 2021 , 17, e1009331	5	1
15	Standard CPR versus interposed abdominal compression CPR in shunted single ventricle patients: comparison using a lumped parameter mathematical model. <i>Cardiology in the Young</i> , 2021 , 1-7	1	1
14	Computational simulation-derived hemodynamic and biomechanical properties of the pulmonary arterial tree early in the course of ventricular septal defects. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021 , 20, 2471-2489	3.8	1
13	In Vitro Assessment of Right Ventricular Outflow Tract Anatomy and Valve Orientation Effects on Bioprosthetic Pulmonary Valve Hemodynamics. <i>Cardiovascular Engineering and Technology</i> , 2021 , 12, 215-231	2.2	1
12	Virtual Transcatheter Interventions for Peripheral Pulmonary Artery Stenosis in Williams and Alagille Syndromes.. <i>Journal of the American Heart Association</i> , 2022 , e023532	6	1
11	A reduced unified continuum formulation for vascular fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022 , 394, 114852	5.7	1
10	Numerical investigation of abdominal aortic aneurysm hemodynamics using the reduced unified continuum formulation for vascular fluid-structure interaction. <i>Forces in Mechanics</i> , 2022 , 7, 100089	1.5	1
9	Preoperative Computed Tomography Angiography Reveals Leaflet-Specific Calcification and Excursion Patterns in Aortic Stenosis.. <i>Circulation: Cardiovascular Imaging</i> , 2021 , 14, 1122-1132	3.9	1

8	Patient-Specific Computational Fluid Dynamics Reveal Localized Flow Patterns Predictive of Post-Left Ventricular Assist Device Aortic Incompetence. <i>Circulation: Heart Failure</i> , 2021 , 14, e008034	7.6	o
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