

# Alison L Marsden

## List of Publications by Year in Descending Order

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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	Tissue engineered vascular grafts transform into autologous neovessels capable of native function and growth. <i>Communications Medicine</i> , <b>2022</b> , 2,		2
168	A Mechanistic Lumped Parameter Model of the Berlin Heart EXCOR to Analyze Device Performance and Physiologic Interactions.. <i>Cardiovascular Engineering and Technology</i> , <b>2022</b> , 1	2.2	
167	Colocalization of Coronary Plaque with Wall Shear Stress in Myocardial Bridge Patients.. <i>Cardiovascular Engineering and Technology</i> , <b>2022</b> , 1	2.2	0
166	Virtual Transcatheter Interventions for Peripheral Pulmonary Artery Stenosis in Williams and Alagille Syndromes.. <i>Journal of the American Heart Association</i> , <b>2022</b> , e023532	6	1
165	A reduced unified continuum formulation for vascular fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2022</b> , 394, 114852	5.7	1
164	Numerical investigation of abdominal aortic aneurysm hemodynamics using the reduced unified continuum formulation for vascular fluid-structure interaction. <i>Forces in Mechanics</i> , <b>2022</b> , 7, 100089	1.5	1
163	Fontan Surgery and Fluid Dynamics <b>2022</b> , 139-148		
162	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> , <b>2021</b> , 162, 1556-1563	1.5	5
161	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> , <b>2021</b> , 14, 770-781	3.3	6
160	Computational Evaluation of Venous Graft Geometries in Coronary Artery Bypass Surgery. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , <b>2021</b> ,	1.7	4
159	Reprint of: Fluid-structure interaction modeling of blood flow in the pulmonary arteries using the unified continuum and variational multiscale formulation. <i>Mechanics Research Communications</i> , <b>2021</b> , 112, 103704	2.2	
158	On the Periodicity of Cardiovascular Fluid Dynamics Simulations. <i>Annals of Biomedical Engineering</i> , <b>2021</b> , 1	4.7	1
157	Hemodynamic performance of tissue-engineered vascular grafts in Fontan patients. <i>Npj Regenerative Medicine</i> , <b>2021</b> , 6, 38	15.8	5
156	Predictive Modeling of Secondary Pulmonary Hypertension in Left Ventricular Diastolic Dysfunction. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 666915	4.6	2
155	A note on the accuracy of the generalized- $\theta$ -scheme for the incompressible Navier-Stokes equations. <i>International Journal for Numerical Methods in Engineering</i> , <b>2021</b> , 122, 638-651	2.4	8
154	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> , <b>2021</b> , 49, 1151-1168	4.7	6
153	On the impact of vessel wall stiffness on quantitative flow dynamics in a synthetic model of the thoracic aorta. <i>Scientific Reports</i> , <b>2021</b> , 11, 6703	4.9	2

152	Model order reduction of flow based on a modular geometrical approximation of blood vessels. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 380, 113762-113762	5.7	2
151	Patient-Specific Computational Fluid Dynamics Reveal Localized Flow Patterns Predictive of Post-Left Ventricular Assist Device Aortic Incompetence. <i>Circulation: Heart Failure</i> , <b>2021</b> , 14, e008034	7.6	0
150	Computational modeling of blood component transport related to coronary artery thrombosis in Kawasaki disease. <i>PLoS Computational Biology</i> , <b>2021</b> , 17, e1009331	5	1
149	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> , <b>2021</b> , 1-7	1	1
148	A design-based model of the aortic valve for fluid-structure interaction. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2021</b> , 20, 2413-2435	3.8	3
147	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> , <b>2021</b> , 20, 2471-2489	3.8	1
146	A continuum and computational framework for viscoelastodynamics: I. Finite deformation linear models. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 385, 114059	5.7	3
145	Geometric Uncertainty in Patient-Specific Cardiovascular Modeling with Convolutional Dropout Networks. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 386,	5.7	2
144	Patient-specific computational flow modelling for assessing hemodynamic changes following fenestrated endovascular aneurysm repair. <i>JVS Vascular Science</i> , <b>2021</b> , 2, 53-69	1.3	2
143	Quantitative Hemodynamics in Aortic Dissection: Comparing in Vitro MRI with FSI Simulation in a Compliant Model. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 575-586	0.9	0
142	In Vitro Assessment of Right Ventricular Outflow Tract Anatomy and Valve Orientation Effects on Bioprosthetic Pulmonary Valve Hemodynamics. <i>Cardiovascular Engineering and Technology</i> , <b>2021</b> , 12, 215-231	2.2	1
141	Preoperative Computed Tomography Angiography Reveals Leaflet-Specific Calcification and Excursion Patterns in Aortic Stenosis.. <i>Circulation: Cardiovascular Imaging</i> , <b>2021</b> , 14, 1122-1132	3.9	1
140	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> , <b>2020</b> , 36, e3351	2.6	12
139	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> , <b>2020</b> , 367, 113122-113122	5.7	14
138	Spontaneous reversal of stenosis in tissue-engineered vascular grafts. <i>Science Translational Medicine</i> , <b>2020</b> , 12,	17.5	40
137	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> , <b>2020</b> , 319, H432-H442	5.2	2
136	Fluid-structure interaction modeling of blood flow in the pulmonary arteries using the unified continuum and variational multiscale formulation. <i>Mechanics Research Communications</i> , <b>2020</b> , 107, 103556-103556	2.2	16
135	A concurrent implementation of the surrogate management framework with application to cardiovascular shape optimization. <i>Optimization and Engineering</i> , <b>2020</b> , 21, 1487-1536	2.1	5

134	Fluid-structure interaction simulations of patient-specific aortic dissection. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2020</b> , 19, 1607-1628	3.8	52
133	Exercise MRI highlights heterogeneity in cardiovascular mechanics among patients with Fontan circulation: proposed protocol for routine evaluation. <i>Journal of Thoracic Disease</i> , <b>2020</b> , 12, 1204-1212	2.6	1
132	MULTIFIDELITY ESTIMATORS FOR CORONARY CIRCULATION MODELS UNDER CLINICALLY INFORMED DATA UNCERTAINTY <b>2020</b> , 10, 449-466		4
131	Multiscale Modeling of Superior Cavopulmonary Circulation: Hemi-Fontan and Bidirectional Glenn Are Equivalent. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , <b>2020</b> , 32, 883-892	1.7	5
130	Computational Modeling and Personalized Surgery <b>2020</b> , 155-175		1
129	Vascular adaptation in the presence of external support - A modeling study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2020</b> , 110, 103943	4.1	3
128	Neural Network Vessel Lumen Regression for Automated Lumen Cross-Section Segmentation in Cardiovascular Image-Based Modeling. <i>Cardiovascular Engineering and Technology</i> , <b>2020</b> , 11, 621-635	2.2	7
127	Effect of Wall Elasticity on Hemodynamics and Wall Shear Stress in Patient-Specific Simulations in the Coronary Arteries. <i>Journal of Biomechanical Engineering</i> , <b>2020</b> , 142,	2.1	26
126	Multilevel and multifidelity uncertainty quantification for cardiovascular hemodynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 365,	5.7	27
125	Accelerating cardiovascular model building with convolutional neural networks. <i>Medical and Biological Engineering and Computing</i> , <b>2019</b> , 57, 2319-2335	3.1	13
124	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> , <b>2019</b> , 40, 3421-3433	9.5	70
123	Hemodynamic variables in aneurysms are associated with thrombotic risk in children with Kawasaki disease. <i>International Journal of Cardiology</i> , <b>2019</b> , 281, 15-21	3.2	18
122	Patient-Specific Multiscale Modeling of the Assisted Bidirectional Glenn. <i>Annals of Thoracic Surgery</i> , <b>2019</b> , 107, 1232-1239	2.7	10
121	Performance of preconditioned iterative linear solvers for cardiovascular simulations in rigid and deformable vessels. <i>Computational Mechanics</i> , <b>2019</b> , 64, 717-739	4	10
120	A robust and efficient iterative method for hyper-elastodynamics with nested block preconditioning. <i>Journal of Computational Physics</i> , <b>2019</b> , 383, 72-93	4.1	12
119	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> , <b>2019</b> , 50, spcone-spcone	5.6	20
118	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> , <b>2019</b> , 50, 677-681	5.6	16
117	Optimization of Tissue-Engineered Vascular Graft Design Using Computational Modeling. <i>Tissue Engineering - Part C: Methods</i> , <b>2019</b> , 25, 561-570	2.9	29

116	An energy-stable mixed formulation for isogeometric analysis of incompressible hyper-elastodynamics. <i>International Journal for Numerical Methods in Engineering</i> , <b>2019</b> , 120, 937-963	2.4	8
115	Contractile and hemodynamic forces coordinate Notch1b-mediated outflow tract valve formation. <i>JCI Insight</i> , <b>2019</b> , 5,	9.9	18
114	Cavopulmonary assist: Long-term reversal of the Fontan paradox. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2019</b> , 158, 1627-1636	1.5	25
113	Uncertainty quantification of simulated biomechanical stimuli in coronary artery bypass grafts. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2019</b> , 345, 402-428	5.7	19
112	Evolution of hemodynamic forces in the pulmonary tree with progressively worsening pulmonary arterial hypertension in pediatric patients. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2019</b> , 18, 779-796	3.8	22
111	A unified continuum and variational multiscale formulation for fluids, solids, and fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2018</b> , 337, 549-597	5.7	20
110	Optimization of the Assisted Bidirectional Glenn Procedure for First Stage Single Ventricle Repair. <i>World Journal for Pediatric &amp; Congenital Heart Surgery</i> , <b>2018</b> , 9, 157-170	1.1	9
109	Benchmark problems for numerical treatment of backflow at open boundaries. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2018</b> , 34, e2918	2.6	26
108	An interactive simulation tool for patient-specific clinical decision support in single-ventricle physiology. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2018</b> , 155, 712-721	1.5	14
107	Simulating Developmental Cardiac Morphology in Virtual Reality Using a Deformable Image Registration Approach. <i>Annals of Biomedical Engineering</i> , <b>2018</b> , 46, 2177-2188	4.7	6
106	Spatial and temporal variations in hemodynamic forces initiate cardiac trabeculation. <i>JCI Insight</i> , <b>2018</b> , 3,	9.9	27
105	A Re-Engineered Software Interface and Workflow for the Open-Source SimVascular Cardiovascular Modeling Package. <i>Journal of Biomechanical Engineering</i> , <b>2018</b> , 140,	2.1	43
104	Computational simulation of postoperative pulmonary flow distribution in Alagille patients with peripheral pulmonary artery stenosis. <i>Congenital Heart Disease</i> , <b>2018</b> , 13, 241-250	3.1	11
103	Real-World Variability in the Prediction of Intracranial Aneurysm Wall Shear Stress: The 2015 International Aneurysm CFD Challenge. <i>Cardiovascular Engineering and Technology</i> , <b>2018</b> , 9, 544-564	2.2	47
102	Multiple Aneurysms AnaTomy Challenge 2018 (MATCH): Phase I: Segmentation. <i>Cardiovascular Engineering and Technology</i> , <b>2018</b> , 9, 565-581	2.2	35
101	Right ventricular stroke work correlates with outcomes in pediatric pulmonary arterial hypertension. <i>Pulmonary Circulation</i> , <b>2018</b> , 8, 2045894018780534	2.7	11
100	Automated Tuning for Parameter Identification and Uncertainty Quantification in Multi-scale Coronary Simulations. <i>Computers and Fluids</i> , <b>2017</b> , 142, 128-138	2.8	53
99	Patient-specific parameter estimation in single-ventricle lumped circulation models under uncertainty. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2017</b> , 33, e02799	2.6	37

98	Superior performance of continuous over pulsatile flow ventricular assist devices in the single ventricle circulation: A computational study. <i>Journal of Biomechanics</i> , <b>2017</b> , 52, 48-54	2.9	14
97	Gradual loading ameliorates maladaptation in computational simulations of vein graft growth and remodelling. <i>Journal of the Royal Society Interface</i> , <b>2017</b> , 14,	4.1	24
96	Assessment of Coronary Artery Aneurysms Caused by Kawasaki Disease Using Transluminal Attenuation Gradient Analysis of Computerized Tomography Angiograms. <i>American Journal of Cardiology</i> , <b>2017</b> , 120, 556-562	3	10
95	SimVascular: An Open Source Pipeline for Cardiovascular Simulation. <i>Annals of Biomedical Engineering</i> , <b>2017</b> , 45, 525-541	4.7	206
94	A generalized multi-resolution expansion for uncertainty propagation with application to cardiovascular modeling. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2017</b> , 314, 196-221	5.7	12
93	Computed Tomography Fractional Flow Reserve Can Identify Culprit Lesions in Aortoiliac Occlusive Disease Using Minimally Invasive Techniques. <i>Annals of Vascular Surgery</i> , <b>2017</b> , 38, 151-157	1.7	4
92	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. <i>Annals of Thoracic Surgery</i> , <b>2017</b> , 103, 645-654	2.7	22
91	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> , <b>2017</b> , 153, 418-427	1.5	38
90	Optimizing fluid-structure interaction systems with immersogeometric analysis and surrogate modeling: Application to a hydraulic arresting gear. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2017</b> , 316, 668-693	5.7	68
89	<b>2017</b> ,		3
88	Blood Flow <b>2017</b> , 1-31		
87	A method to quantify mechanobiologic forces during zebrafish cardiac development using 4-D light sheet imaging and computational modeling. <i>PLoS Computational Biology</i> , <b>2017</b> , 13, e1005828	5	36
86	Computational blood flow simulations in Kawasaki disease patients: Insight into coronary artery aneurysm hemodynamics. <i>Global Cardiology Science &amp; Practice</i> , <b>2017</b> , 2017, e201729	0.7	6
85	Patient-Specific Simulations Reveal Significant Differences in Mechanical Stimuli in Venous and Arterial Coronary Grafts. <i>Journal of Cardiovascular Translational Research</i> , <b>2016</b> , 9, 279-90	3.3	25
84	On a sparse pressure-flow rate condensation of rigid circulation models. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 2174-2186	2.9	2
83	Dense Volume-to-Volume Vascular Boundary Detection. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 371-379	3.9	43
82	Uncertainty quantification in virtual surgery hemodynamics predictions for single ventricle palliation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2016</b> , 32, e02737	2.6	48
81	Atlas-Based Ventricular Shape Analysis for Understanding Congenital Heart Disease. <i>Progress in Pediatric Cardiology</i> , <b>2016</b> , 43, 61-69	0.4	14

80	Does TCPC power loss really affect exercise capacity?. <i>Heart</i> , <b>2015</b> , 101, 575	5.1	3
79	In Vitro Assessment of the Assisted Bidirectional Glenn Procedure for Stage One Single Ventricle Repair. <i>Cardiovascular Engineering and Technology</i> , <b>2015</b> , 6, 256-67	2.2	9
78	Simulations reveal adverse hemodynamics in patients with multiple systemic to pulmonary shunts. <i>Journal of Biomechanical Engineering</i> , <b>2015</b> , 137,	2.1	15
77	Computational simulation of the adaptive capacity of vein grafts in response to increased pressure. <i>Journal of Biomechanical Engineering</i> , <b>2015</b> , 137,	2.1	21
76	A multiscale model for the study of cardiac biomechanics in single-ventricle surgeries: a clinical case. <i>Interface Focus</i> , <b>2015</b> , 5, 20140079	3.9	13
75	Structural Edge Detection for Cardiovascular Modeling. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 735-742.	0.9	9
74	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> , <b>2015</b> , 9, 100-108	2.4	12
73	A bi-partitioned iterative algorithm for solving linear systems arising from incompressible flow problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2015</b> , 286, 40-62	5.7	30
72	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> , <b>2015</b> , 149, 689-96.e1-3	1.5	29
71	Impact of data distribution on the parallel performance of iterative linear solvers with emphasis on CFD of incompressible flows. <i>Computational Mechanics</i> , <b>2015</b> , 55, 93-103	4	11
70	Integration of clinical data collected at different times for virtual surgery in single ventricle patients: a case study. <i>Annals of Biomedical Engineering</i> , <b>2015</b> , 43, 1310-20	4.7	13
69	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> , <b>2015</b> , 149, 239-45.e1	1.5	15
68	Computational modeling of pathophysiologic responses to exercise in Fontan patients. <i>Annals of Biomedical Engineering</i> , <b>2015</b> , 43, 1335-47	4.7	11
67	The assisted bidirectional Glenn: a novel surgical approach for first-stage single-ventricle heart palliation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2015</b> , 149, 699-705	1.5	27
66	Flow simulations and validation for the first cohort of patients undergoing the Y-graft Fontan procedure. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2015</b> , 149, 247-55	1.5	44
65	Computational modeling and engineering in pediatric and congenital heart disease. <i>Current Opinion in Pediatrics</i> , <b>2015</b> , 27, 587-96	3.2	30
64	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> , <b>2015</b> , 2015, 679-82	0.9	3
63	Multiscale Modeling of Cardiovascular Flows for Clinical Decision Support. <i>Applied Mechanics Reviews</i> , <b>2015</b> , 67,	8.6	52

62	Distribution of aerosolized particles in healthy and emphysematous rat lungs: comparison between experimental and numerical studies. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 1147-57	2.9	24
61	Computation of residence time in the simulation of pulsatile ventricular assist devices. <i>Computational Mechanics</i> , <b>2014</b> , 54, 911-919	4	76
60	Validation of Patient-Specific Hemodynamic Simulations in Coronary Aneurysms Caused by Kawasaki Disease. <i>Cardiovascular Engineering and Technology</i> , <b>2014</b> , 5, 189-201	2.2	20
59	Patient-Specific Cardiovascular Fluid Mechanics Analysis with the ST and ALE-VMS Methods. <i>Computational Methods in Applied Sciences (Springer)</i> , <b>2014</b> , 71-102	0.4	6
58	Numerical blood flow simulation in surgical corrections: what do we need for an accurate analysis?. <i>Journal of Surgical Research</i> , <b>2014</b> , 186, 44-55	2.5	22
57	An integrated approach to patient-specific predictive modeling for single ventricle heart palliation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2014</b> , 17, 1572-89	2.1	48
56	Optimization in Cardiovascular Modeling. <i>Annual Review of Fluid Mechanics</i> , <b>2014</b> , 46, 519-546	22	54
55	Thrombotic risk stratification using computational modeling in patients with coronary artery aneurysms following Kawasaki disease. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2014</b> , 13, 1261-76 <sup>3,8</sup>	3.8	39
54	Recent advances in computational methodology for simulation of mechanical circulatory assist devices. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , <b>2014</b> , 6, 169-88	6.6	21
53	USNCTAM perspectives on mechanics in medicine. <i>Journal of the Royal Society Interface</i> , <b>2014</b> , 11, 20140301	3.01	28
52	A simulation protocol for exercise physiology in Fontan patients using a closed loop lumped-parameter model. <i>Journal of Biomechanical Engineering</i> , <b>2014</b> , 136,	2.1	38
51	ST and ALE-VMS methods for patient-specific cardiovascular fluid mechanics modeling. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2014</b> , 24, 2437-2486	3.5	98
50	Shape optimization of pulsatile ventricular assist devices using FSI to minimize thrombotic risk. <i>Computational Mechanics</i> , <b>2014</b> , 54, 921-932	4	92
49	Airflow and particle deposition simulations in health and emphysema: from in vivo to in silico animal experiments. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 899-914	4.7	47
48	Fluid-structure interaction simulation of pulsatile ventricular assist devices. <i>Computational Mechanics</i> , <b>2013</b> , 52, 971-981	4	94
47	A new preconditioning technique for implicitly coupled multidomain simulations with applications to hemodynamics. <i>Computational Mechanics</i> , <b>2013</b> , 52, 1141-1152	4	65
46	Predictive modeling of the virtual Hemi-Fontan operation for second stage single ventricle palliation: two patient-specific cases. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 423-9	2.9	60
45	An efficient framework for optimization and parameter sensitivity analysis in arterial growth and remodeling computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2013</b> , 256, 200-210	5.7	24



44	A modular numerical method for implicit 0D/3D coupling in cardiovascular finite element simulations. <i>Journal of Computational Physics</i> , <b>2013</b> , 244, 63-79	4.1	108
43	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> , <b>2013</b> , 135, 021016	2.1	92
42	Optimization of a Y-graft design for improved hepatic flow distribution in the fontan circulation. <i>Journal of Biomechanical Engineering</i> , <b>2013</b> , 135, 011002	2.1	37
41	Simulation based planning of surgical interventions in pediatric cardiology. <i>Physics of Fluids</i> , <b>2013</b> , 25, 101303	4.4	40
40	Lagrangian analysis of hemodynamics data from FSI simulation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2013</b> , 29, 445-61	2.6	25
39	A non-discrete method for computation of residence time in fluid mechanics simulations. <i>Physics of Fluids</i> , <b>2013</b> , 25, 110802	4.4	32
38	Low entropy data mapping for sparse iterative linear solvers <b>2013</b> ,		3
37	Moving domain computational fluid dynamics to interface with an embryonic model of cardiac morphogenesis. <i>PLoS ONE</i> , <b>2013</b> , 8, e72924	3.7	42
36	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> , <b>2012</b> , 143, 1086-97	1.5	57
35	Identification of hemodynamically optimal coronary stent designs based on vessel caliber. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2012</b> , 59, 1992-2002	5	23
34	Fluid Mechanics of Mixing in the Vertebrobasilar System: Comparison of Simulation and MRI. <i>Cardiovascular Engineering and Technology</i> , <b>2012</b> , 3, 450-461	2.2	13
33	Patient-specific multiscale modeling of blood flow for coronary artery bypass graft surgery. <i>Annals of Biomedical Engineering</i> , <b>2012</b> , 40, 2228-42	4.7	128
32	Respiratory effects on hemodynamics in patient-specific CFD models of the Fontan circulation under exercise conditions. <i>European Journal of Mechanics, B/Fluids</i> , <b>2012</b> , 35, 61-69	2.4	27
31	Optimization of computationally expensive simulations with Gaussian processes and parameter uncertainty: Application to cardiovascular surgery <b>2012</b> ,		6
30	Hypoplastic left heart syndrome: current considerations and expectations. <i>Journal of the American College of Cardiology</i> , <b>2012</b> , 59, S1-42	15.1	340
29	Toward a Computational Steering Framework for Large-Scale Composite Structures Based on Continually and Dynamically Injected Sensor Data. <i>Procedia Computer Science</i> , <b>2012</b> , 9, 1149-1158	1.6	13
28	Fluid-structure interaction simulations of the Fontan procedure using variable wall properties. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2012</b> , 28, 513-27	2.6	60
27	Image-based modeling of hemodynamics in coronary artery aneurysms caused by Kawasaki disease. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2012</b> , 11, 915-32	3.8	61

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