David A Steinman

List of Publications by Year
in descending order

181 papers	10,402 citations	23567 58 h-index	34986 98 g-index
181 all docs	181 docs citations	181 times ranked	6274 citing authors

#	Article	IF	Citations
1	An image-based modeling framework for patient-specific computational hemodynamics. Medical and Biological Engineering and Computing, 2008, 46, 1097-112.	2.8	621
2	Geometry of the Carotid Bifurcation Predicts Its Exposure to Disturbed Flow. Stroke, 2008, 39, 2341-2347.	2.0	313
3	Image-Based Computational Fluid Dynamics Modeling in Realistic Arterial Geometries. Annals of Biomedical Engineering, 2002, 30, 483-497.	2.5	290
4	Characterization of volumetric flow rate waveforms in the normal internal carotid and vertebral arteries. Physiological Measurement, 2005, 26, 477-488.	2.1	280
5	Characterization of common carotid artery blood-flow waveforms in normal human subjects. Physiological Measurement, 1999, 20, 219-240.	2.1	279
6	A Framework for Geometric Analysis of Vascular Structures: Application to Cerebral Aneurysms. IEEE Transactions on Medical Imaging, 2009, 28, 1141-1155.	8.9	268
7	Image-based computational simulation of flow dynamics in a giant intracranial aneurysm. American Journal of Neuroradiology, 2003, 24, 559-66.	2.4	258
8	Hemodynamics of human carotid artery bifurcations: Computational studies with models reconstructed from magnetic resonance imaging of normal subjects. Journal of Vascular Surgery, 1998, 28, 143-156.	1.1	241
9	Intracranial arterial wall imaging using threeâ€dimensional high isotropic resolution black blood MRI at 3.0 Tesla. Journal of Magnetic Resonance Imaging, 2011, 34, 22-30.	3.4	235
10	Reconstruction of carotid bifurcation hemodynamics and wall thickness using computational fluid dynamics and MRI. Magnetic Resonance in Medicine, 2002, 47, 149-159.	3.0	226
11	Image-Based Modeling of Blood Flow and Vessel Wall Dynamics: Applications, Methods and Future Directions. Annals of Biomedical Engineering, 2010, 38, 1188-1203.	2.5	220
12	Variation in the Carotid Bifurcation Geometry of Young Versus Older Adults. Stroke, 2005, 36, 2450-2456.	2.0	212
13	Correlations Among Indicators of Disturbed Flow at the Normal Carotid Bifurcation. Journal of Biomechanical Engineering, 2009, 131, 061013.	1.3	209
14	Robust and Objective Decomposition and Mapping of Bifurcating Vessels. IEEE Transactions on Medical Imaging, 2004, 23, 704-713.	8.9	199
15	Simulation of non-Newtonian blood flow in an end-to-side anastomosis. Biorheology, 1994, 31, 565-586.	0.4	182
16	PIV-Measured Versus CFD-Predicted Flow Dynamics in Anatomically Realistic Cerebral Aneurysm Models. Journal of Biomechanical Engineering, 2008, 130, 021015.	1.3	173
17	Atherosclerosis at arterial bifurcations: evidence for the role of haemodynamics and geometry. Thrombosis and Haemostasis, 2016, 115, 484-492.	3.4	172
18	On the Relative Importance of Rheology for Image-Based CFD Models of the Carotid Bifurcation. Journal of Biomechanical Engineering, 2007, 129, 273-278.	1.3	164

#	Article	IF	Citations
19	Exact fully 3D Navier-Stokes solutions for benchmarking. International Journal for Numerical Methods in Fluids, 1994, 19, 369-375.	1.6	160
20	Helical flow in carotid bifurcation as surrogate marker of exposure to disturbed shear. Journal of Biomechanics, 2012, 45, 2398-2404.	2.1	145
21	Prostate boundary segmentation from 2D ultrasound images. Medical Physics, 2000, 27, 1777-1788.	3.0	144
22	Sex Differences in Carotid Plaque and Stenosis. Stroke, 2004, 35, 477-481.	2.0	138
23	Mind the Gap: Impact of Computational Fluid Dynamics Solution Strategy on Prediction of Intracranial Aneurysm Hemodynamics and Rupture Status Indicators. American Journal of Neuroradiology, 2014, 35, 536-543.	2.4	128
24	Inlet Conditions for Image-Based CFD Models of the Carotid Bifurcation: Is it Reasonable to Assume Fully Developed Flow?. Journal of Biomechanical Engineering, 2006, 128, 371-379.	1.3	120
25	Accuracy of Computational Hemodynamics in Complex Arterial Geometries Reconstructed from Magnetic Resonance Imaging. Annals of Biomedical Engineering, 1999, 27, 32-41.	2.5	117
26	Flow Imaging and Computing: Large Artery Hemodynamics. Annals of Biomedical Engineering, 2005, 33, 1704-1709.	2.5	110
27	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, 021016.	1.3	109
28	Characterization of volumetric flow rate waveforms at the carotid bifurcations of older adults. Physiological Measurement, 2010, 31, 291-302.	2.1	104
29	Rethinking turbulence in blood. Biorheology, 2009, 46, 77-81.	0.4	100
30	Hemodynamics in the mouse aortic arch as assessed by MRI, ultrasound, and numerical modeling. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H884-H892.	3.2	96
31	Finite-Element Modeling of the Hemodynamics of Stented Aneurysms. Journal of Biomechanical Engineering, 2004, 126, 382-387.	1.3	94
32	On the nature and reduction of plaque-mimicking flow artifacts in black blood MRI of the carotid bifurcation. Magnetic Resonance in Medicine, 1998, 39, 635-641.	3.0	91
33	Virtual angiography for visualization and validation of computational models of aneurysm hemodynamics. IEEE Transactions on Medical Imaging, 2005, 24, 1586-1592.	8.9	91
34	Flow waveform effects on end-to-side anastomotic flow patterns. Journal of Biomechanics, 1998, 31, 609-617.	2.1	90
35	Computational blood flow modelling. Journal of Biomechanics, 1997, 31, 179-184.	2.1	88
36	A Numerical Study of Blood Flow Patterns in Anatomically Realistic and Simplified End-to-Side Anastomoses. Journal of Biomechanical Engineering, 1999, 121, 265-272.	1.3	87

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37	Accuracy of MR phase contrast velocity measurements for unsteady flow. Journal of Magnetic Resonance Imaging, 1995, 5, 428-431.	3.4	86
38	Reproducibility of Image-Based Computational Fluid Dynamics Models of the Human Carotid Bifurcation. Annals of Biomedical Engineering, 2003, 31, 132-141.	2.5	84
39	Accuracy and variability assessment of a semiautomatic technique for segmentation of the carotid arteries from three-dimensional ultrasound images. Medical Physics, 2000, 27, 1333-1342.	3.0	83
40	Steady flow separation patterns in a 45 degree junction. Journal of Fluid Mechanics, 2000, 411, 1-38.	3.4	83
41	Flow Patterns at the Stenosed Carotid Bifurcation: Effect of Concentric versus Eccentric Stenosis. Annals of Biomedical Engineering, 2000, 28, 415-423.	2.5	82
42	On the overestimation of early wall thickening at the carotid bulb by black blood MRI, with implications for coronary and vulnerable plaque imaging. Magnetic Resonance in Medicine, 2008, 60, 1020-1028.	3.0	82
43	Two-equation Turbulence Modeling of Pulsatile Flow in a Stenosed Tube. Journal of Biomechanical Engineering, 2004, 126, 625-635.	1.3	79
44	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.	1.6	78
45	A Numerical Simulation of Flow in a Two-Dimensional End-to-Side Anastomosis Model. Journal of Biomechanical Engineering, 1993, 115, 112-118.	1.3	76
46	The Effect of Wall Distensibility on Flow in a Two-Dimensional End-to-Side Anastomosis. Journal of Biomechanical Engineering, 1994, 116, 294-301.	1.3	75
47	The Computational Fluid Dynamics Rupture Challenge 2013â€"Phase II: Variability of Hemodynamic Simulations in Two Intracranial Aneurysms. Journal of Biomechanical Engineering, 2015, 137, 121008.	1.3	74
48	Computational modeling of arterial biomechanics: Insights into pathogenesis and treatment of vascular disease. Journal of Vascular Surgery, 2003, 37, 1118-1128.	1.1	73
49	High-resolution computational fluid dynamics detects flow instabilities in the carotid siphon: Implications for aneurysm initiation and rupture?. Journal of Biomechanics, 2014, 47, 3210-3216.	2.1	73
50	Correlation Between Local Hemodynamics and Lesion Distribution in a Novel Aortic Regurgitation Murine Model of Atherosclerosis. Annals of Biomedical Engineering, 2011, 39, 1414-1422.	2.5	71
51	High-resolution CFD detects high-frequency velocity fluctuations in bifurcation, but not sidewall, aneurysms. Journal of Biomechanics, 2013, 46, 402-407.	2.1	71
52	A rational approach to defining principal axes of multidirectional wall shear stress in realistic vascular geometries, with application to the study of the influence of helical flow on wall shear stress directionality in aorta. Journal of Biomechanics, 2015, 48, 899-906.	2.1	71
53	Towards the Clinical utility of CFD for assessment of intracranial aneurysm rupture â€“ a systematic review and novel parameter-ranking tool. Journal of NeuroInterventional Surgery, 2019, 11, 153-158.	3.3	71
54	Better Than Nothing: A Rational Approach for Minimizing the Impact of Outflow Strategy on Cerebrovascular Simulations. American Journal of Neuroradiology, 2018, 39, 337-343.	2.4	69

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55	An objective approach to digital removal of saccular aneurysms: technique and applications. British Journal of Radiology, 2009, 82, S55-S61.	2.2	68
56	The Computational Fluid Dynamics Rupture Challenge 2013â€”Phase I: Prediction of Rupture Status in Intracranial Aneurysms. American Journal of Neuroradiology, 2015, 36, 530-536.	2.4	65
57	Path-Dependent Hemodynamics of the Stenosed Carotid Bifurcation. Annals of Biomedical Engineering, 2003, 31, 1054-1065.	2.5	64
58	Narrowing the Expertise Gap for Predicting Intracranial Aneurysm Hemodynamics: Impact of Solver Numerics versus Mesh and Time-Step Resolution. American Journal of Neuroradiology, 2015, 36, 1310-1316.	2.4	61
59	Rapid Three-Dimensional Segmentation of the Carotid Bifurcation From Serial MR Images. Journal of Biomechanical Engineering, 2000, 122, 96-99.	1.3	60
60	An Insight into the Mechanistic Role of the Common Carotid Artery on the Hemodynamics at the Carotid Bifurcation. Annals of Biomedical Engineering, 2015, 43, 68-81.	2.5	60
61	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH): Phase I: Segmentation. Cardiovascular Engineering and Technology, 2018, 9, 565-581.	1.6	59
62	Errors in the estimation of wall shear stress by maximum Doppler velocity. Atherosclerosis, 2013, 227, 259-266.	0.8	58
63	Effect of Contralateral Carotid Artery Stenosis on Carotid Ultrasound Velocity Measurements. Stroke, 2000, 31, 2636-2640.	2.0	57
64	A semiâ€automatic technique for measurement of arterial wall from black blood MRI. Medical Physics, 2001, 28, 1098-1107.	3.0	56
65	Combined analysis of spatial and velocity displacement artifacts in phase contrast measurements of complex flows. Journal of Magnetic Resonance Imaging, 1997, 7, 339-346.	3.4	55
66	Insights into the co-localization of magnitude-based versus direction-based indicators of disturbed shear at the carotid bifurcation. Journal of Biomechanics, 2016, 49, 2413-2419.	2.1	54
67	Carotid Bifurcation Geometry Is an Independent Predictor of Early Wall Thickening at the Carotid Bulb. Stroke, 2014, 45, 473-478.	2.0	52
68	Estimation of Inlet Flow Rates for Image-Based Aneurysm CFD Models: Where and How to Begin?. Annals of Biomedical Engineering, 2015, 43, 1422-1431.	2.5	51
69	The Vascular Modeling Toolkit: A Python Library for the Analysis of Tubular Structures in Medical Images. Journal of Open Source Software, 2018, 3, 745.	4.6	51
70	On the effect of parentâ€“aneurysm angle on flow patterns in basilar tip aneurysms: Towards a surrogate geometric marker of intra-aneurismal hemodynamics. Journal of Biomechanics, 2008, 41, 241-248.	2.1	50
71	Automatic Neck Plane Detection and 3D Geometric Characterization of Aneurysmal Sacs. Annals of Biomedical Engineering, 2012, 40, 2188-2211.	2.5	50
72	Segment-specific associations between local haemodynamic and imaging markers of early atherosclerosis at the carotid artery: an in vivo human study. Journal of the Royal Society Interface, 2018, 15, 20180352.	3.4	49

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73	Image-based Computational Fluid Dynamics: A New Paradigm for Monitoring Hemodynamics and Atherosclerosis. Current Drug Targets Cardiovascular & Haematological Disorders, 2004, 4, 183-197.	2.0	45
74	Is flow in the common carotid artery fully developed?. Physiological Measurement, 2008, 29, 1335-1349.	2.1	44
75	Comparison of Carotid Plaque Ulcer Detection Using Contrast-Enhanced and Time-of-Flight MRA Techniques. American Journal of Neuroradiology, 2013, 34, 177-184.	2.4	44
76	Nonâ€Newtonian versus numerical rheology: Practical impact of shearâ€thinning on the prediction of stable and unstable flows in intracranial aneurysms. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e2836.	2.1	42
77	Particle Volumetric Residence Time Calculations in Arterial Geometries. Journal of Biomechanical Engineering, 1996, 118, 158-164.	1.3	41
78	Effect of Velocity Profile Skewing on Blood Velocity and Volume Flow Waveforms Derived From Maximum Doppler Spectral Velocity. Ultrasound in Medicine and Biology, 2013, 39, 870-881.	1.5	40
79	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.	1.6	40
80	On the shape of the common carotid artery with implications for blood velocity profiles. Physiological Measurement, 2011, 32, 1885-1897.	2.1	38
81	How patient specific are patient-specific computational models of cerebral aneurysms? An overview of sources of error and variability. Neurosurgical Focus, 2019, 47, E14.	2.3	38
82	Effect of Common Carotid Artery Inlet Length on Normal Carotid Bifurcation Hemodynamics. Journal of Biomechanical Engineering, 2010, 132, 121008.	1.3	37
83	On the quantification and visualization of transient periodic instabilities in pulsatile flows. Journal of Biomechanics, 2017, 52, 179-182.	2.1	37
84	Simulated pathline visualization of computed periodic blood flow patterns. Journal of Biomechanics, 2000, 33, 623-628.	2.1	35
85	Extracorporeal femoral to carotid artery perfusion in selective brain cooling for a giant aneurysm. Journal of Neurosurgery, 2004, 100, 343-347.	1.6	35
86	Improved prediction of disturbed flow via hemodynamically-inspired geometric variables. Journal of Biomechanics, 2012, 45, 1632-1637.	2.1	34
87	Carotid Bifurcation Hemodynamics in Older Adults: Effect of Measured Versus Assumed Flow Waveform. Journal of Biomechanical Engineering, 2010, 132, 071006.	1.3	33
88	3D phase contrast MRI: Partial volume correction for robust blood flow quantification in small intracranial vessels. Magnetic Resonance in Medicine, 2018, 79, 129-140.	3.0	31
89	On Assessing the Quality of Particle Tracking Through Computational Fluid Dynamic Models. Journal of Biomechanical Engineering, 2002, 124, 166-175.	1.3	29
90	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH)â€”phase II: rupture risk assessment. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1795-1804.	2.8	29

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91	Direct Numerical Simulation of Laminar-Turbulent Transition in a Non-Axisymmetric Stenosis Model for Newtonian vs. Shear-Thinning Non-Newtonian Rheologies. Flow, Turbulence and Combustion, 2019, 102, 43-72.	2.6	29
92	A Eulerian method to analyze wall shear stress fixed points and manifolds in cardiovascular flows. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1403-1423.	2.8	29
93	Computational Modeling and Flow Diverters: A Teaching Moment. American Journal of Neuroradiology, 2011, 32, 981-983.	2.4	28
94	Improved reduced-order modelling of cerebrovascular flow distribution by accounting for arterial bifurcation pressure drops. Journal of Biomechanics, 2017, 51, 83-88.	2.1	27
95	Wall Shear Stress Topological Skeleton Independently Predicts Long-Term Restenosis After Carotid Bifurcation Endarterectomy. Annals of Biomedical Engineering, 2020, 48, 2936-2949.	2.5	27
96	Torrents of torment: turbulence as a mechanism of pulsatile tinnitus secondary to venous stenosis revealed by high-fidelity computational fluid dynamics. Journal of NeuroInterventional Surgery, 2021, 13, 732-737.	3.3	24
97	On the influence of vessel planarity on local hemodynamics at the human carotid bifurcation. Biorheology, 2002, 39, 443-8.	0.4	24
98	MR measurement and numerical simulation of steady flow in an end-to-side anastomosis model. Journal of Biomechanics, 1996, 29, 537-542.	2.1	23
99	Use of an Ultrasound Blood-Mimicking Fluid for Doppler Investigations of Turbulence In Vitro. Ultrasound in Medicine and Biology, 2008, 34, 1163-1173.	1.5	22
100	Vessel calibre and flow splitting relationships at the internal carotid artery terminal bifurcation. Physiological Measurement, 2017, 38, 2044-2057.	2.1	22
101	Errors in power-law estimations of inflow rates for intracranial aneurysm CFD. Journal of Biomechanics, 2018, 80, 159-165.	2.1	22
102	Template-based finite-element mesh generation from medical images. Computer Methods and Programs in Biomedicine, 2005, 77, 11-21.	4.7	21
103	Early Atherosclerotic Changes in Coronary Arteries are Associated with Endothelium Shear Stress Contraction/Expansion Variability. Annals of Biomedical Engineering, 2021, 49, 2606-2621.	2.5	21
104	Use of Factor Analysis to Characterize Arterial Geometry and Predict Hemodynamic Risk: Application to the Human Carotid Bifurcation. Journal of Biomechanical Engineering, 2010, 132, 114505.	1.3	20
105	Assumptions in modelling of large artery hemodynamics. Modeling, Simulation and Applications, 2012, , 1-18.	1.3	20
106	Characterization of Transition to Turbulence for Blood in a Straight Pipe Under Steady Flow Conditions. Journal of Biomechanical Engineering, 2016, 138, .	1.3	20
107	On the hydrodynamic stability of pulsatile flow in a plane channel. Physics of Fluids, 2002, 14, 1938-1944.	4.0	18
108	Real-time numerical simulation of Doppler ultrasound in the presence of nonaxial flow. Ultrasound in Medicine and Biology, 2005, 31, 519-528.	1.5	18

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109	4D-CT angiography versus 3D-rotational angiography as the imaging modality for computational fluid dynamics of cerebral aneurysms. Journal of NeuroInterventional Surgery, 2020, 12, 626-630.	3.3	18
110	Effect of black blood MR image quality on vessel wall segmentation. Magnetic Resonance in Medicine, 2001, 46, 299-304.	3.0	17
111	How patient-specific do internal carotid artery inflow rates need to be for computational fluid dynamics of cerebral aneurysms?. Journal of NeuroInterventional Surgery, 2021, 13, 459-464.	3.3	16
112	Effect of distal graft anastomosis site on retrograde perfusion and flow patterns of native coronary vasculature. Annals of Thoracic Surgery, 2001, 72, 782-787.	1.3	15
113	Carotid Ultrasound Boundary Study (CUBS): An Open Multicenter Analysis of Computerized Intimaâ€“Media Thickness Measurement Systems and Their Clinical Impact. Ultrasound in Medicine and Biology, 2021, 47, 2442-2455.	1.5	15
114	Carotid Ultrasound Boundary Study (CUBS): Technical considerations on an open multi-center analysis of computerized measurement systems for intima-media thickness measurement on common carotid artery longitudinal B-mode ultrasound scans. Computers in Biology and Medicine, 2022, 144, 105333.	7.0	15
115	Anthropometric data for magnetic resonance imaging of the carotid bifurcation. Journal of Magnetic Resonance Imaging, 2005, 21, 845-849.	3.4	13
116	Visualization of complex flow fields, with application to the interpretation of colour flow doppler images. Ultrasound in Medicine and Biology, 1992, 18, 1-9.	1.5	12
117	Scanâ€“Rescan reproducibility of carotid bifurcation geometry from routine contrastâ€enhanced MR angiography. Journal of Magnetic Resonance Imaging, 2011, 33, 482-489.	3.4	12
118	Robust cerebrovascular blood velocity and flow rate estimation from 4Dâ€<scp>CTA</scp>. Medical Physics, 2019, 46, 2126-2136.	3.0	12
119	On the prevalence of flow instabilities from high-fidelity computational fluid dynamics of intracranial bifurcation aneurysms. Journal of Biomechanics, 2021, 127, 110683.	2.1	12
120	In Vitro Doppler Ultrasound Investigation of Turbulence Intensity in Pulsatile Flow With Simulated Cardiac Variability. Ultrasound in Medicine and Biology, 2009, 35, 120-128.	1.5	11
121	Overestimation of cerebral aneurysm wall thickness by black blood MRI?. Journal of Magnetic Resonance Imaging, 2010, 31, 766-766.	3.4	11
122	Spectral decomposition and illustration-inspired visualisation of highly disturbed cerebrovascular blood flow dynamics. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2020, 8, 182-193.	1.9	11
123	In vivo Doppler Ultrasound Quantification of Turbulence Intensity Using A High-Pass Frequency Filter Method. Ultrasound in Medicine and Biology, 2010, 36, 761-771.	1.5	10
124	Impact of T2 decay on carotid artery wall thickness measurements. Journal of Magnetic Resonance Imaging, 2013, 37, 1493-1498.	3.4	10
125	Relative Performance of Geometric Search Algorithms for Interpolating Unstructured Mesh Data. Lecture Notes in Computer Science, 2003, , 391-398.	1.3	9
126	Fast and mechanistic ultrasound simulation using a point source/receiver approach. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 2335-2346.	3.0	9

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127	Inputs for Subject-Specific Computational Fluid Dynamics Simulation of Blood Flow in the Mouse Aorta. Journal of Biomechanical Engineering, 2014, 136, 101008.	1.3	8
128	On the spectrographic representation of cardiovascular flow instabilities. Journal of Biomechanics, 2020, 110, 109977.	2.1	8
129	On delayed transition to turbulence in an eccentric stenosis model for clean vs. noisy high-fidelity CFD. Journal of Biomechanics, 2021, 125, 110588.	2.1	8
130	A Dual-Pressure Boundary Condition for use in Simulations of Bifurcating Conduits. Journal of Biomechanical Engineering, 2002, 124, 617-619.	1.3	7
131	The Art and Science of Visualizing Simulated Blood-Flow Dynamics. Leonardo, 2007, 40, 71-76.	0.3	7
132	Exploring wall shear stress spatiotemporal heterogeneity in coronary arteries combining correlation-based analysis and complex networks with computational hemodynamics. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 1209-1222.	1.8	7
133	<title>Development and evaluation of a semiautomatic 3D segmentation technique of the carotid arteries from 3D ultrasound images</title>. , 1999, 3661, 214.		6
134	On the Synthesis of Sample Volumes for Real-Time Spectral Doppler Ultrasound Simulation. Ultrasound in Medicine and Biology, 2010, 36, 2107-2116.	1.5	6
135	Cerebral aneurysm blood flow simulations: Thereâ€™s solver settings and then thereâ€™s solver settings. Journal of Biomechanics, 2017, 61, 280.	2.1	6
136	Calculating particle-to-wall distances in unstructured computational fluid dynamic models. Applied Mathematical Modelling, 2001, 25, 803-814.	4.2	5
137	Real-time virtual Doppler ultrasound. , 2004, , .		5
138	Validation of the Carotid Intimaâ€“Media Thickness Variability: Can Manual Segmentations Be Trusted as Ground Truth?. Ultrasound in Medicine and Biology, 2016, 42, 1598-1611.	1.5	5
139	Relevance and challenges of computational fluid dynamics in the biomedical sciences. Journal of Biomechanics, 2016, 49, 2101.	2.1	5
140	Spatiotemporal Hemodynamic Complexity in Carotid Arteries: an Integrated Computational Hemodynamics & Complex Networks-Based Approach. IEEE Transactions on Biomedical Engineering, 2019, 67, 1-1.	4.2	5
141	Real-time and interactive virtual Doppler ultrasound. , 2005, , .		4
142	Virtual angiography for visualization and validation of computational fluid dynamics models of aneurysm hemodynamics. , 2005, , .		3
143	Correlation Among Hemodynamic Parameters at the Carotid Bifurcation. , 2008, , .		3
144	Prediction of Disturbed Flow by Factor Analysis of Carotid Bifurcation Geometry. , 2009, , .		3

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145	Illustration-Inspired Visualization of Blood Flow Dynamics. , 2014, , .		3
146	FAMUS II: A Fast and Mechanistic Ultrasound Simulator Using an Impulse Response Approach. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 362-373.	3.0	3
147	Spectral Bandedness in High-Fidelity CFD Predicts Rupture Status in Intracranial Aneurysms. Journal of Biomechanical Engineering, 2022, , .	1.3	3
148	Integrating computational fluid dynamics data into medical image visualization workflows via DICOM. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1143-1154.	2.8	3
149	Reliability of vascular geometry factors derived from clinical MRA. , 2009, , .		2
150	From image data to computational domains. , 2009, , 123-175.		2
151	Data-Driven Sonification of CFD Aneurysm Models. , 0, , .		2
152	Imaging Science: The Pictorial Turn in Bio- and Neurosciences. , 2011, , 111-128.		2
153	Influence of Inlet Secondary Curvature on Image-Based CFD Models of the Carotid Bifurcation. , 2008, , .		2
154	Doppler ultrasound and numerical analysis for the assessment of hemodynamic disturbances in ulcerated carotid arteries. , 2008, , .		1
155	Characterization of 3-D flow structures in the stenosed carotid bifurcation with plaque ulceration. , 2009, , .		1
156	Automated and objective removal of bifurcation aneurysms: Incremental improvements, and validation against healthy controls. Journal of Biomechanics, 2019, 96, 109342.	2.1	1
157	Up around the bend: progress and promise of intravascular imaging in neurointerventional surgery. Journal of NeuroInterventional Surgery, 2021, 13, 495-496.	3.3	1
158	Narcissus and Echo:Reflections on an Art-Science Collaboration. Leonardo, 2021, 54, 552-557.	0.3	1
159	Transition to Turbulence Downstream of a Stenosis for Whole Blood and a Newtonian Analog Under Steady Flow Conditions. Journal of Biomechanical Engineering, 2021, 144, .	1.3	1
160	Degree of Retrograde Flow and Its Effect on Local Hemodynamics and Plaque Distribution in an Aortic Regurgitation Murine Model of Atherosclerosis. , 2011, , .		1
161	Spectral landscapes of flow instabilities in brain aneurysms. Physical Review Fluids, 2021, 6, .	2.5	1
162	Improving visualization of three-dimensional aneurysm features via segmentation with upsampled resolution and gradient enhancement (SURGE). Journal of NeuroInterventional Surgery, 2023, 15, 760-765.	3.3	1

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163	P3B-4 In Vitro Investigation of Blood-Flow Velocity Patterns Near a Fine Mesh. , 2006, , .		0
164	Is Flow in the Common Carotid Artery Fully-Developed?. , 2008, , .		0
165	Numerical analysis of the hemodynamic effect of plaque ulceration in the stenotic carotid artery bifurcation. Proceedings of SPIE, 2009, , .	0.8	0
166	Image-Based CFD Modelling of Hemodynamic Factors in Aneurysm Formation Using a Novel Approach for Digital Removal of Saccular Aneurysms. , 2009, , .		0
167	Characterization of Common Carotid Artery Curvature and Its Impact on Velocity Profile Shape. , 2010, , .		0
168	Improved geometric variables for predicting disturbed flow at the normal carotid bifurcation. Proceedings of SPIE, 2011, , .	0.8	0
169	CFD Challenge: Solutions Using a Finite Element Method Flow Solver Implemented in FEniCS. , 2012, , .		0
170	Calculation of Carotid Artery Flow Rates Using Doppler Ultrasound: Implications of Velocity Profile Skewing. , 2012, , .		0
171	Effect of Common Carotid Artery Inlet Length on Helical Flow at the Carotid Bifurcation: Influence on Exposure to Disturbed Shear. , 2012, , .		0
172	Sources of error in CEMRA-based CFD simulations of the common carotid artery. Proceedings of SPIE, 2013, , .	0.8	0
173	Letter by Steinman et al Regarding Article, â€œWall Shear Stress and T1 Contrast Ratio Are Associated With Embolic Signals During Carotid Exposure in Endarterectomyâ€• Stroke, 2018, 49, e341.	2.0	0
174	Variation in the Hemodynamics of Young Adult Carotid Bifurcations. , 2007, , .		0
175	Geometry Anticipates Hemodynamic Phenotype of Basilar Tip Aneurysms. , 2007, , .		0
176	Hemodynamic Phenotypes of Anatomically Realistic Terminal Aneurysms. , 2008, , .		0
177	Normal Carotid Bifurcation Hemodynamics in Older Adults: Effect of Measured vs. Allometrically-Scaled Flow Rate Boundary Conditions. , 2009, , .		0
178	Modelling and Simulation in Biomedical Research. Advances in Bioinformatics and Biomedical Engineering Book Series, 2010, , 228-240.	0.4	0
179	In Vivo MRI Versus Ex Vivo CT for Image-Based CFD of the Mouse Aorta. , 2012, , .		0
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