

Ryo Torii

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.

106
papers

3,185
citations

28
h-index

54
g-index

117
ext. papers

3,741
ext. citations

3.9
avg, IF

4.85
L-index

#	Paper	IF	Citations
106	Magnitude and role of wall shear stress on cerebral aneurysm: computational fluid dynamic study of 20 middle cerebral artery aneurysms. <i>Stroke</i> , 2004 , 35, 2500-5	6.7	594
105	Incomplete stent apposition causes high shear flow disturbances and delay in neointimal coverage as a function of strut to wall detachment distance: implications for the management of incomplete stent apposition. <i>Circulation: Cardiovascular Interventions</i> , 2014 , 7, 180-9	6	151
104	Fluid-structure Interaction Modeling of Aneurysmal Conditions with High and Normal Blood Pressures. <i>Computational Mechanics</i> , 2006 , 38, 482-490	4	141
103	Computer modeling of cardiovascular fluid-structure interactions with the deforming-spatial-domain/stabilized space-time formulation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 1885-1895	5.7	137
102	Influence of wall elasticity in patient-specific hemodynamic simulations. <i>Computers and Fluids</i> , 2007 , 36, 160-168	2.8	132
101	Fluid-structure interaction modeling of a patient-specific cerebral aneurysm: influence of structural modeling. <i>Computational Mechanics</i> , 2008 , 43, 151-159	4	127
100	Fluid-structure interaction modeling of blood flow and cerebral aneurysm: Significance of artery and aneurysm shapes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009 , 198, 3613-3621	5.7	115
99	Impact of stent strut design in metallic stents and biodegradable scaffolds. <i>International Journal of Cardiology</i> , 2014 , 177, 800-8	3.2	106
98	Kissing balloon or sequential dilation of the side branch and main vessel for provisional stenting of bifurcations: lessons from micro-computed tomography and computational simulations. <i>JACC: Cardiovascular Interventions</i> , 2012 , 5, 47-56	5	101
97	Fluid-structure interaction analysis of a patient-specific right coronary artery with physiological velocity and pressure waveforms. <i>Communications in Numerical Methods in Engineering</i> , 2009 , 25, 565-580		88
96	Role of the bloodstream impacting force and the local pressure elevation in the rupture of cerebral aneurysms. <i>Stroke</i> , 2005 , 36, 1933-8	6.7	85
95	Influence of wall thickness on fluid-structure interaction computations of cerebral aneurysms. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010 , 26, 336-347	2.6	73
94	Finite element simulation of blood flow in the cerebral artery. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 191, 661-671	5.7	72
93	Numerical investigation of the effect of hypertensive blood pressure on cerebral aneurysm dependence of the effect on the aneurysm shape. <i>International Journal for Numerical Methods in Fluids</i> , 2007 , 54, 995-1009	1.9	71
92	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
91	Role of 0D peripheral vasculature model in fluid-structure interaction modeling of aneurysms. <i>Computational Mechanics</i> , 2010 , 46, 43-52	4	56
90	Local Hemodynamic Forces After Stenting: Implications on Restenosis and Thrombosis. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2017 , 37, 2231-2242	9.4	51

89	Location of side branch access critically affects results in bifurcation stenting: Insights from bench modeling and computational flow simulation. <i>International Journal of Cardiology</i> , 2013 , 168, 3623-8	3.2	51
88	Influencing factors in image-based fluid-structure interaction computation of cerebral aneurysms. <i>International Journal for Numerical Methods in Fluids</i> , 2011 , 65, 324-340	1.9	49
87	Influence of Wall Elasticity on Image-Based Blood Flow Simulations. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2004 , 70, 1224-1231		45
86	Computational Fluid Dynamic Analysis of the Left Atrial Appendage to Predict Thrombosis Risk. <i>Frontiers in Cardiovascular Medicine</i> , 2018 , 5, 34	5.4	43
85	Crush, culotte, T and protrusion: which 2-stent technique for treatment of true bifurcation lesions? - insights from in vitro experiments and micro-computed tomography. <i>Circulation Journal</i> , 2013 , 77, 73-80	3.9	41
84	Estimation of element-based zero-stress state for arterial FSI computations. <i>Computational Mechanics</i> , 2014 , 54, 895-910	4	40
83	Coronary arterial dynamics computation with medical-image-based time-dependent anatomical models and element-based zero-stress state estimates. <i>Computational Mechanics</i> , 2014 , 54, 1047-1053	4	39
82	Computational modeling of LDL and albumin transport in an in vivo CT image-based human right coronary artery. <i>Journal of Biomechanical Engineering</i> , 2009 , 131, 021003	2.1	37
81	Vulnerable plaques and patients: state-of-the-art. <i>European Heart Journal</i> , 2020 , 41, 2997-3004	9.5	34
80	MR image-based geometric and hemodynamic investigation of the right coronary artery with dynamic vessel motion. <i>Annals of Biomedical Engineering</i> , 2010 , 38, 2606-20	4.7	32
79	Integrated morphologic and functional assessment of the aortic root after different tissue valve root replacement procedures. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2012 , 143, 1422-8	1.5	28
78	The Nidus for Possible Thrombus Formation: Insight From the Microenvironment of Bioresorbable Vascular Scaffold. <i>JACC: Cardiovascular Interventions</i> , 2016 , 9, 2167-2168	5	27
77	Stress phase angle depicts differences in coronary artery hemodynamics due to changes in flow and geometry after percutaneous coronary intervention. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009 , 296, H765-76	5.2	25
76	Endothelial shear stress 5 years after implantation of a coronary bioresorbable scaffold. <i>European Heart Journal</i> , 2018 , 39, 1602-1609	9.5	24
75	A Technical Review of Minimally Invasive Mitral Valve Replacements. <i>Cardiovascular Engineering and Technology</i> , 2015 , 6, 174-84	2.2	23
74	Vulnerable plaque detection: an unrealistic quest or a feasible objective with a clinical value?. <i>Heart</i> , 2016 , 102, 581-9	5.1	23
73	A computational study on the influence of catheter-delivered intravascular probes on blood flow in a coronary artery model. <i>Journal of Biomechanics</i> , 2007 , 40, 2501-9	2.9	20
72	A Mock Circulatory System Incorporating a Compliant 3D-Printed Anatomical Model to Investigate Pulmonary Hemodynamics. <i>Artificial Organs</i> , 2017 , 41, 637-646	2.6	19

71	Modelling of inflow boundary conditions for image-based simulation of cerebrovascular flow. <i>International Journal for Numerical Methods in Fluids</i> , 2005 , 47, 603-617	1.9	19
70	Patient-specific modeling and multi-scale blood simulation for computational hemodynamic study on the human cerebrovascular system. <i>Current Pharmaceutical Biotechnology</i> , 2012 , 13, 2153-65	2.6	17
69	Comparison of Aortic Flow Patterns Before and After Transcatheter Aortic Valve Implantation. <i>Cardiovascular Engineering and Technology</i> , 2012 , 3, 123-135	2.2	16
68	Strut protrusion and shape impact on endothelial shear stress: insights from pre-clinical study comparing Mirage and Absorb bioresorbable scaffolds. <i>International Journal of Cardiovascular Imaging</i> , 2017 , 33, 1313-1322	2.5	15
67	Patient-specific coronary stenoses can be modeled using a combination of OCT and flow velocities to accurately predict hyperemic pressure gradients. <i>IEEE Transactions on Biomedical Engineering</i> , 2014 , 61, 1902-13	5	13
66	Numerical Simulation System for Blood Flow in the Cerebral Artery Using CT Imaging Data. <i>JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing</i> , 2001 , 44, 982-989		13
65	Difference in haemodynamic microenvironment in vessels scaffolded with Absorb BVS and Mirage BRMS: insights from a preclinical endothelial shear stress study. <i>EuroIntervention</i> , 2017 , 13, 1327-1335	3.1	13
64	Early coverage of drug-eluting stents analysed by optical coherence tomography: evidence of the impact of stent apposition and strut characteristics on the neointimal healing process. <i>EuroIntervention</i> , 2016 , 12, e605-14	3.1	13
63	Preclinical assessment of the endothelial shear stress in porcine-based models following implantation of two different bioresorbable scaffolds: effect of scaffold design on the local haemodynamic micro-environment. <i>EuroIntervention</i> , 2016 , 12, 1296	3.1	12
62	Assessment of the hemodynamic characteristics of Absorb BVS in a porcine coronary artery model. <i>International Journal of Cardiology</i> , 2017 , 227, 467-473	3.2	11
61	Shear Stress Estimated by Quantitative Coronary Angiography Predicts Plaques Prone to Progress and Cause Events. <i>JACC: Cardiovascular Imaging</i> , 2020 , 13, 2206-2219	8.4	11
60	Predicting impending rupture of the ascending aorta with bicuspid aortic valve: spatiotemporal flow and wall shear stress. <i>JACC: Cardiovascular Imaging</i> , 2013 , 6, 1017-9	8.4	10
59	Bioresorbable vascular scaffold radial expansion and conformation compared to a metallic platform: insights from in vitro expansion in a coronary artery lesion model. <i>EuroIntervention</i> , 2016 , 12, 834-44	3.1	10
58	Intravascular multimodality imaging: feasibility and role in the evaluation of coronary plaque pathology. <i>European Heart Journal Cardiovascular Imaging</i> , 2017 , 18, 613-620	4.1	10
57	Modelling multi-scale cell-tissue interaction of tissue-engineered muscle constructs. <i>Journal of Tissue Engineering</i> , 2018 , 9, 2041731418787141	7.5	10
56	Midterm results of the Ross procedure in children: an appraisal of the subannular implantation with interrupted sutures technique. <i>European Journal of Cardio-thoracic Surgery</i> , 2017 , 52, 798-804	3	9
55	Implications of the local haemodynamic forces on the phenotype of coronary plaques. <i>Heart</i> , 2019 , 105, 1078-1086	5.1	9
54	Aortic root dynamism, geometry, and function after the remodeling operation: Clinical relevance. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2018 , 156, 951-962.e2	1.5	9

53	Neointima and neoatherosclerotic characteristics in bare metal and first- and second-generation drug-eluting stents in patients admitted with cardiovascular events attributed to stent failure: an optical coherence tomography study. <i>EuroIntervention</i> , 2018 , 13, e1831-e1840	3.1	9
52	Design, Analysis and Testing of a Novel Mitral Valve for Transcatheter Implantation. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 1852-1864	4.7	8
51	Impact of Inflow Boundary Conditions on the Calculation of CT-Based FFR. <i>Fluids</i> , 2019 , 4, 60	1.6	8
50	On outflow boundary conditions for CT-based computation of FFR: Examination using PET images. <i>Medical Engineering and Physics</i> , 2020 , 76, 79-87	2.4	8
49	Implications of the local hemodynamic forces on the formation and destabilization of neoatherosclerotic lesions. <i>International Journal of Cardiology</i> , 2018 , 272, 7-12	3.2	8
48	The Effect of Strut Protrusion on Shear Stress Distribution: Hemodynamic Insights From a Prospective Clinical Trial. <i>JACC: Cardiovascular Interventions</i> , 2017 , 10, 1803-1805	5	7
47	Non-Newtonian pulsatile shear stress assessment: a method to differentiate bioresorbable scaffold platforms. <i>European Heart Journal</i> , 2017 , 38, 2570	9.5	7
46	Numerical evaluation of elastic models in blood flow–arterial wall interaction. <i>International Journal of Computational Fluid Dynamics</i> , 2006 , 20, 223-228	1.2	7
45	Computational biomechanics of the aortic root. <i>Aswan Heart Centre Science & Practice Series</i> , 2011 , 2011,		6
44	Enhancing Magnetic Resonance Imaging With Computational Fluid Dynamics. <i>Journal of Engineering and Science in Medical Diagnostics and Therapy</i> , 2019 , 2,	1	6
43	Five-year follow-up of underexpanded and overexpanded bioresorbable scaffolds: self-correction and impact on shear stress. <i>EuroIntervention</i> , 2017 , 12, 2158-2159	3.1	6
42	Disturbed Flow in a Stenosed Carotid Artery Bifurcation: Comparison of RANS-Based Transitional Model and LES with Experimental Measurements. <i>International Journal of Applied Mechanics</i> , 2019 , 11, 1950032	2.4	6
41	The impact of plaque type on strut embedment/protrusion and shear stress distribution in bioresorbable scaffold. <i>European Heart Journal Cardiovascular Imaging</i> , 2020 , 21, 454-462	4.1	5
40	Computerised Methodologies for Non-Invasive Angiography-Derived Fractional Flow Reserve Assessment: A Critical Review. <i>Journal of Interventional Cardiology</i> , 2020 , 2020, 6381637	1.8	5
39	Angiographic derived endothelial shear stress: a new predictor of atherosclerotic disease progression. <i>European Heart Journal Cardiovascular Imaging</i> , 2019 , 20, 314-322	4.1	5
38	Wall shear stress estimated by 3D-QCA can predict cardiovascular events in lesions with borderline negative fractional flow reserve. <i>Atherosclerosis</i> , 2021 , 322, 24-30	3.1	5
37	Reliable in vivo intravascular imaging plaque characterization: A challenge unmet. <i>American Heart Journal</i> , 2019 , 218, 20-31	4.9	4
36	An integrated geometric modelling framework for patient-specific computational haemodynamic study on wide-ranged vascular network. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2012 , 15, 615-25	2.1	4

35	Dynamic Characterisation of Fibre-Optic Temperature Sensors for Physiological Monitoring. <i>Sensors</i> , 2020 , 21,	3.8	4
34	Impact of bioresorbable scaffold design characteristics on local haemodynamic forces: an ex vivo assessment with computational fluid dynamics simulations. <i>EuroIntervention</i> , 2020 , 16, e930-e937	3.1	4
33	Post-implantation shear stress assessment: an emerging tool for differentiation of bioresorbable scaffolds. <i>International Journal of Cardiovascular Imaging</i> , 2019 , 35, 409-418	2.5	4
32	Advanced deep learning methodology for accurate, real-time segmentation of high-resolution intravascular ultrasound images. <i>International Journal of Cardiology</i> , 2021 , 339, 185-191	3.2	4
31	Predictive value of the QFR in detecting vulnerable plaques in non-flow limiting lesions: a combined analysis of the PROSPECT and IBIS-4 study. <i>International Journal of Cardiovascular Imaging</i> , 2020 , 36, 993-1002	2.5	3
30	Hemodynamic analysis of a novel bioresorbable scaffold in porcine coronary artery model. <i>Catheterization and Cardiovascular Interventions</i> , 2018 , 91, 1084-1091	2.7	3
29	Method for percutaneously introducing, and removing, anatomical stenosis of predetermined severity in vivo: the "stenotic stent". <i>Journal of Cardiovascular Translational Research</i> , 2013 , 6, 640-8	3.3	3
28	Characterisation of spatiotemporal aortic flow and aortic wall biomechanics in coarctation. <i>Global Cardiology Science & Practice</i> , 2015 , 2015, 45	0.7	3
27	Early strut protrusion and late neointima thickness in the Absorb bioresorbable scaffold: a serial wall shear stress analysis up to five years. <i>EuroIntervention</i> , 2019 , 15, e370-e379	3.1	3
26	Failure and detachment path of impulsively loaded plates. <i>Thin-Walled Structures</i> , 2020 , 155, 106871	4.7	3
25	Use of quantitative cardiovascular magnetic resonance myocardial perfusion mapping for characterization of ischemia in patients with left internal mammary coronary artery bypass grafts. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2021 , 23, 82	6.9	3
24	Efficacy and Reproducibility of Attenuation-Compensated Optical Coherence Tomography for Assessing External Elastic Membrane Border and Plaque Composition in Native and Stented Segments - An In Vivo and Histology-Based Study. <i>Circulation Journal</i> , 2019 , 84, 91-100	2.9	3
23	A deep learning methodology for the automated detection of end-diastolic frames in intravascular ultrasound images. <i>International Journal of Cardiovascular Imaging</i> , 2021 , 37, 1825-1837	2.5	3
22	Local Hemodynamics: An Innocent Bystander or a Critical Factor Regulating Neoatherosclerotic Evolution?. <i>JACC: Cardiovascular Interventions</i> , 2015 , 8, e149-e150	5	2
21	Quantitative assessment of right ventricular structure and flow dynamics in pulmonary homograft obstruction. <i>Global Cardiology Science & Practice</i> , 2014 , 2014, 350-3	0.7	2
20	Two Secreted Proteoglycans, Activators of Urothelial Cell-Cell Adhesion, Negatively Contribute to Bladder Cancer Initiation and Progression. <i>Cancers</i> , 2020 , 12,	6.6	2
19	Importance of Stress Mapping of Aortic Wall in Aortic Valve Disease. <i>Journal of the American College of Cardiology</i> , 2016 , 67, 1755-6	15.1	2
18	Evaluation of the Efficacy of Computed Tomographic Coronary Angiography in Assessing Coronary Artery Morphology and Physiology: Rationale and Study Design. <i>Cardiology</i> , 2020 , 145, 285-293	1.6	2

17	A Computationally Efficient Approach to Segmentation of the Aorta and Coronary Arteries Using Deep Learning. <i>IEEE Access</i> , 2021 , 9, 108873-108888	3.5	2
16	Left Ventricular Assist Device Flow Pattern Analysis Using a Novel Model Incorporating Left Ventricular Pulsatility. <i>ASAIO Journal</i> , 2021 , 67, 724-732	3.6	2
15	The Evolution of Data Fusion Methodologies Developed to Reconstruct Coronary Artery Geometry From Intravascular Imaging and Coronary Angiography Data: A Comprehensive Review. <i>Frontiers in Cardiovascular Medicine</i> , 2020 , 7, 33	5.4	1
14	The effect of strut thickness on shear stress distribution in a preclinical model. <i>International Journal of Cardiovascular Imaging</i> , 2017 , 33, 1675-1676	2.5	1
13	Low-Cost Fabrication of Polyvinyl Alcohol-Based Personalized Vascular Phantoms for In Vitro Hemodynamic Studies: Three Applications. <i>Journal of Engineering and Science in Medical Diagnostics and Therapy</i> , 2020 , 3,	1	1
12	Estimation of Smoothing Error in Applying the Computed Tomography to Hemodynamic Numerical Simulations. <i>The Proceedings of the JSME Annual Meeting</i> , 2000 , 2000.1, 261-262		1
11	Angiography-Based 4-Dimensional Superficial Wall Strain and Stress: A New Diagnostic Tool in the Catheterization Laboratory. <i>Frontiers in Cardiovascular Medicine</i> , 2021 , 8, 667310	5.4	1
10	Spatiotemporal droplet dispersion measurements demonstrate face masks reduce risks from singing.. <i>Scientific Reports</i> , 2021 , 11, 24183	4.9	1
9	CT-based fractional flow reserve: development and expanded application. <i>Global Cardiology Science & Practice</i> , 2021 , 2021, e202120	0.7	0
8	Preclinical evaluation of a thin-strut bioresorbable scaffold (ArterioSorb): acute-phase invasive imaging assessment and hemodynamic implication. <i>EuroIntervention</i> , 2020 , 16, e141-e146	3.1	0
7	Experimental Validation of Enhanced Magnetic Resonance Imaging (EMRI) Using Particle Image Velocimetry (PIV). <i>Annals of Biomedical Engineering</i> , 2021 , 1	4.7	0
6	Uncovered non-apposed side-branch struts in a bifurcation lesion: a nidus for late stent thrombosis. <i>Hellenic Journal of Cardiology</i> , 2021 , 63, 96-96	2.1	0
5	Machine learning for atherosclerotic tissue component classification in combined near-infrared spectroscopy intravascular ultrasound imaging: Validation against histology.. <i>Atherosclerosis</i> , 2022 , 345, 15-25	3.1	
4	F-0819 Fluid Structure Interaction Analysis of Curved Pipe Similar to Internal Carotid Artery. <i>The Proceedings of the JSME Annual Meeting</i> , 2001 , IV.01.1, 37-38		
3	1B43 Fluid-Structure Interaction Analysis of Growth of Cerebral Aneurysm. <i>Proceedings of the JSME Bioengineering Conference and Seminar</i> , 2001 , 2001.12, 71-72		
2	Endothelial shear stress and vascular remodeling in bioresorbable scaffold and metallic stent. <i>Atherosclerosis</i> , 2020 , 312, 79-89	3.1	
1	Modelling Pulmonary Arterial Hypertension: Clinical Concepts, Engineering Applications and an Integrated Medico-engineering Approach 2022 , 169-187		