Hao Gao

List of Publications by Citations

79 papers	1,150 citations	21 h-index	31 g-index
99 ext. papers	1,419 ext. citations	3.5 avg, IF	4.53 L-index

#	Paper	IF	Citations
79	Pixel-tracking derived strain using the GlasgowHeart Method. *Journal of Cardiovascular Magnetic Resonance*, **2016**, 18,	6.9	78
78	Structure-based finite strain modelling of the human left ventricle in diastole. *International Journal for Numerical Methods in Biomedical Engineering*, **2013**, 29, 83-103	2.6	75
77	Carotid arterial plaque stress analysis using fluid-structure interactive simulation based on in-vivo magnetic resonance images of four patients. *Journal of Biomechanics*, **2009**, 42, 1416-1423	2.9	63
76	Verification of cardiac mechanics software: benchmark problems and solutions for testing active and passive material behaviour. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20150641	2.4	61
75	Effects of varied lipid core volume and fibrous cap thickness on stress distribution in carotid arterial plaques. *Journal of Biomechanics*, **2008**, 41, 3053-9	2.9	57
74	Parameter estimation in a Holzapfel-Ogden law for healthy myocardium. *Journal of Engineering Mathematics*, **2015**, 95, 231-248	1.2	53
73	A modified Holzapfel-Ogden law for a residually stressed finite strain model of the human left ventricle in diastole. *Biomechanics and Modeling in Mechanobiology*, **2014**, 13, 99-113	3.8	50
72	Quasi-static image-based immersed boundary-finite element model of left ventricle under diastolic loading. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 1199-222	2.6	40
71	A coupled mitral valve-left ventricle model with fluid-structure interaction. *Medical Engineering and Physics*, **2017**, 47, 128-136	2.4	39
70	Dynamic finite-strain modelling of the human left ventricle in health and disease using an immersed boundary-finite element method. *IMA Journal of Applied Mathematics*, **2014**, 79, 978-1010	1	38
69	Image-based fluid□tructure interaction model of the human mitral valve. *Computers and Fluids*, **2013**, 71, 417-425	2.8	34
68	Study of cardiovascular function using a coupled left ventricle and systemic circulation model. *Journal of Biomechanics*, **2016**, 49, 2445-54	2.9	33
67	Changes and classification in myocardial contractile function in the left ventricle following acute myocardial infarction. *Journal of the Royal Society Interface*, **2017**, 14,	4.1	31
66	Study of carotid arterial plaque stress for symptomatic and asymptomatic patients. *Journal of Biomechanics*, **2011**, 44, 2551-7	2.9	29
65	Investigation of the optimal collagen fibre orientation in human iliac arteries. *Journal of the Mechanical Behavior of Biomedical Materials*, **2015**, 52, 108-119	4.1	27
64	Advances in computational modelling for personalised medicine after myocardial infarction. *Heart*, **2018**, 104, 550-557	5.1	27
63	Study of reproducibility of human arterial plaque reconstruction and its effects on stress analysis based on multispectral in vivo magnetic resonance imaging. *Journal of Magnetic Resonance Imaging*, **2009**, 30, 85-93	5.6	25

62	Modelling mitral valvular dynamics-current trend and future directions. *International Journal for Numerical Methods in Biomedical Engineering*, **2017**, 33, e2858	2.6	24
61	Left ventricular strain and its pattern estimated from cine CMR and validation with DENSE. *Physics in Medicine and Biology*, **2014**, 59, 3637-56	3.8	24
60	Computed tomography carotid wall plaque characterization using a combination of discrete wavelet transform and texture features: A pilot study. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2013**, 227, 643-54	1.7	22
59	On the AIC-based model reduction for the general Holzapfel-Ogden myocardial constitutive law. *Biomechanics and Modeling in Mechanobiology*, **2019**, 18, 1213-1232	3.8	21
58	A Novel Method for Estimating Myocardial Strain: Assessment of Deformation Tracking Against Reference Magnetic Resonance Methods in Healthy Volunteers. *Scientific Reports*, **2016**, 6, 38774	4.9	21
57	A finite strain nonlinear human mitral valve model with fluid-structure interaction. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 1597-613	2.6	19
56	Semiautomated analysis of carotid artery wall thickness in MRI. *Journal of Magnetic Resonance Imaging*, **2014**, 39, 1457-67	5.6	17
55	Analysis of a coupled fluid-structure interaction model of the left atrium and mitral valve. *International Journal for Numerical Methods in Biomedical Engineering*, **2019**, 35, e3254	2.6	15
54	A One-Dimensional Hemodynamic Model of the Coronary Arterial Tree. *Frontiers in Physiology*, **2019**, 10, 853	4.6	14
53	Surrogate models based on machine learning methods for parameter estimation of left ventricular myocardium. *Royal Society Open Science*, **2021**, 8, 201121	3.3	14
52	Analysis of carotid artery plaque and wall boundaries on CT images by using a semi-automatic method based on level set model. *Neuroradiology*, **2012**, 54, 1207-14	3.2	12
51	Stress analysis of carotid atheroma in a transient ischaemic attack patient using the MRI-based fluid-structure interaction method. *British Journal of Radiology*, **2009**, 82 Spec No 1, S46-54	3.4	12
50	On the chordae structure and dynamic behaviour of the mitral valve. *IMA Journal of Applied Mathematics*, **2018**, 83, 1066-1091	1	12
49	Gaussian process emulation to accelerate parameter estimation in a mechanical model of the left ventricle: a critical step towards clinical end-user relevance. *Journal of the Royal Society Interface*, **2019**, 16, 20190114	4.1	11
48	Semiautomated and automated algorithms for analysis of the carotid artery wall on computed tomography and sonography: a correlation study. *Journal of Ultrasound in Medicine*, **2013**, 32, 665-74	2.9	11
47	Stress analysis of carotid atheroma in transient ischemic attack patients: evidence for extreme stress-induced plaque rupture. *Annals of Biomedical Engineering*, **2011**, 39, 2203-12	4.7	11
46	Estimating prognosis in patients with acute myocardial infarction using personalized computational heart models. *Scientific Reports*, **2017**, 7, 13527	4.9	10
45	Coupled agent-based and hyperelastic modelling of the left ventricle post-myocardial infarction. *International Journal for Numerical Methods in Biomedical Engineering*, **2019**, 35, e3155	2.6	10

44	Effect of myofibre architecture on ventricular pump function by using a neonatal porcine heart model: from DT-MRI to rule-based methods. *Royal Society Open Science*, **2020**, 7, 191655	3.3	8
43	Fast parameter inference in a biomechanical model of the left ventricle by using statistical emulation. *Journal of the Royal Statistical Society Series C: Applied Statistics*, **2019**, 68, 1555-1576	1.5	8
42	Multi-scale modelling of the human left ventricle. *Scientia Sinica: Physica, Mechanica Et Astronomica*, **2015**, 45, 024702-024702	1.5	8
41	Constricted channel flow with different cross-section shapes. *European Journal of Mechanics, B/Fluids*, **2017**, 63, 1-8	2.4	8
40	Highly automatic quantification of myocardial oedema in patients with acute myocardial infarction using bright blood T2-weighted CMR. *Journal of Cardiovascular Magnetic Resonance*, **2013**, 15, 28	6.9	7
39	Covalent immobilization of biomolecules on stent materials through mussel adhesive protein coating to form biofunctional films. *Materials Science and Engineering C*, **2020**, 106, 110187	8.3	6
38	Some Effects of Different Constitutive Laws on FSI Simulation for the Mitral Valve. *Scientific Reports*, **2019**, 9, 12753	4.9	5
37	A mathematical model for active contraction in healthy and failing myocytes and left ventricles. *PLoS ONE*, **2017**, 12, e0174834	3.7	5
36	LV wall segmentation using the variational level set method (LSM) with additional shape constraint for oedema quantification. *Physics in Medicine and Biology*, **2012**, 57, 6007-23	3.8	5
35	Modelling of fibre dispersion and its effects on cardiac mechanics from diastole to systole. *Journal of Engineering Mathematics*, **2021**, 128, 1	1.2	5
34	A ghost structure finite difference method for a fractional FitzHugh-Nagumo monodomain model on moving irregular domain. *Journal of Computational Physics*, **2021**, 428, 110081	4.1	4
33	A numerical study of a heart phantom model. *International Journal of Computer Mathematics*, **2014**, 91, 1535-1551	1.2	3
32	Analysis of Cardiac Amyloidosis Progression Using Model-Based Markers. *Frontiers in Physiology*, **2020**, 11, 324	4.6	2
31	Simulation of action potential propagation based on the ghost structure method. *Scientific Reports*, **2019**, 9, 10927	4.9	2
30	Variational level set method for left ventricle segmentation **2013**,		2
29	Circumferential Residual Stress Distribution and Its Influence in a Diseased Carotid Artery **2009**,		2
28	Myocardial strain estimated from standard cine MRI closely represents strain estimated from dedicated strain-encoded MRI. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 2650-3	0.9	2
27	Initial Experience with a Dynamic Imaging-Derived Immersed Boundary Model of Human Left Ventricle. *Lecture Notes in Computer Science*, **2013**, 11-18	0.9	2

26	Mechanical and morphometric study of mitral valve chordae tendineae and related papillary muscle. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 111, 104011	4.1	2
25	The Comparison of Different Constitutive Laws and Fiber Architectures for the Aortic Valve on Fluid-Structure Interaction Simulation. *Frontiers in Physiology*, **2021**, 12, 682893	4.6	2
24	Apparent growth tensor of left ventricular post myocardial infarction - In human first natural history study. *Computers in Biology and Medicine*, **2021**, 129, 104168	7	2
23	A poroelastic immersed finite element framework for modelling cardiac perfusion and fluid-structure interaction. *International Journal for Numerical Methods in Biomedical Engineering*, **2021**, 37, e3446	2.6	2
22	Neural network-based left ventricle geometry prediction from CMR images with application in biomechanics. *Artificial Intelligence in Medicine*, **2021**, 119, 102140	7.4	2
21	Fluid-Structure Interaction Model of Human Mitral Valve within Left Ventricle. *Lecture Notes in Computer Science*, **2015**, 330-337	0.9	1
20	Two Statistical Mixture Model vs. Fuzzy C-Means: In the application of edema segmentation **2013**,		1
19	Automatic quantification and 3D visualisation of edema in cardiac MRI. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 8021-4	0.9	1
18	Knowledge-Based Multi-sequence MR Segmentation via Deep Learning with a Hybrid U-Net++ Model. *Lecture Notes in Computer Science*, **2020**, 280-289	0.9	1
17	Image-Derived Human Left Ventricular Modelling with Fluid-Structure Interaction. *Lecture Notes in Computer Science*, **2015**, 321-329	0.9	1
16	Stress Analysis on Carotid Atherosclerotic Plaques by Fluid Structure Interaction **2011**, 87-118		1
15	Fluid-structure interaction in a fully coupled three-dimensional mitral-atrium-pulmonary model. *Biomechanics and Modeling in Mechanobiology*, **2021**, 20, 1267-1295	3.8	1
14	Action potential propagation and block in a model of atrial tissue with myocyte-fibroblast coupling. *Mathematical Medicine and Biology*, **2021**, 38, 106-131	1.3	1
13	Effects of dispersed fibres in myocardial mechanics, Part I: passive response.. *Mathematical Biosciences and Engineering*, **2022**, 19, 3972-3993	2.1	1
12	Bayesian optimisation for efficient parameter inference in a cardiac mechanics model of the left ventricle.. *International Journal for Numerical Methods in Biomedical Engineering*, **2022**, e3593	2.6	0
11	17 A case-control study with computational modelling of acute left ventricular dysfunction. *Heart*, **2016**, 102, A12.1-A12	5.1	
10	18 Cine-derived strain using the glasgowheart method. *Heart*, **2016**, 102, A12.2-A13	5.1	
9	17 Numerical study of imaged-based human mitral valve coupled with the left ventricle. *Heart*, **2015**, 101, A6.2-A6	5.1	

8	Atherosclerosis Plaque Stress Analysis: A Review **2014**, 81-93	
7	CMRI based 3D left ventricle motion analysis on patients with acute myocardial infarction. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 6821-4	0.9
6	22 Semi-Automatic OEDEMA Quantification from Direct T2 Map Cardiac MRI. *Heart*, **2012**, 98, A7.2-A7	5.1
5	Carotid Plaque Stress Analysis: Issues on Patient-Specific Modeling **2014**, 95-106	
4	Addendum: Action potential propagation and block in a model of atrial tissue with myocyte-fibroblast coupling. *Mathematical Medicine and Biology*, **2021**, 38, 292-298	1.3
3	Constitutive Modelling of Soft Biological Tissue from Ex Vivo to in Vivo: Myocardium as an Example. *Springer Proceedings in Mathematics and Statistics*, **2021**, 3-14	0.2
2	Effects of dispersed fibres in myocardial mechanics, Part II: active response.. *Mathematical Biosciences and Engineering*, **2022**, 19, 4101-4119	2.1
1	A new active contraction model for the myocardium using a modified hill model.. *Computers in Biology and Medicine*, **2022**, 145, 105417	7