

Arash Kheradvar,, Faha

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.

65
papers

2,509
citations

22
h-index

49
g-index

72
ext. papers

2,890
ext. citations

4.1
avg, IF

5.37
L-index

#	Paper	IF	Citations
65	A combined deep-learning and deformable-model approach to fully automatic segmentation of the left ventricle in cardiac MRI. <i>Medical Image Analysis</i> , 2016 , 30, 108-119	15.4	368
64	Echocardiographic particle image velocimetry: a novel technique for quantification of left ventricular blood vorticity pattern. <i>Journal of the American Society of Echocardiography</i> , 2010 , 23, 86-94	5.8	358
63	Optimal vortex formation as an index of cardiac health. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 6305-8	11.5	250
62	Emerging trends in CV flow visualization. <i>JACC: Cardiovascular Imaging</i> , 2012 , 5, 305-16	8.4	174
61	The effects of transcatheter valve crimping on pericardial leaflets. <i>Annals of Thoracic Surgery</i> , 2014 , 97, 1260-6	2.7	96
60	An anatomic study of the lingual nerve in the third molar region. <i>Journal of Oral and Maxillofacial Surgery</i> , 2000 , 58, 649-51; discussion 652-3	1.8	88
59	Contrast echocardiography for assessing left ventricular vortex strength in heart failure: a prospective cohort study. <i>European Heart Journal Cardiovascular Imaging</i> , 2013 , 14, 1049-60	4.1	81
58	Automatic segmentation of the right ventricle from cardiac MRI using a learning-based approach. <i>Magnetic Resonance in Medicine</i> , 2017 , 78, 2439-2448	4.4	80
57	Emerging trends in heart valve engineering: Part I. Solutions for future. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 833-43	4.7	70
56	On mitral valve dynamics and its connection to early diastolic flow. <i>Annals of Biomedical Engineering</i> , 2009 , 37, 1-13	4.7	68
55	Assessment of transmitral vortex formation in patients with diastolic dysfunction. <i>Journal of the American Society of Echocardiography</i> , 2012 , 25, 220-7	5.8	66
54	Correlation between vortex ring formation and mitral annulus dynamics during ventricular rapid filling. <i>ASAIO Journal</i> , 2007 , 53, 8-16	3.6	60
53	On the Mechanics of Transcatheter Aortic Valve Replacement. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 310-331	4.7	57
52	Influence of ventricular pressure drop on mitral annulus dynamics through the process of vortex ring formation. <i>Annals of Biomedical Engineering</i> , 2007 , 35, 2050-64	4.7	42
51	High-speed particle image velocimetry to assess cardiac fluid dynamics in vitro: From performance to validation. <i>European Journal of Mechanics, B/Fluids</i> , 2012 , 35, 2-8	2.4	40
50	Emerging trends in heart valve engineering: Part II. Novel and standard technologies for aortic valve replacement. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 844-57	4.7	38
49	Bioenergetics Consequences of Mitochondrial Transplantation in Cardiomyocytes. <i>Journal of the American Heart Association</i> , 2020 , 9, e014501	6	37

48	The effects of positioning of transcatheter aortic valves on fluid dynamics of the aortic root. <i>ASAIO Journal</i> , 2014 , 60, 545-552	3.6	35
47	Characterizing the collagen fiber orientation in pericardial leaflets under mechanical loading conditions. <i>Annals of Biomedical Engineering</i> , 2013 , 41, 547-61	4.7	34
46	A 3-D Active Contour Method for Automated Segmentation of the Left Ventricle From Magnetic Resonance Images. <i>IEEE Transactions on Biomedical Engineering</i> , 2017 , 64, 134-144	5	32
45	Emerging Trends in Heart Valve Engineering: Part IV. Computational Modeling and Experimental Studies. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 2314-33	4.7	30
44	Emerging trends in heart valve engineering: Part III. Novel technologies for mitral valve repair and replacement. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 858-70	4.7	28
43	Inflammatory response assessment of a hybrid tissue-engineered heart valve leaflet. <i>Annals of Biomedical Engineering</i> , 2013 , 41, 316-26	4.7	22
42	Vortex Formation in the Cardiovascular System 2012 ,		22
41	An in vitro study of changing profile heights in mitral bioprostheses and their influence on flow. <i>ASAIO Journal</i> , 2006 , 52, 34-8	3.6	22
40	A Hybrid Tissue-Engineered Heart Valve. <i>Annals of Thoracic Surgery</i> , 2015 , 99, 2183-7	2.7	21
39	Simplified Bernoulli's method significantly underestimates pulmonary transvalvular pressure drop. <i>Journal of Magnetic Resonance Imaging</i> , 2016 , 43, 1313-9	5.6	20
38	Artificial intelligence in pediatric and adult congenital cardiac MRI: an unmet clinical need. <i>Cardiovascular Diagnosis and Therapy</i> , 2019 , 9, S310-S325	2.6	19
37	Diagnostic and prognostic significance of cardiovascular vortex formation. <i>Journal of Cardiology</i> , 2019 , 74, 403-411	3	18
36	The effects of dynamic saddle annulus and leaflet length on transmitral flow pattern and leaflet stress of a bileaflet bioprosthetic mitral valve. <i>Journal of Heart Valve Disease</i> , 2012 , 21, 225-33		18
35	Metal mesh scaffold for tissue engineering of membranes. <i>Tissue Engineering - Part C: Methods</i> , 2012 , 18, 293-301	2.9	14
34	Load-dependent extracellular matrix organization in atrioventricular heart valves: differences and similarities. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2015 , 309, H276-84	5.2	13
33	Three-dimensional reconstruction of cardiac flows based on multi-planar velocity fields. <i>Experiments in Fluids</i> , 2014 , 55, 1	2.5	13
32	3D Printing, Computational Modeling, and Artificial Intelligence for Structural Heart Disease. <i>JACC: Cardiovascular Imaging</i> , 2021 , 14, 41-60	8.4	13
31	Effect of the Mitral Valve's Anterior Leaflet on Axisymmetry of Transmitral Vortex Ring. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 2349-60	4.7	12

30	Animal Models for Heart Valve Research and Development. <i>Drug Discovery Today: Disease Models</i> , 2017 , 24, 55-62	1.3	12
29	Effect of fiber geometry on pulsatile pumping and energy expenditure. <i>Bulletin of Mathematical Biology</i> , 2009 , 71, 1580-98	2.1	11
28	Assessment of left ventricular viscoelastic components based on ventricular harmonic behavior. <i>Cardiovascular Engineering (Dordrecht, Netherlands)</i> , 2006 , 6, 30-9		10
27	Juvenile xanthogranuloma: concurrent involvement of skin and eye. <i>Cornea</i> , 2001 , 20, 760-2	3.1	10
26	Fully-automated deep-learning segmentation of pediatric cardiovascular magnetic resonance of patients with complex congenital heart diseases. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2020 , 22, 80	6.9	10
25	Heart beat but not respiration is the main driving force of the systemic venous return in the Fontan circulation. <i>Scientific Reports</i> , 2019 , 9, 2034	4.9	9
24	Effect of stent crimping on calcification of transcatheter aortic valves. <i>Interactive Cardiovascular and Thoracic Surgery</i> , 2019 , 29, 64-73	1.8	9
23	Vortex Formation in the Heart 2012 , 45-79		9
22	A calcified polymeric valve for valve-in-valve applications. <i>Journal of Biomechanics</i> , 2017 , 50, 77-82	2.9	8
21	Proof of concept of FOLDAVALVE, a novel 14 Fr totally repositionable and retrievable transcatheter aortic valve. <i>EuroIntervention</i> , 2015 , 11, 591-6	3.1	7
20	Generalizable fully automated multi-label segmentation of four-chamber view echocardiograms based on deep convolutional adversarial networks. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20200267	4.1	7
19	A measure of axisymmetry for vortex rings. <i>European Journal of Mechanics, B/Fluids</i> , 2015 , 49, 264-271	2.4	6
18	Intraventricular Vortex Interaction between Transmitral Flow and Paravalvular Leak. <i>Scientific Reports</i> , 2018 , 8, 15657	4.9	6
17	A Tri-Leaflet Nitinol Mesh Scaffold for Engineering Heart Valves. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 413-426	4.7	5
16	Influence of HLA on progression of optic neuritis to multiple sclerosis: results of a four-year follow-up study. <i>Multiple Sclerosis Journal</i> , 2004 , 10, 526-31	5	5
15	4D flow streamline characteristics of the great arteries twenty years after Lecompte and direct spiral arterial switch operation (DSASO) in simple TGA. <i>Global Cardiology Science & Practice</i> , 2016 , 2016, e201629	0.7	5
14	Mitochondrial transplantation in cardiomyocytes: foundation, methods, and outcomes. <i>American Journal of Physiology - Cell Physiology</i> , 2021 , 321, C489-C503	5.4	4
13	A framework for synthetic validation of 3D echocardiographic particle image velocimetry. <i>Meccanica</i> , 2017 , 52, 555-561	2.1	3

12	Vortex Dynamics 2012 , 17-44		2
11	Immunological and Phenotypic Considerations in Supplementing Cardiac Biomaterials with Cells 2015 , 239-273		2
10	Age-related changes in diastolic function in children: Echocardiographic association with vortex formation time. <i>Echocardiography</i> , 2019 , 36, 1869-1875	1.5	1
9	Transcatheter heart valves 2019 , 85-122		1
8	Estimation of elastic and viscous properties of the left ventricle based on annulus plane harmonic behavior. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 616-9		1
7	Myocardial Perfusion in Hypoplastic Left Heart Syndrome. <i>Circulation: Cardiovascular Imaging</i> , 2021 , 14, e012468	3.9	1
6	MRI-based comprehensive analysis of vascular anatomy and hemodynamics.. <i>Cardiovascular Diagnosis and Therapy</i> , 2021 , 11, 1367-1378	2.6	1
5	Comments on Defining the Contribution of Diastolic Vortex Ring to Left Ventricular Filling. <i>Journal of the American College of Cardiology</i> , 2015 , 65, 2573-4	15.1	0
4	Transvalvular flow 2019 , 239-279		
3	Fundamental Fluid Mechanics 2012 , 1-16		
2	Diagnostic Vortex Imaging 2012 , 125-157		
1	Effect of Cardiac Devices and Surgery on Vortex Formation 2012 , 81-124		