Arash Kheradvar,, Faha

List of Publications by Year in Descending Order

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	Myocardial Perfusion in Hypoplastic Left Heart Syndrome. *Circulation: Cardiovascular Imaging*, **2021**, 14, e012468	3.9	1
64	3D Printing, Computational Modeling, and Artificial Intelligence for Structural Heart Disease. *JACC: Cardiovascular Imaging*, **2021**, 14, 41-60	8.4	13
63	MRI-based comprehensive analysis of vascular anatomy and hemodynamics.. *Cardiovascular Diagnosis and Therapy*, **2021**, 11, 1367-1378	2.6	1
62	Mitochondrial transplantation in cardiomyocytes: foundation, methods, and outcomes. *American Journal of Physiology - Cell Physiology*, **2021**, 321, C489-C503	5.4	4
61	Bioenergetics Consequences of Mitochondrial Transplantation in Cardiomyocytes. *Journal of the American Heart Association*, **2020**, 9, e014501	6	37
60	Fully-automated deep-learning segmentation of pediatric cardiovascular magnetic resonance of patients with complex congenital heart diseases. *Journal of Cardiovascular Magnetic Resonance*, **2020**, 22, 80	6.9	10
59	Generalizable fully automated multi-label segmentation of four-chamber view echocardiograms based on deep convolutional adversarial networks. *Journal of the Royal Society Interface*, **2020**, 17, 20200267	4.1	7
58	Heart beat but not respiration is the main driving force of the systemic venous return in the Fontan circulation. *Scientific Reports*, **2019**, 9, 2034	4.9	9
57	Effect of stent crimping on calcification of transcatheter aortic valves. *Interactive Cardiovascular and Thoracic Surgery*, **2019**, 29, 64-73	1.8	9
56	Diagnostic and prognostic significance of cardiovascular vortex formation. *Journal of Cardiology*, **2019**, 74, 403-411	3	18
55	Age-related changes in diastolic function in children: Echocardiographic association with vortex formation time. *Echocardiography*, **2019**, 36, 1869-1875	1.5	1
54	Transcatheter heart valves **2019**, 85-122		1
53	Transvalvular flow **2019**, 239-279		
52	Artificial intelligence in pediatric and adult congenital cardiac MRI: an unmet clinical need. *Cardiovascular Diagnosis and Therapy*, **2019**, 9, S310-S325	2.6	19
51	Intraventricular Vortex Interaction between Transmitral Flow and Paravalvular Leak. *Scientific Reports*, **2018**, 8, 15657	4.9	6
50	A framework for synthetic validation of 3D echocardiographic particle image velocimetry. *Meccanica*, **2017**, 52, 555-561	2.1	3
49	A 3-D Active Contour Method for Automated Segmentation of the Left Ventricle From Magnetic Resonance Images. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 134-144	5	32

48	Automatic segmentation of the right ventricle from cardiac MRI using a learning-based approach. *Magnetic Resonance in Medicine*, **2017**, 78, 2439-2448	4.4	80
47	A Tri-Leaflet Nitinol Mesh Scaffold for Engineering Heart Valves. *Annals of Biomedical Engineering*, **2017**, 45, 413-426	4.7	5
46	Animal Models for Heart Valve Research and Development. *Drug Discovery Today: Disease Models*, **2017**, 24, 55-62	1.3	12
45	A calcified polymeric valve for valve-in-valve applications. *Journal of Biomechanics*, **2017**, 50, 77-82	2.9	8
44	On the Mechanics of Transcatheter Aortic Valve Replacement. *Annals of Biomedical Engineering*, **2017**, 45, 310-331	4.7	57
43	Simplified Bernoulli's method significantly underestimates pulmonary transvalvular pressure drop. *Journal of Magnetic Resonance Imaging*, **2016**, 43, 1313-9	5.6	20
42	A combined deep-learning and deformable-model approach to fully automatic segmentation of the left ventricle in cardiac MRI. *Medical Image Analysis*, **2016**, 30, 108-119	15.4	368
41	4D flow streamline characteristics of the great arteries twenty years after Lecompte and direct spiral arterial switch operation (DSASO) in simple TGA. *Global Cardiology Science & Practice*, **2016**, 2016, e201629	0.7	5
40	Comments on Defining the Contribution of Diastolic Vortex Ring to Left Ventricular Filling. *Journal of the American College of Cardiology*, **2015**, 65, 2573-4	15.1	0
39	Emerging Trends in Heart Valve Engineering: Part IV. Computational Modeling and Experimental Studies. *Annals of Biomedical Engineering*, **2015**, 43, 2314-33	4.7	30
38	Effect of the Mitral Valve's Anterior Leaflet on Axisymmetry of Transmitral Vortex Ring. *Annals of Biomedical Engineering*, **2015**, 43, 2349-60	4.7	12
37	Load-dependent extracellular matrix organization in atrioventricular heart valves: differences and similarities. *American Journal of Physiology - Heart and Circulatory Physiology*, **2015**, 309, H276-84	5.2	13
36	Emerging trends in heart valve engineering: Part II. Novel and standard technologies for aortic valve replacement. *Annals of Biomedical Engineering*, **2015**, 43, 844-57	4.7	38
35	Emerging trends in heart valve engineering: Part I. Solutions for future. *Annals of Biomedical Engineering*, **2015**, 43, 833-43	4.7	70
34	A measure of axisymmetry for vortex rings. *European Journal of Mechanics, B/Fluids*, **2015**, 49, 264-271	2.4	6
33	Emerging trends in heart valve engineering: Part III. Novel technologies for mitral valve repair and replacement. *Annals of Biomedical Engineering*, **2015**, 43, 858-70	4.7	28
32	A Hybrid Tissue-Engineered Heart Valve. *Annals of Thoracic Surgery*, **2015**, 99, 2183-7	2.7	21
31	Proof of concept of FOLDAVALVE, a novel 14 Fr totally repositionable and retrievable transcatheter aortic valve. *EuroIntervention*, **2015**, 11, 591-6	3.1	7

30	Immunological and Phenotypic Considerations in Supplementing Cardiac Biomaterials with Cells **2015**, 239-273		2
29	Three-dimensional reconstruction of cardiac flows based on multi-planar velocity fields. *Experiments in Fluids*, **2014**, 55, 1	2.5	13
28	The effects of transcatheter valve crimping on pericardial leaflets. *Annals of Thoracic Surgery*, **2014**, 97, 1260-6	2.7	96
27	The effects of positioning of transcatheter aortic valves on fluid dynamics of the aortic root. *ASAIO Journal*, **2014**, 60, 545-552	3.6	35
26	Contrast echocardiography for assessing left ventricular vortex strength in heart failure: a prospective cohort study. *European Heart Journal Cardiovascular Imaging*, **2013**, 14, 1049-60	4.1	81
25	Characterizing the collagen fiber orientation in pericardial leaflets under mechanical loading conditions. *Annals of Biomedical Engineering*, **2013**, 41, 547-61	4.7	34
24	Inflammatory response assessment of a hybrid tissue-engineered heart valve leaflet. *Annals of Biomedical Engineering*, **2013**, 41, 316-26	4.7	22
23	High-speed particle image velocimetry to assess cardiac fluid dynamics in vitro: From performance to validation. *European Journal of Mechanics, B/Fluids*, **2012**, 35, 2-8	2.4	40
22	Assessment of transmitral vortex formation in patients with diastolic dysfunction. *Journal of the American Society of Echocardiography*, **2012**, 25, 220-7	5.8	66
21	Vortex Formation in the Heart **2012**, 45-79		9
20	Fundamental Fluid Mechanics **2012**, 1-16		
19	Diagnostic Vortex Imaging **2012**, 125-157		
18	Vortex Dynamics **2012**, 17-44		2
17	Effect of Cardiac Devices and Surgery on Vortex Formation **2012**, 81-124		
16	Emerging trends in CV flow visualization. *JACC: Cardiovascular Imaging*, **2012**, 5, 305-16	8.4	174
15	Vortex Formation in the Cardiovascular System **2012**,		22
14	Metal mesh scaffold for tissue engineering of membranes. *Tissue Engineering - Part C: Methods*, **2012**, 18, 293-301	2.9	14
13	The effects of dynamic saddle annulus and leaflet length on transmitral flow pattern and leaflet stress of a bileaflet bioprosthetic mitral valve. *Journal of Heart Valve Disease*, **2012**, 21, 225-33		18

12	Echocardiographic particle image velocimetry: a novel technique for quantification of left ventricular blood vorticity pattern. *Journal of the American Society of Echocardiography*, **2010**, 23, 86-94	5.8	358
11	On mitral valve dynamics and its connection to early diastolic flow. *Annals of Biomedical Engineering* , **2009**, 37, 1-13	4.7	68
10	Effect of fiber geometry on pulsatile pumping and energy expenditure. *Bulletin of Mathematical Biology*, **2009**, 71, 1580-98	2.1	11
9	Influence of ventricular pressure drop on mitral annulus dynamics through the process of vortex ring formation. *Annals of Biomedical Engineering*, **2007**, 35, 2050-64	4.7	42
8	Correlation between vortex ring formation and mitral annulus dynamics during ventricular rapid filling. *ASAIO Journal*, **2007**, 53, 8-16	3.6	60
7	Estimation of elastic and viscous properties of the left ventricle based on annulus plane harmonic behavior. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 616-9		1
6	An in vitro study of changing profile heights in mitral bioprostheses and their influence on flow. *ASAIO Journal*, **2006**, 52, 34-8	3.6	22
5	Optimal vortex formation as an index of cardiac health. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 6305-8	11.5	250
4	Assessment of left ventricular viscoelastic components based on ventricular harmonic behavior. *Cardiovascular Engineering (Dordrecht, Netherlands)*, **2006**, 6, 30-9		10
3	Influence of HLA on progression of optic neuritis to multiple sclerosis: results of a four-year follow-up study. *Multiple Sclerosis Journal*, **2004**, 10, 526-31	5	5
2	Juvenile xanthogranuloma: concurrent involvement of skin and eye. *Cornea*, **2001**, 20, 760-2	3.1	10
1	An anatomic study of the lingual nerve in the third molar region. *Journal of Oral and Maxillofacial Surgery*, **2000**, 58, 649-51; discussion 652-3	1.8	88