

# Lik Chuan Lee

## List of Publications by Year in descending order

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Version: 2024-02-01

48  
papers

1,338  
citations

279701

23  
h-index

360920

35  
g-index

48  
all docs

48  
docs citations

48  
times ranked

1199  
citing authors

#	ARTICLE	IF	CITATIONS
1	Distribution of normal human left ventricular myofiber stress at end diastole and end systole: a target for in silico design of heart failure treatments. <i>Journal of Applied Physiology</i> , 2014, 117, 142-152.	1.2	117
2	Algisyl-LVR <sup>®</sup> with coronary artery bypass grafting reduces left ventricular wall stress and improves function in the failing human heart. <i>International Journal of Cardiology</i> , 2013, 168, 2022-2028.	0.8	86
3	Heterogeneous growth-induced prestrain in the heart. <i>Journal of Biomechanics</i> , 2015, 48, 2080-2089.	0.9	75
4	Modeling Pathologies of Diastolic and Systolic Heart Failure. <i>Annals of Biomedical Engineering</i> , 2016, 44, 112-127.	1.3	73
5	Human Cardiac Function Simulator for the Optimal Design of a Novel Annuloplasty Ring with a Sub-valvular Element for Correction of Ischemic Mitral Regurgitation. <i>Cardiovascular Engineering and Technology</i> , 2015, 6, 105-116.	0.7	54
6	First Evidence of Depressed Contractility in the Border Zone of a Human Myocardial Infarction. <i>Annals of Thoracic Surgery</i> , 2012, 93, 1188-1193.	0.7	53
7	Growth and remodeling of the left ventricle: A case study of myocardial infarction and surgical ventricular restoration. <i>Mechanics Research Communications</i> , 2012, 42, 134-141.	1.0	53
8	An integrated electromechanical-growth heart model for simulating cardiac therapies. <i>Biomechanics and Modeling in Mechanobiology</i> , 2016, 15, 791-803.	1.4	50
9	Image-based computational assessment of vascular wall mechanics and hemodynamics in pulmonary arterial hypertension patients. <i>Journal of Biomechanics</i> , 2018, 68, 84-92.	0.9	44
10	A computational model that predicts reverse growth in response to mechanical unloading. <i>Biomechanics and Modeling in Mechanobiology</i> , 2015, 14, 217-229.	1.4	39
11	Applications of Computational Modeling in Cardiac Surgery. <i>Journal of Cardiac Surgery</i> , 2014, 29, 293-302.	0.3	38
12	Patient-specific finite element modeling of the Cardiokinetix Parachute <sup>®</sup> device: effects on left ventricular wall stress and function. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 557-566.	1.6	38
13	Mathematical modeling of cardiac growth and remodeling. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2016, 8, 211-226.	6.6	37
14	Analysis of patient-specific surgical ventricular restoration: importance of an ellipsoidal left ventricular geometry for diastolic and systolic function. <i>Journal of Applied Physiology</i> , 2013, 115, 136-144.	1.2	36
15	Utility of high-resolution electroanatomic mapping of the left ventricle using a multispline basket catheter in a swine model of chronic myocardial infarction. <i>Heart Rhythm</i> , 2015, 12, 144-154.	0.3	36
16	Patient-Specific Finite Element-Based Analysis of Ventricular Myofiber Stress After Coapsys: Importance of Residual Stress. <i>Annals of Thoracic Surgery</i> , 2012, 93, 1964-1971.	0.7	34
17	Equilibrated warping: Finite element image registration with finite strain equilibrium gap regularization. <i>Medical Image Analysis</i> , 2018, 50, 1-22.	7.0	34
18	Organ-level validation of a cross-bridge cycling descriptor in a left ventricular finite element model: effects of ventricular loading on myocardial strains. <i>Physiological Reports</i> , 2017, 5, e13392.	0.7	33

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19	Patient-Specific Computational Analysis of Ventricular Mechanics in Pulmonary Arterial Hypertension. <i>Journal of Biomechanical Engineering</i> , 2016, 138, .	0.6	32
20	Efficient estimation of personalized biventricular mechanical function employing gradient-based optimization. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2982.	1.0	30
21	A Novel Method for Quantifying Smooth Regional Variations in Myocardial Contractility Within an Infarcted Human Left Ventricle Based on Delay-Enhanced Magnetic Resonance Imaging. <i>Journal of Biomechanical Engineering</i> , 2015, 137, 081009.	0.6	29
22	High Spatial Resolution Multi-Organ Finite Element Modeling of Ventricular-Arterial Coupling. <i>Frontiers in Physiology</i> , 2018, 9, 119.	1.3	28
23	Reduction in Left Ventricular Wall Stress and Improvement in Function in Failing Hearts using Algisyl-LVR. <i>Journal of Visualized Experiments</i> , 2013, .	0.2	26
24	A Novel Method for Quantifying In-Vivo Regional Left Ventricular Myocardial Contractility in the Border Zone of a Myocardial Infarction. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 094506.	0.6	23
25	Bioinjection treatment: Effects of post-injection residual stress on left ventricular wall stress. <i>Journal of Biomechanics</i> , 2014, 47, 3115-3119.	0.9	23
26	Model of Anisotropic Reverse Cardiac Growth in Mechanical Dyssynchrony. <i>Scientific Reports</i> , 2019, 9, 12670.	1.6	21
27	In-silico assessment of the effects of right ventricular assist device on pulmonary arterial hypertension using an image based biventricular modeling framework. <i>Mechanics Research Communications</i> , 2019, 97, 101-111.	1.0	20
28	Computational Modeling Studies of the Roles of Left Ventricular Geometry, Afterload, and Muscle Contractility on Myocardial Strains in Heart Failure with Preserved Ejection Fraction. <i>Journal of Cardiovascular Translational Research</i> , 2021, 14, 1131-1145.	1.1	20
29	Computational quantification of patient-specific changes in ventricular dynamics associated with pulmonary hypertension. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019, 317, H1363-H1375.	1.5	16
30	Multiscale Modeling Framework of Ventricular-Arterial Bi-directional Interactions in the Cardiopulmonary Circulation. <i>Frontiers in Physiology</i> , 2020, 11, 2.	1.3	16
31	Biomechanics of Human Fetal Hearts with Critical Aortic Stenosis. <i>Annals of Biomedical Engineering</i> , 2021, 49, 1364-1379.	1.3	13
32	Quantification of Biventricular Strains in Heart Failure With Preserved Ejection Fraction Patient Using Hyperelastic Warping Method. <i>Frontiers in Physiology</i> , 2018, 9, 1295.	1.3	12
33	Effects of Mechanical Dyssynchrony on Coronary Flow: Insights From a Computational Model of Coupled Coronary Perfusion With Systemic Circulation. <i>Frontiers in Physiology</i> , 2020, 11, 915.	1.3	10
34	Role of coronary flow regulation and cardiac-coronary coupling in mechanical dyssynchrony associated with right ventricular pacing. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2021, 320, H1037-H1054.	1.5	10
35	Contribution of left ventricular residual stress by myocytes and collagen: existence of inter-constituent mechanical interaction. <i>Biomechanics and Modeling in Mechanobiology</i> , 2018, 17, 985-999.	1.4	9
36	Validation of Equilibrated Warping-Image Registration with Mechanical Regularization On 3D Ultrasound Images. <i>Lecture Notes in Computer Science</i> , 2019, , 334-341.	1.0	9

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37	Force-dependent recruitment from myosin OFF-state increases end-systolic pressure-volume relationship in left ventricle. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020, 19, 2683-2692.	1.4	9
38	Mechanical Stimuli for Left Ventricular Growth During Pressure Overload. <i>Experimental Mechanics</i> , 2021, 61, 131-146.	1.1	8
39	Patient-Specific Computational Analysis of Hemodynamics and Wall Mechanics and Their Interactions in Pulmonary Arterial Hypertension. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 611149.	2.0	8
40	Transmural Distribution of Coronary Perfusion and Myocardial Work Density Due to Alterations in Ventricular Loading, Geometry and Contractility. <i>Frontiers in Physiology</i> , 2021, 12, 744855.	1.3	8
41	Three-dimensional biventricular strains in pulmonary arterial hypertension patients using hyperelastic warping. <i>Computer Methods and Programs in Biomedicine</i> , 2020, 189, 105345.	2.6	7
42	Microstructure-based finite element model of left ventricle passive inflation. <i>Acta Biomaterialia</i> , 2019, 90, 241-253.	4.1	5
43	Overview of mathematical modeling of myocardial blood flow regulation. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2020, 318, H966-H975.	1.5	5
44	Optimization of cardiac resynchronization therapy based on a cardiac electromechanics-perfusion computational model. <i>Computers in Biology and Medicine</i> , 2022, 141, 105050.	3.9	5
45	Left Ventricular Geometry, Tissue Composition, and Residual Stress in High Fat Diet Dahl-Salt Sensitive Rats. <i>Experimental Mechanics</i> , 2021, 61, 191-201.	1.1	3
46	Algisyl-LVR Reduces Left Ventricular Wall Stress and Improves Function in the Failing Human Heart. <i>Journal of Cardiac Failure</i> , 2012, 18, S57-S58.	0.7	2
47	Physics-based computer simulation of the long-term effects of cardiac regenerative therapies. <i>Technology</i> , 2016, 04, 23-29.	1.4	1
48	Invited Commentary. <i>Annals of Thoracic Surgery</i> , 2014, 98, 80.	0.7	0