Jichao Zhao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8761859/publications.pdf

Version: 2024-02-01

109 papers	3,177 citations	159358 30 h-index	168136 53 g-index
113 all docs	113 docs citations	113 times ranked	3275 citing authors

#	Article	IF	Citations
1	Atrial fibrillation driven by micro-anatomic intramural re-entry revealed by simultaneous sub-epicardial and sub-endocardial optical mapping in explanted human hearts. European Heart Journal, 2015, 36, 2390-2401.	1.0	347
2	Empagliflozin, a sodium glucose co-transporter-2 inhibitor, alleviates atrial remodeling and improves mitochondrial function in high-fat diet/streptozotocin-induced diabetic rats. Cardiovascular Diabetology, 2019, 18, 165.	2.7	170
3	A global benchmark of algorithms for segmenting the left atrium from late gadolinium-enhanced cardiac magnetic resonance imaging. Medical Image Analysis, 2021, 67, 101832.	7.0	150
4	Threeâ€dimensional Integrated Functional, Structural, and Computational Mapping to Define the Structural â€œFingerprintsâ€•of Heartâ€Specific Atrial Fibrillation Drivers in Human Heart Ex Vivo. Journal of the American Heart Association, 2017, 6, .	1.6	120
5	An Image-Based Model of Atrial Muscular Architecture. Circulation: Arrhythmia and Electrophysiology, 2012, 5, 361-370.	2.1	112
6	ECG signal classification for the detection of cardiac arrhythmias using a convolutional recurrent neural network. Physiological Measurement, 2018, 39, 094006.	1.2	110
7	Application of Micro-Computed Tomography With Iodine Staining to Cardiac Imaging, Segmentation, and Computational Model Development. IEEE Transactions on Medical Imaging, 2013, 32, 8-17.	5.4	106
8	High resolution 3-Dimensional imaging of the human cardiac conduction system from microanatomy to mathematical modeling. Scientific Reports, 2017, 7, 7188.	1.6	104
9	Fibrosis: a structural modulator of sinoatrial node physiology and dysfunction. Frontiers in Physiology, 2015, 6, 37.	1.3	93
10	Compact finite difference method for integro-differential equations. Applied Mathematics and Computation, 2006, 177, 271-288.	1.4	90
11	Fully Automatic Left Atrium Segmentation From Late Gadolinium Enhanced Magnetic Resonance Imaging Using a Dual Fully Convolutional Neural Network. IEEE Transactions on Medical Imaging, 2019, 38, 515-524.	5.4	90
12	Robust ECG Signal Classification for the Detection of Atrial Fibrillation Using Novel Neural Networks. , 0, , .		87
13	Adenosine-Induced Atrial Fibrillation. Circulation, 2016, 134, 486-498.	1.6	85
14	Human sinoatrial node structure: 3D microanatomy of sinoatrial conduction pathways. Progress in Biophysics and Molecular Biology, 2016, 120, 164-178.	1.4	81
15	A Machine Learning Aided Systematic Review and Meta-Analysis of the Relative Risk of Atrial Fibrillation in Patients With Diabetes Mellitus. Frontiers in Physiology, 2018, 9, 835.	1.3	80
16	Fibrosis and Atrial Fibrillation: Computerized and Optical Mapping. JACC: Clinical Electrophysiology, 2017, 3, 531-546.	1.3	77
17	Redundant and diverse intranodal pacemakers and conduction pathways protect the human sinoatrial node from failure. Science Translational Medicine, 2017, 9, .	5.8	76
18	Pyk2 and FAK differentially regulate progression of the cell cycle. Journal of Cell Science, 2000, 113, 3063-3072.	1.2	67

#	Article	IF	Citations
19	Three-Dimensional Impulse Propagation in Myocardium. Circulation Research, 2013, 112, 834-848.	2.0	66
20	Compact finite difference method for American option pricing. Journal of Computational and Applied Mathematics, 2007, 206, 306-321.	1.1	65
21	Integration of High-Resolution Optical Mapping and 3-Dimensional Micro-Computed Tomographic Imaging to Resolve the Structural Basis of Atrial Conduction in the Human Heart. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 1514-1517.	2.1	51
22	Human Atrial Fibrillation Drivers ResolvedÂWith Integrated Functional andÂStructural Imaging to Benefit ClinicalÂMapping. JACC: Clinical Electrophysiology, 2018, 4, 1501-1515.	1.3	51
23	Segmentation of histological images and fibrosis identification with a convolutional neural network. Computers in Biology and Medicine, 2018, 98, 147-158.	3.9	41
24	Impaired neuronal sodium channels cause intranodal conduction failure and reentrant arrhythmias in human sinoatrial node. Nature Communications, 2020, 11, 512.	5.8	39
25	Image-Based Model of Atrial Anatomy and Electrical Activation: A Computational Platform for Investigating Atrial Arrhythmia. IEEE Transactions on Medical Imaging, 2013, 32, 18-27.	5.4	38
26	Canine and human sinoatrial node: differences and similarities in the structure, function, molecular profiles, and arrhythmia. Journal of Veterinary Cardiology, 2019, 22, 2-19.	0.3	38
27	Maintenance of Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2016, 9, .	2.1	37
28	Novel application of 3D contrast-enhanced CMR to define fibrotic structure of the human sinoatrial node in vivo. European Heart Journal Cardiovascular Imaging, 2017, 18, 862-869.	0.5	35
29	Heterogeneous and anisotropic integrative model of pulmonary veins: computational study of arrhythmogenic substrate for atrial fibrillation. Interface Focus, 2013, 3, 20120069.	1.5	34
30	Pyk2 and FAK differentially regulate progression of the cell cycle. Journal of Cell Science, 2000, 113 () Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.2	34
31	Optimization of Catheter Ablation of Atrial Fibrillation: Insights Gained from Clinically-Derived Computer Models. International Journal of Molecular Sciences, 2015, 16, 10834-10854.	1.8	33
32	A Tissueâ€Specific Model of Reentry in the Right Atrial Appendage. Journal of Cardiovascular Electrophysiology, 2009, 20, 675-684.	0.8	30
33	A novel computational sheep atria model for the study of atrial fibrillation. Interface Focus, 2013, 3, 20120067.	1.5	29
34	The functional architecture of skeletal compared to cardiac musculature: Myocyte orientation, lamellar unit morphology, and the helical ventricular myocardial band. Clinical Anatomy, 2016, 29, 316-332.	1.5	24
35	Ionic and cellular mechanisms underlying TBX5/PITX2 insufficiency-induced atrial fibrillation: Insights from mathematical models of human atrial cells. Scientific Reports, 2018, 8, 15642.	1.6	24
36	Mini Review: Deep Learning for Atrial Segmentation From Late Gadolinium-Enhanced MRIs. Frontiers in Cardiovascular Medicine, 2020, 7, 86.	1.1	23

#	Article	IF	Citations
37	In silico investigation of the mechanisms underlying atrial fibrillation due to impaired Pitx2. PLoS Computational Biology, 2020, 16, e1007678.	1.5	21
38	Absence of rotational activity detected using 2-dimensional phase mapping in the corresponding 3-dimensional phase maps in human persistent atrial fibrillation. Heart Rhythm, 2018, 15, 182-192.	0.3	20
39	Convergence of the compact finite difference method for second-order elliptic equations. Applied Mathematics and Computation, 2006, 182, 1454-1469.	1.4	19
40	Insights from echocardiography, magnetic resonance imaging, and microcomputed tomography relative to the midâ€myocardial left ventricular echogenic zone. Echocardiography, 2016, 33, 1546-1556.	0.3	19
41	Highly accurate compact mixed methods for two point boundary value problems. Applied Mathematics and Computation, 2007, 188, 1402-1418.	1.4	18
42	Unmasking Arrhythmogenic Hubs of Reentry Driving Persistent Atrial Fibrillation for Patientâ€Specific Treatment. Journal of the American Heart Association, 2020, 9, e017789.	1.6	18
43	Telemonitoring and hemodynamic monitoring to reduce hospitalization rates in heart failure: a systematic review and meta-analysis of randomized controlled trials and real-world studies. Journal of Geriatric Cardiology, 2018, 15, 298-309.	0.2	18
44	Cancer antigen-125 and risk of atrial fibrillation: a systematic review and meta-analysis. Heart Asia, 2018, 10, e010970.	1.1	17
45	Compact finite difference methods for high order integro-differential equations. Applied Mathematics and Computation, 2013, 221, 66-78.	1.4	16
46	A robust computational framework for estimating 3D Bi-Atrial chamber wall thickness. Computers in Biology and Medicine, 2019, 114, 103444.	3.9	16
47	Transient Rotor Activity During ProlongedÂ3-Dimensional PhaseÂMapping in Human Persistent AtrialÂFibrillation. JACC: Clinical Electrophysiology, 2018, 4, 72-83.	1.3	15
48	High-Resolution Contrast-Enhanced Micro-Computed Tomography to Identify the Cardiac Conduction System in Congenitally Malformed Hearts. JACC: Cardiovascular Imaging, 2018, 11, 1706-1712.	2.3	15
49	Abstract 18402: Human Atrial Fibrillation Drivers Seen Simultaneously by Focal Impulse and Rotor Mapping and High-resolution Optical Mapping. Circulation, 2015, 132, .	1.6	15
50	Computational Modelling of Low Voltage Resonant Drift of Scroll Waves in the Realistic Human Atria. Lecture Notes in Computer Science, 2015, , 421-429.	1.0	14
51	Progressive modification of rotors in persistent atrial fibrillation by stepwise linear ablation. HeartRhythm Case Reports, 2015, 1, 22-26.	0.2	13
52	Toward Patient-Specific Prediction of Ablation Strategies for Atrial Fibrillation Using Deep Learning. Frontiers in Physiology, 2021, 12, 674106.	1.3	13
53	PITX2 upregulation increases the risk of chronic atrial fibrillation in a dose-dependent manner by modulating IKs and ICaLâ€"insights from human atrial modelling. Annals of Translational Medicine, 2020, 8, 191-191.	0.7	12
54	Probucol prevents atrial ion channel remodeling in an alloxan-induced diabetes rabbit model. Oncotarget, 2016, 7, 83850-83858.	0.8	12

#	Article	IF	Citations
55	Proarrhythmia in the p.Met207Val PITX2c-Linked Familial Atrial Fibrillation-Insights From Modeling. Frontiers in Physiology, 2019, 10, 1314.	1.3	11
56	Comprehensive evaluation of electrophysiological and 3D structural features of human atrial myocardium with insights on atrial fibrillation maintenance mechanisms. Journal of Molecular and Cellular Cardiology, 2021, 151, 56-71.	0.9	11
57	Determination of Atrial Myofibre Orientation Using Structure Tensor Analysis for Biophysical Modelling. Lecture Notes in Computer Science, 2013, , 425-432.	1.0	10
58	In Silico Assessment of Class I Antiarrhythmic Drug Effects on Pitx2-Induced Atrial Fibrillation: Insights from Populations of Electrophysiological Models of Human Atrial Cells and Tissues. International Journal of Molecular Sciences, 2021, 22, 1265.	1.8	9
59	Enhancing the detection of atrial fibrillation from wearable sensors with neural style transfer and convolutional recurrent networks. Computers in Biology and Medicine, 2022, 146, 105551.	3.9	8
60	Effects of pharmacological gap junction and sodium channel blockade on S1S2 restitution properties in Langendorff-perfused mouse hearts. Oncotarget, 2017, 8, 85341-85352.	0.8	7
61	Novel Methods for Characterization of Paroxysmal Atrial Fibrillation in Human Left Atria. Open Biomedical Engineering Journal, 2013, 7, 29-40.	0.7	7
62	Myofiber orientation and electrical activation in human and sheep atrial models. , 2012, 2012, 6365-8.		6
63	Loss of Side-to-Side Connections Affects the Relative Contributions of the Sodium and Calcium Current to Transverse Propagation Between Strands of Atrial Myocytes. Frontiers in Physiology, 2018, 9, 1212.	1.3	6
64	Afterdepolarizations and abnormal calcium handling in atrial myocytes with modulated SERCA uptake: a sensitivity analysis of calcium handling channels. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190557.	1.6	6
65	Understanding PITX2-Dependent Atrial Fibrillation Mechanisms through Computational Models. International Journal of Molecular Sciences, 2021, 22, 7681.	1.8	6
66	Arrhythmogenic substrate for atrial fibrillation: Insights from an integrative computational model of pulmonary veins. , 2012, 2012, 203-6.		5
67	Editorial: Recent Advances in Understanding the Basic Mechanisms of Atrial Fibrillation Using Novel Computational Approaches. Frontiers in Physiology, 2019, 10, 1065.	1.3	5
68	Modulated Calcium Homeostasis and Release Events Under Atrial Fibrillation and Its Risk Factors: A Meta-Analysis. Frontiers in Cardiovascular Medicine, 2021, 8, 662914.	1.1	5
69	Automatic 3D Surface Reconstruction of the Left Atrium From Clinically Mapped Point Clouds Using Convolutional Neural Networks. Frontiers in Physiology, 2022, 13, 880260.	1.3	5
70	In Silico Assessment of Genetic Variation in PITX2 Reveals the Molecular Mechanisms of Calcium-Mediated Cellular Triggered Activity in Atrial Fibrillation*. , 2020, 2020, 2353-2356.		4
71	Morphological Substrates for Atrial Arrhythmogenesis in a Heart With Atrioventricular Septal Defect. Frontiers in Physiology, 2018, 9, 1071.	1.3	3
72	Standard Quasi-Conformal Flattening of the Right and Left Atria. Lecture Notes in Computer Science, 2019, , 85-93.	1.0	3

#	Article	IF	Citations
73	Mechanisms underlying pro-arrhythmic abnormalities arising from Pitx2-induced electrical remodelling: an in silico intersubject variability study. Annals of Translational Medicine, 2021, 9, 106-106.	0.7	3
74	Atrial Fibrosis and Atrial Fibrillation: A Computer Simulation in the Posterior Left Atrium. Lecture Notes in Computer Science, 2013, , 400-408.	1.0	3
75	Two-Stage 2D CNN for Automatic Atrial Segmentation from LGE-MRIs. Lecture Notes in Computer Science, 2020, , 81-89.	1.0	3
76	Intracardiac Inverse Potential Mapping Using the Method of Fundamental Solutions. Frontiers in Physiology, 2022, 13, .	1.3	3
77	Structure specific models of electrical function in the right atrial appendage. , 2008, 2008, 145-8.		2
78	Electropathological substrate detection of persistent atrial fibrillation — A novel method to analyze unipolar electrograms of noncontact mapping. , 2011, 2011, 1471-4.		2
79	HUMAN ATRIAL FIBRILLATION TERMINATED BY TARGETED ABLATION OF LOCALIZED REENTRANT DRIVERS GUIDED BY DUAL-SIDED SIMULTANEOUS EPICARDIAL AND ENDOCARDIAL OPTICAL MAPPING. Heart Rhythm, 2014, 11, 2129-2130.	0.3	2
80	Diet-Induced Metabolic Syndrome Reduced Heart Rate Variability and Increased Irregularity and Complexity of Short-Term RR Time Series in Rabbits. Animals, 2019, 9, 572.	1.0	2
81	A novel system for mapping regional electrical properties and characterizing arrhythmia in isolated intact rat atria. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 321, H412-H421.	1.5	2
82	Comparison of 2D Echocardiography and Cardiac Cine MRI in the Assessment of Regional Left Ventricular Wall Thickness. Lecture Notes in Computer Science, 2020, , 52-62.	1.0	2
83	Leading Reentry Circuit(s) in the Right Atrial Free Wall Underlies Adenosine-Induced Atrial Fibrillation in Coronary Perfused Human Hearts. Heart Rhythm, 2013, 10, 1745.	0.3	1
84	INTEGRATION OF GADOLINIUM-ENHANCED MRI AND SIMULTANEOUS EPICARDIALâ€“ENDOCARDIAL OPTICAL MAPPING REVEALS MICROANATOMIC SUBSTRATES ANCHORING REENTRANT DRIVERS DURING SUSTAINED ATRIAL FIBRILLATION IN HUMAN HEART. Heart Rhythm, 2014, 11, 2131-2132.	0.3	1
85	Machine Learning for Fully Automatic 3D Atria Segmentation and Reconstruction from Gadolinium Enhanced MRIs. Heart Lung and Circulation, 2017, 26, S33.	0.2	1
86	Atrial Electro-anatomic Mapping with a Novel Noncontact Approach. , 0, , .		1
87	Structural Basis of Atrial Arrhythmogenesis in Metabolic Syndrome. , 0, , .		1
88	The Ionic Mechanisms of Triggered Atrial Activity under a TBX5-Driven Regulatory Network. , 0, , .		1
89	A computer study of the effects of branching dimension on safety factor distribution and propagation in a cardiac conduction network. , 2009, 2009, 3278-81.		0
90	Extended High Density Epicardial Phase Mapping of Persistent Atrial Fibrillation in the Human Left Atrium: High Prevalence of Transient Rotational Activity. Heart Lung and Circulation, 2016, 25, S145.	0.2	0

#	Article	IF	Citations
91	Transient Rotor Activity Using Novel Prolonged 3D Phase Mapping in Human Persistent Atrial Fibrillation. Heart Lung and Circulation, 2017, 26, S175.	0.2	0
92	Analysis of Panoramic Propagation Patterns Mapped from Patients With Persistent Atrial Fibrillation. , 0, , .		0
93	Ensemble of Convolutional Neural Networks for Heart Segmentation. Lecture Notes in Computer Science, 2019, , 282-291.	1.0	0
94	HECT E3 Ubiquitin Ligase Smurf2 Regulates Î¼-Opioid Receptor Degradation in Lung Epithelial Cells. , 2019, , .		0
95	HIPPO-MST1/2 Act Through BUB3 and FOXO to Sustain Increased Proliferation and Survival of Pulmonary Vascular Cells in Pulmonary Arterial Hypertension. , 2021, , .		0
96	B-PO05-017 IN VIVO TO EX VIVO HIGH RESOLUTION OPTICAL MAPPING AND CONTRAST ENHANCED MAGNETIC RESONANCE IMAGING TO REVEAL ATRIAL FIBRILLATION DRIVERS AND IMPROVE IDENTIFICATION OF ARRHYTHMOGENIC STRUCTURAL SUBSTRATES IN PERSISTENT ATRIAL FIBRILLATION CANINE MODEL. Heart Rhythm, 2021, 18, S377-S378.	0.3	0
97	Identification of the Crucial Substrates of Persistent Atrial Fibrillation by Isochronal Spectrum Analysis. Journal of Arrhythmia, 2011, 27, PE4_018.	0.5	0
98	A High Resolution Bi-atrial Optical Mapping System for the Analysis of Arrhythmia in the Hypertensive Heart. , 0, , .		0
99	Financial Applications of Symbolically Generated Compact Finite Difference Formulae. , 2007, , 361-374.		0
100	Abstract 15311: Drivers Associated With Dense Fibrotic Regions Are Critical Targets in Extra-Pulmonary Vein Ablation in Persistent Atrial Fibrillation. Circulation, 2020, 142, .	1.6	0
101	Abstract 16340: Atrial Wall Thickness Features Predefine Human Right Atrial Driver: Insights Gained From Novel Structural Analysis. Circulation, 2020, 142, .	1.6	0
102	Abstract 14900: Human Atrial Fibrillation Drivers Revealed by Machine Learning Using Multicomponent Electrograms and 3D CE-MRI Structural Features. Circulation, 2020, 142, .	1.6	0
103	Abstract 14897: Activation Dyssynchrony Between Contact Multielectrode Mapping and Subsurface Near-Infrared Optical Mapping During Human Atrial Fibrillation. Circulation, 2020, 142, .	1.6	0
104	In silico investigation of the mechanisms underlying atrial fibrillation due to impaired Pitx2. , 2020, 16, e1007678.		0
105	In silico investigation of the mechanisms underlying atrial fibrillation due to impaired Pitx2. , 2020, 16, e1007678.		0
106	In silico investigation of the mechanisms underlying atrial fibrillation due to impaired Pitx2. , 2020, 16, e1007678.		0
107	In silico investigation of the mechanisms underlying atrial fibrillation due to impaired Pitx2. , 2020, 16, e1007678.		0
108	Identifying locations susceptible to micro-anatomical reentry using a spatial network representation of atrial fibre maps. PLoS ONE, 2022, 17, e0267166.	1.1	0

#	Article	IF	Citations
109	Non-Contact Intracardiac Potential Mapping Using Mesh-Based and Meshless Inverse Solvers. Frontiers in Physiology, 0, 13, .	1.3	0