Oleg V Aslanidi

List of Publications by Year
in descending order

75 papers	1,835 citations	279487 23 h-index	276539 41 g-index
76 all docs	76 docs citations	76 times ranked	1706 citing authors

#	Article	IF	Citations
1	Toward Patient-Specific Prediction of Ablation Strategies for Atrial Fibrillation Using Deep Learning. Frontiers in Physiology, 2021, 12, 674106.	1.3	13
2	Reinforcement Learning to Improve Image-Guidance of Ablation Therapy for Atrial Fibrillation. Frontiers in Physiology, 2021, 12, 733139.	1.3	5
3	Evolution of Epicardial Rotors into Breakthrough Waves During Atrial Fibrillation in 3D Canine Biatrial Model with Detailed Fibre Orientation. , 2021, , .		0
4	Left Atrial Appendage Morphology Impacts Thrombus Formation Risks in Multi-Physics Atrial Models. , 2021, , .		3
5	Investigation of Low-Voltage Defibrillation by Standing Waves in Human Ventricular Tissue Models. , 2021, , .		0
6	Identifying locations of re-entrant drivers from patient-specific distribution of fibrosis in the left atrium. PLoS Computational Biology, 2020, 16, e1008086.	1.5	22
7	Prolonged ursodeoxycholic acid administration reduces acute ischaemia-induced arrhythmias in adult rat hearts. Scientific Reports, 2020, 10, 15284.	1.6	7
8	Editorial: Recent Advances in Understanding the Basic Mechanisms of Atrial Fibrillation Using Novel Computational Approaches. Frontiers in Physiology, 2019, 10, 1065.	1.3	5
9	Development of a Deep Learning Method to Predict Optimal Ablation Patterns for Atrial Fibrillation. , 2019, , .		3
10	Computational Modelling of Electro-Mechanical Coupling in the Atria and Its Changes During Atrial Fibrillation. Lecture Notes in Computer Science, 2019, , 103-113.	1.0	0
11	Virtual Catheter Ablation of Target Areas Identified from Image-Based Models of Atrial Fibrillation. Lecture Notes in Computer Science, 2019, , 11-19.	1.0	2
12	Modeling Left Atrial Flow, Energy, Blood Heating Distribution in Response to Catheter Ablation Therapy. Frontiers in Physiology, 2018, 9, 1757.	1.3	18
13	Image-Based Computational Evaluation of the Effects of Atrial Wall Thickness and Fibrosis on Re-entrant Drivers for Atrial Fibrillation. Frontiers in Physiology, 2018, 9, 1352.	1.3	43
14	Algorithms for left atrial wall segmentation and thickness â€“ Evaluation on an open-source CT and MRI image database. Medical Image Analysis, 2018, 50, 36-53.	7.0	40
15	Novel MRI Technique Enables Non-Invasive Measurement of Atrial Wall Thickness. IEEE Transactions on Medical Imaging, 2017, 36, 1607-1614.	5.4	37
16	Novel Computational Analysis of Left Atrial Anatomy Improves Prediction of Atrial Fibrillation Recurrence after Ablation. Frontiers in Physiology, 2017, 8, 68.	1.3	52
17	Segmentation Challenge on the Quantification of Left Atrial Wall Thickness. Lecture Notes in Computer Science, 2017, , 193-200.	1.0	1
18	Slow Conduction in the Border Zones of Patchy Fibrosis Stabilizes the Drivers for Atrial Fibrillation: Insights from Multi-Scale Human Atrial Modeling. Frontiers in Physiology, 2016, 7, 474.	1.3	109

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19	Towards patient-specific modelling of lesion formation during radiofrequency catheter ablation for atrial fibrillation. , 2016, 2016, 489-492.		3
20	Atrial Heterogeneity Generates Re-entrant Substrate during Atrial Fibrillation and Anti-arrhythmic Drug Action: Mechanistic Insights from Canine Atrial Models. PLoS Computational Biology, 2016, 12, e1005245.	1.5	67
21	Letter to the Editorâ€"Initiation and sustenance of reentry are promoted by two different mechanisms. Heart Rhythm, 2015, 12, e2.	0.3	4
22	3D high-resolution atrial wall thickness maps using black-blood PSIR. Journal of Cardiovascular Magnetic Resonance, 2015, 17, P239.	1.6	8
23	Abstract 12471: Optimal Prediction of Atrial Fibrillation Recurrence After Ablation: A Computational Anatomy Study. Circulation, 2015, 132, .	1.6	0
24	Role of atrial tissue substrate and electrical activation pattern in fractionation of atrial electrograms: A computational study. , 2014, 2014, 1587-90.		3
25	Evolution and pharmacological modulation of the arrhythmogenic wave dynamics in canine pulmonary vein model. Europace, 2014, 16, 416-423.	0.7	37
26	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
27	A novel computational sheep atria model for the study of atrial fibrillation. Interface Focus, 2013, 3, 20120067.	1.5	29
28	Heterogeneous and anisotropic integrative model of pulmonary veins: computational study of arrhythmogenic substrate for atrial fibrillation. Interface Focus, 2013, 3, 20120069.	1.5	34
29	Proâ€arrhythmogenic effects of atrial fibrillationâ€induced electrical remodelling: insights from the threeâ€dimensional virtual human atria. Journal of Physiology, 2013, 591, 4249-4272.	1.3	152
30	Determination of Atrial Myofibre Orientation Using Structure Tensor Analysis for Biophysical Modelling. Lecture Notes in Computer Science, 2013, , 425-432.	1.0	10
31	Arrhythmogenic substrate for atrial fibrillation: Insights from an integrative computational model of pulmonary veins. , 2012, 2012, 203-6.		5
32	Postnatal development of transmural gradients in expression of ion channels and Ca2+-handling proteins in the ventricle. Journal of Molecular and Cellular Cardiology, 2012, 53, 145-155.	0.9	17
33	Structureâ€"Function Relationship in the Sinus and Atrioventricular Nodes. Pediatric Cardiology, 2012, 33, 890-899.	0.6	42
34	Virtual tissue engineering of the human atrium: Modelling pharmacological actions on atrial arrhythmogenesis. European Journal of Pharmaceutical Sciences, 2012, 46, 209-221.	1.9	23
35	Correlation Between P-Wave Morphology and Origin of Atrial Focal Tachycardiaâ€"Insights From Realistic Models of the Human Atria and Torso. IEEE Transactions on Biomedical Engineering, 2011, 58, 2952-2955.	2.5	19
36	Towards a computational reconstruction of the electrodynamics of premature and full term human labour. Progress in Biophysics and Molecular Biology, 2011, 107, 183-192.	1.4	29

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37	3D virtual human atria: A computational platform for studying clinical atrial fibrillation. Progress in Biophysics and Molecular Biology, 2011, 107, 156-168.	1.4	143
38	Computer Threeâ€Dimensional Anatomical Reconstruction of the Human Sinus Node and a Novel Paranodal Area. Anatomical Record, 2011, 294, 970-979.	0.8	89
39	Electrophysiological models for the heterogeneous canine atria: Computational platform for studying rapid atrial arrhythmias. , 2011, 2011, 1693-6.		11
40	Mechanistic Links Between Na ⁺ Channel (SCN5A) Mutations and Impaired Cardiac Pacemaking in Sick Sinus Syndrome. Circulation Research, 2010, 107, 126-137.	2.0	94
41	Ionic Mechanisms for Electrical Heterogeneity between Rabbit Purkinje Fiber and Ventricular Cells. Biophysical Journal, 2010, 98, 2420-2431.	0.2	42
42	Response: Optimal Velocity Can Arise from Various Discontinuities. Biophysical Journal, 2010, 98, 3104-3105.	0.2	1
43	Electrophysiological substrate for a dominant reentrant source during atrial fibrillation. , 2009, 2009, 2819-22.		7
44	Mechanisms of defibrillation by standing waves in the bidomain ventricular tissue with voltage applied in an external bath. Physica D: Nonlinear Phenomena, 2009, 238, 984-991.	1.3	6
45	Mechanisms of Transition from Normal to Reentrant Electrical Activity in a Model of Rabbit Atrial Tissue: Interaction of Tissue Heterogeneity and Anisotropy. Biophysical Journal, 2009, 96, 798-817.	0.2	67
46	Optimal Velocity and Safety of Discontinuous Conduction through the Heterogeneous Purkinje-Ventricular Junction. Biophysical Journal, 2009, 97, 20-39.	0.2	49
47	Mathematical models of the electrical action potential of Purkinje fibre cells. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 2225-2255.	1.6	119
48	Left to Right Atrial Electrophysiological Differences: Substrate for a Dominant Reentrant Source during Atrial Fibrillation. Lecture Notes in Computer Science, 2009, , 154-161.	1.0	4
49	The canine virtual ventricular wall: A platform for dissecting pharmacological effects on propagation and arrhythmogenesis. Progress in Biophysics and Molecular Biology, 2008, 96, 187-208.	1.4	71
50	Regional differences in rabbit atrial action potential properties: Mechanisms, consequences and pharmacological implications. , 2008, 2008, 141-4.		2
51	Optimal safety of conduction through the Purkinje-ventricular junction. , 2008, , .		0
52	Electrophysiologically detailed models of the right and left rabbit atria: Pharmacological impacts on propagation and arrhythmogenesis. , 2008, , .		2
53	Effects of the intracellular Ca2+ dynamics on restitution properties and stability of reentry in rabbit atrial tissue model. , 2008, , .		1
54	Modelling conduction through the Purkinje ventricular junction and the short-QT syndrome associated with HERG mutation in the rabbit ventricles. , 2007, , .		0

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55	A novel mathematical model of the electrical action potential in a canine Purkinje fiber cell. , 2007, , .		3
56	P3-23. Heart Rhythm, 2006, 3, S185.	0.3	0
57	The Virtual Ventricular Wall: A Tool for Exploring Cardiac Propagation and Arrhythmogenesis. Journal of Biological Physics, 2006, 32, 355-368.	0.7	13
58	21 Towards understanding the physical basis of re-entrant cardiac arrhythmias. Studies in Multidisciplinarity, 2005, , 389-410.	0.0	0
59	Dynamical and cellular electrophysiological mechanisms of ECG changes during ischaemia. Journal of Theoretical Biology, 2005, 237, 369-381.	0.8	21
60	Virtual Ventricular Wall: Effects of Pathophysiology and Pharmacology on Transmural Propagation. Lecture Notes in Computer Science, 2005, , 162-171.	1.0	0
61	Conditions Causing Wavefront Instability in a Growing Colony of Bacterial Cells with Chemotactic Activity. Doklady Biochemistry and Biophysics, 2004, 394, 18-21.	0.3	1
62	Coherent Dynamics of Excitable and Coupled Î²-Cells. , 2004, , 375-379.		0
63	Beyond the Kuramoto-Zelâ€™dovich theory: Steadily rotating concave spiral waves and their relation to the echo phenomenon. JETP Letters, 2003, 77, 270-275.	0.4	9
64	VULNERABILITY TO REENTRY, AND DRIFT, STABILITY AND BREAKDOWN OF SPIRAL WAVES IN A LINEAR GRADIENT OF GK IN A LUOâ€"RUDY 1 VIRTUAL VENTRICULAR TISSUE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3865-3871.	0.7	4
65	A SIMPLE MODEL FOR INTERACTION OF VOLTAGE AND CALCIUM DYNAMICS IN VIRTUAL VENTRICULAR TISSUE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3873-3886.	0.7	0
66	Enhanced self-termination of re-entrant arrhythmias as a pharmacological strategy for antiarrhythmic action. Chaos, 2002, 12, 843-851.	1.0	24
67	A Model for Glucose-induced Wave Propagation in Pancreatic Islets of Langerhans. Journal of Theoretical Biology, 2002, 215, 273-286.	0.8	11
68	Excitation Wave Propagation as a Possible Mechanism for Signal Transmission in Pancreatic Islets of Langerhans. Biophysical Journal, 2001, 80, 1195-1209.	0.2	59
69	Standing Excitation Waves in the Heart Induced by Strong Alternating Electric Fields. Physical Review Letters, 2001, 87, 168104.	2.9	23
70	The Efficacy of Class III Anti-arrhythmic Drug Action in 3D Canine Atrial Models: Is the Blockade of IKCa Pro- or Anti-arrhythmic?. , 0, , .		0
71	A Novel Model of the Rabbit Atrial Myocyte for the Study of Ca2+ Mediated Arrhythmia. , 0, , .		2
72	Image-Based Computational Evaluation of the Competing Effect of Atrial Wall Thickness and Fibrosis on Re-entrant Drivers for Atrial Arrhythmias. , 0, , .		0

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73	Computational Evaluation of Radiofrequency Catheter Ablation Settings for Variable Atrial Tissue Depth and Blood Flow Conditions. , 0, , .		2
74	Investigating Strain as a Biomarker for Atrial Fibrosis Quantified by Patient Cine MRI Data. , 0, , .		0
75	Modelling Left Atrial Flow and Blood Coagulation for Risk of Thrombus Formation in Atrial Fibrillation. , 0, , .		7