Oscar Camara

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. IEEE Transactions on Medical Imaging, 2018, 37, 2514-2525.	5.4	926
2	Generalized Overlap Measures for Evaluation and Validation in Medical Image Analysis. IEEE Transactions on Medical Imaging, 2006, 25, 1451-1461.	5.4	583
3	Three-Dimensional Architecture of Scar and Conducting Channels Based on High Resolution ce-CMR. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 528-537.	2.1	179
4	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
5	Cardiac function estimation from MRI using a heart model and data assimilation: Advances and difficulties. Medical Image Analysis, 2006, 10, 642-656.	7.0	132
6	OpenCMISS: A multi-physics & multi-scale computational infrastructure for the VPH/Physiome project. Progress in Biophysics and Molecular Biology, 2011, 107, 32-47.	1.4	123
7	Temporal diffeomorphic free-form deformation: Application to motion and strain estimation from 3D echocardiography. Medical Image Analysis, 2012, 16, 427-450.	7.0	123
8	Integration of fuzzy spatial relations in deformable models—Application to brain MRI segmentation. Pattern Recognition, 2006, 39, 1401-1414.	5.1	120
9	euHeart: personalized and integrated cardiac care using patient-specific cardiovascular modelling. Interface Focus, 2011, 1, 349-364.	1.5	112
10	A ruleâ€based method to model myocardial fiber orientation in cardiac biventricular geometries with outflow tracts. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3185.	1.0	78
11	Sensitivity analysis of geometrical parameters to study haemodynamics and thrombus formation in the left atrial appendage. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3100.	1.0	63
12	Relationship between endocardial activation sequences defined by high-density mapping to early septal contraction (septal flash) in patients with left bundle branch block undergoing cardiac resynchronization therapy. Europace, 2012, 14, 99-106.	0.7	61
13	Cardiac Magnetic Resonance-Guided Ventricular Tachycardia Substrate Ablation. JACC: Clinical Electrophysiology, 2020, 6, 436-447.	1.3	61
14	Persistence of Cardiac Remodeling in Preadolescents With Fetal Growth Restriction. Circulation: Cardiovascular Imaging, 2017, 10, .	1.3	60
15	Simulation of cardiac pathologies using an electromechanical biventricular model and XMR interventional imaging. Medical Image Analysis, 2005, 9, 467-480.	7.0	53
16	In silico Optimization of Left Atrial Appendage Occluder Implantation Using Interactive and Modeling Tools. Frontiers in Physiology, 2019, 10, 237.	1.3	50
17	A Computational Model of the Fetal Circulation to Quantify Blood Redistribution in Intrauterine Growth Restriction. PLoS Computational Biology, 2014, 10, e1003667.	1.5	48
18	GIMIAS: An Open Source Framework for Efficient Development of Research Tools and Clinical Prototypes. Lecture Notes in Computer Science, 2009, , 417-426.	1.0	47

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19	Preferential regional distribution of atrial fibrosis in posterior wall around left inferior pulmonary vein as identified by late gadolinium enhancement cardiac magnetic resonance in patients with atrial fibrillation. Europace, 2018, 20, 1959-1965.	0.7	47
20	The reproducibility of late gadolinium enhancement cardiovascular magnetic resonance imaging of post-ablation atrial scar: a cross-over study. Journal of Cardiovascular Magnetic Resonance, 2018, 20, 21.	1.6	46
21	Numerical simulation of blood flow in the left ventricle and aortic sinus using magnetic resonance imaging and computational fluid dynamics. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 740-749.	0.9	36
22	Fusion of spatial relationships for guiding recognition, example of brain structure recognition in 3D MRI. Pattern Recognition Letters, 2005, 26, 449-457.	2.6	35
23	Inter-model consistency and complementarity: Learning from ex-vivo imaging and electrophysiological data towards an integrated understanding of cardiac physiology. Progress in Biophysics and Molecular Biology, 2011, 107, 122-133.	1.4	35
24	Dielectric properties of colon polyps, cancer, and normal mucosa: <i>Ex vivo</i> measurements from 0.5 to 20AGHz. Medical Physics, 2018, 45, 3768-3782.	1.6	33
25	Computational modeling of thoracic and abdominal anatomy using spatial relationships for image segmentation. Real Time Imaging, 2004, 10, 263-273.	1.6	32
26	Phenomenological Model of Diffuse Global and Regional Atrophy Using Finite-Element Methods. IEEE Transactions on Medical Imaging, 2006, 25, 1417-1430.	5.4	32
27	Accuracy assessment of global and local atrophy measurement techniques with realistic simulated longitudinal Alzheimer's disease images. NeuroImage, 2008, 42, 696-709.	2.1	32
28	Radiomics Signatures of Cardiovascular Risk Factors in Cardiac MRI: Results From the UK Biobank. Frontiers in Cardiovascular Medicine, 2020, 7, 591368.	1.1	32
29	Reproducibility and accuracy of late gadolinium enhancement cardiac magnetic resonance measurements for the detection of left atrial fibrosis in patients undergoing atrial fibrillation ablation procedures. Europace, 2019, 21, 724-731.	0.7	31
30	Understanding the mechanisms amenable to CRT response: from pre-operative multimodal image data to patient-specific computational models. Medical and Biological Engineering and Computing, 2013, 51, 1235-1250.	1.6	30
31	Toward the automatic quantification of in utero brain development in 3D structural MRI: A review. Human Brain Mapping, 2017, 38, 2772-2787.	1.9	30
32	Explicit Incorporation of Prior Anatomical Information Into a Nonrigid Registration of Thoracic and Abdominal CT and 18-FDG Whole-Body Emission PET Images. IEEE Transactions on Medical Imaging, 2007, 26, 164-178.	5.4	29
33	Using anatomical knowledge expressed as fuzzy constraints to segment the heart in CT images. Pattern Recognition, 2008, 41, 2525-2540.	5.1	28
34	Deep Learning Framework for Real-Time Estimation of in-silico Thrombotic Risk Indices in the Left Atrial Appendage. Frontiers in Physiology, 2021, 12, 694945.	1.3	28
35	Sensitivity Analysis of In Silico Fluid Simulations to Predict Thrombus Formation after Left Atrial Appendage Occlusion. Mathematics, 2021, 9, 2304.	1.1	28
36	Integration of electro-anatomical and imaging data of the left ventricle: An evaluation framework. Medical Image Analysis, 2016, 32, 131-144.	7.0	27

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37	Image-based criteria to identify the presence of epicardial arrhythmogenic substrate in patients with transmural myocardial infarction. Heart Rhythm, 2018, 15, 814-821.	0.3	27
38	Generalised Overlap Measures for Assessment of Pairwise and Groupwise Image Registration and Segmentation. Lecture Notes in Computer Science, 2005, 8, 99-106.	1.0	26
39	Impact of Flow Dynamics on Device-Related Thrombosis After Left Atrial Appendage Occlusion. Canadian Journal of Cardiology, 2020, 36, 968.e13-968.e14.	0.8	26
40	A Radiomics Approach to Computer-Aided Diagnosis with Cardiac Cine-MRI. Lecture Notes in Computer Science, 2018, , 82-90.	1.0	25
41	Large Diffeomorphic FFD Registration for Motion and Strain Quantification from 3D-US Sequences. Lecture Notes in Computer Science, 2009, , 437-446.	1.0	23
42	Feasibility of estimating regional mechanical properties of cerebral aneurysms <i>in vivo</i> . Medical Physics, 2010, 37, 1689-1706.	1.6	22
43	Breaking the state of the heart: meshless model for cardiac mechanics. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1549-1561.	1.4	22
44	Fast Multiscale Modeling of Cardiac Electrophysiology Including Purkinje System. IEEE Transactions on Biomedical Engineering, 2011, 58, 2956-2960.	2.5	21
45	Learning non-linear patch embeddings with neural networks for label fusion. Medical Image Analysis, 2018, 44, 143-155.	7.0	21
46	Toward integrated management of cerebral aneurysms. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2961-2982.	1.6	18
47	Three-dimensional printing of an aortic model for transcatheter aortic valve implantation: possible clinical applications. International Journal of Cardiovascular Imaging, 2017, 33, 283-285.	0.7	18
48	Description of brain internal structures by means of spatial relations for MR image segmentation. , 2004, , .		17
49	Standardized unfold mapping: a technique to permit left atrial regional data display and analysis. Journal of Interventional Cardiac Electrophysiology, 2017, 50, 125-131.	0.6	17
50	Estimation of Purkinje trees from electro-anatomical mapping of the left ventricle using minimal cost geodesics. Medical Image Analysis, 2015, 24, 52-62.	7.0	16
51	Methods for Inverting Dense Displacement Fields: Evaluation in Brain Image Registration. , 2007, 10, 900-907.		16
52	Temporal Diffeomorphic Free-Form Deformation for Strain Quantification in 3D-US Images. Lecture Notes in Computer Science, 2010, 13, 1-8.	1.0	16
53	A Wavelet-Based Electrogram Onset Delineator for Automatic Ventricular Activation Mapping. IEEE Transactions on Biomedical Engineering, 2014, 61, 2830-2839.	2.5	14
54	Centreline-Based Shape Descriptors of the Left Atrial Appendage in Relation with Thrombus Formation. Lecture Notes in Computer Science, 2019, , 200-208.	1.0	13

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55	Analysis of Microstructure of the Cardiac Conduction System Based on Three-Dimensional Confocal Microscopy. PLoS ONE, 2016, 11, e0164093.	1.1	13
56	Joint Analysis of Morphological Parameters and In Silico Haemodynamics of the Left Atrial Appendage for Thrombogenic Risk Assessment. Journal of Interventional Cardiology, 2022, 2022, 1-10.	0.5	13
57	In-Silico Analysis of the Influence of Pulmonary Vein Configuration on Left Atrial Haemodynamics and Thrombus Formation in a Large Cohort. Lecture Notes in Computer Science, 2021, , 605-616.	1.0	12
58	Quantitative Analysis of Electro-Anatomical Maps: Application to an Experimental Model of Left Bundle Branch Block/Cardiac Resynchronization Therapy. IEEE Journal of Translational Engineering in Health and Medicine, 2017, 5, 1-15.	2.2	11
59	A Radiomics Approach to Analyze Cardiac Alterations in Hypertension. , 2019, , .		11
60	A Multimodal Database for the 1 st Cardiac Motion Analysis Challenge. Lecture Notes in Computer Science, 2012, , 33-44.	1.0	11
61	Design and Evaluation of an Antenna Applicator for a Microwave Colonoscopy System. IEEE Transactions on Antennas and Propagation, 2019, 67, 4968-4977.	3.1	10
62	In silico pace-mapping: prediction of left vs. right outflow tract origin in idiopathic ventricular arrhythmias with patient-specific electrophysiological simulations. Europace, 2020, 22, 1419-1430.	0.7	10
63	Fast Quasi-Conformal Regional Flattening of the Left Atrium. IEEE Transactions on Visualization and Computer Graphics, 2020, 26, 2591-2602.	2.9	9
64	Deep Learning Surrogate of Computational Fluid Dynamics for Thrombus Formation Risk in the Left Atrial Appendage. Lecture Notes in Computer Science, 2020, , 157-166.	1.0	9
65	In Silico Analysis of Haemodynamics in Patient-Specific Left Atria with Different Appendage Morphologies. Lecture Notes in Computer Science, 2017, , 412-420.	1.0	8
66	Mind the gap: Quantification of incomplete ablation patterns after pulmonary vein isolation using minimum path search. Medical Image Analysis, 2019, 51, 1-12.	7.0	7
67	Integration of artificial intelligence into clinical patient management: focus on cardiac imaging. Revista Espanola De Cardiologia (English Ed), 2021, 74, 72-80.	0.4	7
68	Smoothed Particle Hydrodynamics for Electrophysiological Modeling: An Alternative to Finite Element Methods. Lecture Notes in Computer Science, 2017, , 333-343.	1.0	7
69	Free Form Deformations Guided by Gradient Vector Flow: A Surface Registration Method in Thoracic and Abdominal PET-CT Applications. Lecture Notes in Computer Science, 2003, , 224-233.	1.0	7
70	Towards Regional Elastography of Intracranial Aneurysms. Lecture Notes in Computer Science, 2008, 11, 131-138.	1.0	7
71	Cardiac Motion Estimation from Intracardiac Electrical Mapping Data: Identifying a Septal Flash in Heart Failure. Lecture Notes in Computer Science, 2009, , 21-29.	1.0	7
72	Thermal impact of balloon occlusion of the coronary sinus during mitral isthmus radiofrequency ablation: an in-silico study. International Journal of Hyperthermia, 2019, 36, 1167-1176.	1.1	6

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73	Calibration of a fully coupled electromechanical meshless computational model of the heart with experimental data. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112869.	3.4	6
74	Multi-sequence Registration of Cine, Tagged and Delay-Enhancement MRI with Shift Correction and Steerable Pyramid-Based Detagging. Lecture Notes in Computer Science, 2009, , 330-338.	1.0	6
75	A two dimensional electromechanical model of a cardiomyocyte to assess intra-cellular regional mechanical heterogeneities. PLoS ONE, 2017, 12, e0182915.	1.1	5
76	High-power short-duration vs. standard radiofrequency cardiac ablation: comparative study based on an in-silico model. International Journal of Hyperthermia, 2021, 38, 582-592.	1.1	5
77	Biophysics-based statistical learning: Application to heart and brain interactions. Medical Image Analysis, 2021, 72, 102089.	7.0	5
78	Accuracy Assessment of Global and Local Atrophy Measurement Techniques with Realistic Simulated Longitudinal Data. , 2007, 10, 785-792.		5
79	Evaluation of a thoracic elastic registration method using anatomical constraints in oncology. , 0, , .		4
80	Statistical Atlases and Computational Models of the Heart - Imaging and Modelling Challenges. Lecture Notes in Computer Science, 2015, , .	1.0	4
81	Left Atrial Segmentation Combining Multi-atlas Whole Heart Labeling and Shape-Based Atlas Selection. Lecture Notes in Computer Science, 2019, , 302-310.	1.0	4
82	Influence of Geometric Variations on LV Activation Times: A Study on an Atlas-Based Virtual Population. Lecture Notes in Computer Science, 2010, , 242-251.	1.0	4
83	Personalization of Fast Conduction Purkinje System in Eikonal-Based Electrophysiological Models with Optical Mapping Data. Lecture Notes in Computer Science, 2010, , 281-290.	1.0	4
84	Effect of Scar Development on Fast Electrophysiological Models of the Human Heart: In-Silico Study on Atlas-Based Virtual Populations. Lecture Notes in Computer Science, 2011, , 427-436.	1.0	4
85	Computational pipeline for the generation and validation of patient-specific mechanical models of brain development. Brain Multiphysics, 2022, 3, 100045.	0.8	4
86	Standardised unfold map of the left atrium: regional definition for multimodal image analysis. Journal of Cardiovascular Magnetic Resonance, 2015, 17, P41.	1.6	3
87	Early Prediction of Alzheimer's Disease with Non-local Patch-Based Longitudinal Descriptors. Lecture Notes in Computer Science, 2017, , 74-81.	1.0	3
88	Large Scale Cardiovascular Model Personalisation for Mechanistic Analysis of Heart and Brain Interactions. Lecture Notes in Computer Science, 2019, , 285-293.	1.0	3
89	Standard Quasi-Conformal Flattening of the Right and Left Atria. Lecture Notes in Computer Science, 2019, , 85-93.	1.0	3
90	Learning decision trees through Monte Carlo tree search: An empirical evaluation. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2020, 10, e1348.	4.6	3

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91	4D Flow Magnetic Resonance Imaging for Left Atrial Haemodynamic Characterization and Model Calibration. Lecture Notes in Computer Science, 2021, , 156-165.	1.0	3
92	A Cartesian Grid Representation of Left Atrial Appendages for a Deep Learning Estimation of Thrombogenic Risk Predictors. Lecture Notes in Computer Science, 2021, , 35-43.	1.0	3
93	Modelling Tumour Growth Patterns with Non-Rigid Image Registration. , 2007, , 139-144.		3
94	Sensitivity Analysis of Mesh Warping and Subsampling Strategies for Generating Large Scale Electrophysiological Simulation Data. Lecture Notes in Computer Science, 2011, , 418-426.	1.0	3
95	In-silico Analysis ofÂDevice-Related Thrombosis forÂDifferent Left Atrial Appendage Occluder Settings. Lecture Notes in Computer Science, 2022, , 160-168.	1.0	3
96	Meshless Electrophysiological Modeling of Cardiac Resynchronization Therapy—Benchmark Analysis with Finite-Element Methods in Experimental Data. Applied Sciences (Switzerland), 2022, 12, 6438.	1.3	3
97	Decision Tree Learning for Uncertain Clinical Measurements. IEEE Transactions on Knowledge and Data Engineering, 2021, 33, 3199-3211.	4.0	2
98	Automatic Detection of Slow Conducting Channels during Substrate Ablation of Scar-Related Ventricular Arrhythmias. Journal of Interventional Cardiology, 2020, 2020, 1-13.	0.5	2
99	Towards assisted electrocardiogram interpretation using an Al-enabled Augmented Reality headset. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 349-356.	1.3	2
100	Geometric Deep Learning for the Assessment of Thrombosis Risk in the Left Atrial Appendage. Lecture Notes in Computer Science, 2021, , 639-649.	1.0	2
101	Cerebral Aneurysms: A Patient-Specific and Image-Based Management Pipeline. Computational Methods in Applied Sciences (Springer), 2011, , 327-349.	0.1	2
102	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
103	Non-stationary diffeomorphic registration: application to endo-vascular treatment monitoring. , 2009, , .		1
104	Automatic activation mapping and origin identification of idiopathic outflow tract ventricular arrhythmias. Journal of Electrocardiology, 2018, 51, 239-246.	0.4	1
105	A Monte Carlo Tree Search Approach to Learning Decision Trees. , 2018, , .		1
106	Cardiac computational modelling. Revista Espanola De Cardiologia (English Ed), 2021, 74, 65-71.	0.4	1
107	Towards Mesh-Free Patient-Specific Mitral Valve Modeling. Lecture Notes in Computer Science, 2021, , 66-75.	1.0	1
108	Best (and Worst) Practices forÂOrganizing a Challenge on Cardiac Biophysical Models During Al Summer: The CRT-EPiggy19 Challenge. Lecture Notes in Computer Science, 2020, , 329-341.	1.0	1

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109	Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. , 0, .		1
110	Image-Based Estimation of Myocardial Acceleration Using TDFFD: A Phantom Study. Lecture Notes in Computer Science, 2014, , 262-270.	1.0	1
111	Fully-Coupled Electromechanical Simulations of the LV Dog Anatomy Using HPC: Model Testing and Verification. Lecture Notes in Computer Science, 2015, , 114-122.	1.0	1
112	REGISTRATION OF RCBV AND ADC MAPS WITH STRUCTURAL AND PHYSIOLOGICAL MR IMAGES IN GLIOMA PATIENTS: STUDY AND VALIDATION. , 2007, , .		0
113	89 Electromechanical interaction in patients undergoing cardiac resynchronisation therapy: comparison of intracardiac activation maps and early septal contraction in left bundle branch block. Heart, 2011, 97, A52-A52.	1.2	0
114	Integration of different cardiac electrophysiological models into a single simulation pipeline. , 2012, ,		0
115	87Non-invasive virtual prediction of site of origin in outflow tract ventricular arrhythmias with a patient-specific computational model. European Heart Journal, 2017, 38, .	1.0	Ο
116	86Combined analysis of virtual haemodynamics patterns and LAA morphologies in relation with the risk of thrombus formation. European Heart Journal, 2017, 38, .	1.0	0
117	P1116Image-based criteria to identify the presence of epicardial arrhythmic substrate in patients with transmural myocardial infarction. European Heart Journal, 2017, 38, .	1.0	0
118	P795Automatic delineation of slow conducting channels from electroanatomical maps in patients with scar-related ventricular arrhythmias. European Heart Journal, 2017, 38, .	1.0	0
119	P780Clinical evaluation of an automatic activation mapping algorithm for identifying the site of origin of idiopathic ventricular arrhythmias. Europace, 2018, 20, i137-i137.	0.7	0
120	P457Prediction of the site of origin in outflow tract ventricular arrhythmias with electrophysiological simulations. Europace, 2018, 20, i90-i90.	0.7	0
121	P778Slow conducting channel identification from electroanatomical maps using an automatic algorithm in patients with scar-related ventricular arrhythmias. Europace, 2018, 20, i136-i137.	0.7	0
122	P3854Analysis of stroke risk based on morphological parameters of the left atrial appendage derived from 3D angiography. European Heart Journal, 2018, 39, .	1.0	0
123	744Reproducible and semi-automatic method for the assessment of ablation gaps in LGE-CMR after RF pulmonary vein isolation. Europace, 2018, 20, i124-i124.	0.7	0
124	622 Predicting post-intervention survival improvement in aortic stenosis through interpretable machine learning. European Heart Journal Cardiovascular Imaging, 2020, 21, .	0.5	0
125	Shape Analysis and Computational Fluid Simulations to Assess Feline Left Atrial Function and Thrombogenesis. Lecture Notes in Computer Science, 2021, , 619-628.	1.0	0
126	CT and PET Registration Using Deformations Incorporating Tumor-Based Constraints. Lecture Notes in Computer Science, 2005, , 1-12.	1.0	0

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127	Atlas Construction and Image Analysis Using Statistical Cardiac Models. Lecture Notes in Computer Science, 2010, , 1-13.	1.0	0
128	Environmental and Economical Assessment for Net Zero Energy Data Centres. , 2016, , .		0
129	Standardised Framework to Study the Influence of Left Atrial RF Catheter Ablation Parameters on Permanent Lesion Formation. Lecture Notes in Computer Science, 2017, , 96-105.	1.0	0
130	Quasi-Conformal Technique for Integrating and Validating Myocardial Tissue Characterization in MRI with Ex-Vivo Human Histological Data. Lecture Notes in Computer Science, 2017, , 172-181.	1.0	0
131	Joint Analysis of Personalized In-Silico Haemodynamics and Shape Descriptors of the Left Atrial Appendage. Lecture Notes in Computer Science, 2019, , 58-66.	1.0	0
132	Left Atrial Thrombus—Are All Atria and Appendages Equal?. Interventional Cardiology Clinics, 2022, 11, 121-134.	0.2	0