Maxime Sermesant

List of Publications by Year
in descending order

221 papers	7,411 citations	50170 46 h-index	64668 79 g-index
234 all docs	234 docs citations	234 times ranked	5923 citing authors

#	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	Realistic simulation of the 3-D growth of brain tumors in MR images coupling diffusion with biomechanical deformation. IEEE Transactions on Medical Imaging, 2005, 24, 1334-1346.	5.4	299
3	Inverse Relationship Between Fractionated Electrograms and Atrial Fibrosis in PersistentÂAtrial Fibrillation. Journal of the American College of Cardiology, 2013, 62, 802-812.	1.2	205
4	Patient-specific electromechanical models of the heart for the prediction of pacing acute effects in CRT: A preliminary clinical validation. Medical Image Analysis, 2012, 16, 201-215.	7.0	186
5	An electromechanical model of the heart for image analysis and simulation. IEEE Transactions on Medical Imaging, 2006, 25, 612-625.	5.4	169
6	Multiphysics and multiscale modelling, dataâ€“model fusion and integration of organ physiology in the clinic: ventricular cardiac mechanics. Interface Focus, 2016, 6, 20150083.	1.5	165
7	A system for real-time XMR guided cardiovascular intervention. IEEE Transactions on Medical Imaging, 2005, 24, 1428-1440.	5.4	157
8	SVF-Net: Learning Deformable Image Registration Using Shape Matching. Lecture Notes in Computer Science, 2017, , 266-274.	1.0	153
9	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
10	iLogDemons: A Demons-Based Registration Algorithm forÂTracking Incompressible Elastic Biological Tissues. International Journal of Computer Vision, 2011, 92, 92-111.	10.9	147
11	Benchmarking framework for myocardial tracking and deformation algorithms: An open access database. Medical Image Analysis, 2013, 17, 632-648.	7.0	140
12	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
13	A Computational Framework for the Statistical Analysis of Cardiac Diffusion Tensors: Application to a Small Database of Canine Hearts. IEEE Transactions on Medical Imaging, 2007, 26, 1500-1514.	5.4	117
14	euHeart: personalized and integrated cardiac care using patient-specific cardiovascular modelling. Interface Focus, 2011, 1, 349-364.	1.5	112
15	Regional Myocardial Wall Thinning at Multidetector Computed Tomography Correlates to Arrhythmogenic Substrate in Postinfarction Ventricular Tachycardia. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 342-350.	2.1	108
16	Image Integration to Guide Catheter Ablation in Scarâ€Related Ventricular Tachycardia. Journal of Cardiovascular Electrophysiology, 2016, 27, 699-708.	0.8	106
17	Application of soft tissue modelling to image-guided surgery. Medical Engineering and Physics, 2005, 27, 893-909.	0.8	104
18	Deformable biomechanical models: Application to 4D cardiac image analysis. Medical Image Analysis, 2003, 7, 475-488.	7.0	103

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19	Coupled personalization of cardiac electrophysiology models for prediction of ischaemic ventricular tachycardia. Interface Focus, 2011, 1, 396-407.	1.5	101
20	In vivo human cardiac fibre architecture estimation using shape-based diffusion tensor processing. Medical Image Analysis, 2013, 17, 1243-1255.	7.0	101
21	Integration of Merged Delayedâ€Enhanced Magnetic Resonance Imaging and Multidetector Computed Tomography for the Guidance of Ventricular Tachycardia Ablation: A Pilot Study. Journal of Cardiovascular Electrophysiology, 2013, 24, 419-426.	0.8	95
22	A Pipeline for the Generation of Realistic 3D Synthetic Echocardiographic Sequences: Methodology and Open-Access Database. IEEE Transactions on Medical Imaging, 2015, 34, 1436-1451.	5.4	91
23	Efficient probabilistic model personalization integrating uncertainty on data and parameters: Application to Eikonal-Diffusion models in cardiac electrophysiology. Progress in Biophysics and Molecular Biology, 2011, 107, 134-146.	1.4	78
24	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
25	Measurement of total pulmonary arterial compliance using invasive pressure monitoring and MR flow quantification during MR-guided cardiac catheterization. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H1301-H1306.	1.5	77
26	Impact of New Technologies and Approaches for Postâ€“Myocardial Infarction Ventricular Tachycardia Ablation During Long-Term Follow-Up. Circulation: Arrhythmia and Electrophysiology, 2016, 9, .	2.1	75
27	Applications of artificial intelligence in cardiovascular imaging. Nature Reviews Cardiology, 2021, 18, 600-609.	6.1	74
28	Registration of 4D Cardiac CT Sequences Under Trajectory Constraints With Multichannel Diffeomorphic Demons. IEEE Transactions on Medical Imaging, 2010, 29, 1351-1368.	5.4	73
29	Anisotropic filtering for model-based segmentation of 4D cylindrical echocardiographic images. Pattern Recognition Letters, 2003, 24, 815-828.	2.6	72
30	A Statistical Model for Quantification and Prediction of Cardiac Remodelling: Application to Tetralogy of Fallot. IEEE Transactions on Medical Imaging, 2011, 30, 1605-1616.	5.4	70
31	Cardiac Imaging in Patients With Ventricular Tachycardia. Circulation, 2017, 136, 2491-2507.	1.6	70
32	A statistical shape modelling framework to extract 3D shape biomarkers from medical imaging data: assessing arch morphology of repaired coarctation of the aorta. BMC Medical Imaging, 2016, 16, 40.	1.4	65
33	Model-Based Imaging of Cardiac Apparent Conductivity and Local Conduction Velocity for Diagnosis and Planning of Therapy. IEEE Transactions on Medical Imaging, 2008, 27, 1631-1642.	5.4	63
34	Detecting Clinically Meaningful Shape Clusters in Medical Image Data: Metrics Analysis for Hierarchical Clustering Applied to Healthy and Pathological Aortic Arches. IEEE Transactions on Biomedical Engineering, 2017, 64, 2373-2383.	2.5	62
35	Three-dimensional right-ventricular regional deformation and survival in pulmonary hypertension. European Heart Journal Cardiovascular Imaging, 2018, 19, 450-458.	0.5	62
36	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

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37	Noninvasive Personalization of a Cardiac Electrophysiology Model From Body Surface Potential Mapping. IEEE Transactions on Biomedical Engineering, 2017, 64, 2206-2218.	2.5	61
38	How successful is successful? Aortic arch shape after successful aortic coarctation repair correlates with left ventricular function. Journal of Thoracic and Cardiovascular Surgery, 2017, 153, 418-427.	0.4	61
39	Statistical Shape Modeling of the Left Ventricle: Myocardial Infarct Classification Challenge. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 503-515.	3.9	61
40	Biocomputing: numerical simulation of glioblastoma growth using diffusion tensor imaging. Physics in Medicine and Biology, 2008, 53, 879-893.	1.6	59
41	Personalization of a cardiac electromechanical model using reduced order unscented Kalman filtering from regional volumes. Medical Image Analysis, 2013, 17, 816-829.	7.0	58
42	3D Strain Assessment in Ultrasound (Straus): A Synthetic Comparison of Five Tracking Methodologies. IEEE Transactions on Medical Imaging, 2013, 32, 1632-1646.	5.4	54
43	Cardiac Arrythmias: Multimodal Assessment Integrating Body Surface ECG Mapping into Cardiac Imaging. Radiology, 2014, 271, 239-247.	3.6	54
44	Simulation of cardiac pathologies using an electromechanical biventricular model and XMR interventional imaging. Medical Image Analysis, 2005, 9, 467-480.	7.0	53
45	Correlation between computer tomographyâ€derived scar topography and critical ablation sites in postinfarction ventricular tachycardia. Journal of Cardiovascular Electrophysiology, 2018, 29, 438-445.	0.8	52
46	In vivo Human 3D Cardiac Fibre Architecture: Reconstruction Using Curvilinear Interpolation of Diffusion Tensor Images. Lecture Notes in Computer Science, 2010, 13, 418-425.	1.0	48
47	Fast parameter calibration of a cardiac electromechanical model from medical images based on the unscented transform. Biomechanics and Modeling in Mechanobiology, 2013, 12, 815-831.	1.4	47
48	Are wall thickness channels defined by computed tomography predictive of isthmuses of postinfarction ventricular tachycardia?. Heart Rhythm, 2019, 16, 1661-1668.	0.3	47
49	An Anisotropic Multi-front Fast Marching Method for Real-Time Simulation of Cardiac Electrophysiology. , 2007, , 160-169.		47
50	Personalization of Cardiac Motion and Contractility From Images Using Variational Data Assimilation. IEEE Transactions on Biomedical Engineering, 2012, 59, 20-24.	2.5	44
51	Myocardial wall thinning predicts transmural substrate in patients with scar-related ventricular tachycardia. Heart Rhythm, 2017, 14, 155-163.	0.3	42
52	A Recursive Anisotropic Fast Marching Approach to Reaction Diffusion Equation: Application to Tumor Growth Modeling. Lecture Notes in Computer Science, 2007, 20, 687-699.	1.0	42
53	Spatial correlation of action potential duration and diastolic dysfunction in transgenic and drug-induced LQT2 rabbits. Heart Rhythm, 2013, 10, 1533-1541.	0.3	41
54	Detailed Evaluation of Five 3D Speckle Tracking Algorithms Using Synthetic Echocardiographic Recordings. IEEE Transactions on Medical Imaging, 2016, 35, 1915-1926.	5.4	40

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55	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
56	Generation of Synthetic but Visually Realistic Time Series of Cardiac Images Combining a Biophysical Model and Clinical Images. IEEE Transactions on Medical Imaging, 2013, 32, 99-109.	5.4	38
57	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
58	Fast personalized electrophysiological models from computed tomography images for ventricular tachycardia ablation planning. Europace, 2018, 20, iii94-iii101.	0.7	35
59	Toward Patient-Specific Myocardial Models of the Heart. Heart Failure Clinics, 2008, 4, 289-301.	1.0	34
60	Model-Based Generation of Large Databases of Cardiac Images: Synthesis of Pathological Cine MR Sequences From Real Healthy Cases. IEEE Transactions on Medical Imaging, 2018, 37, 755-766.	5.4	34
61	Realistic Vendor-Specific Synthetic Ultrasound Data for Quality Assurance of 2-D Speckle Tracking Echocardiography: Simulation Pipeline and Open Access Database. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 411-422.	1.7	33
62	Building maps of local apparent conductivity of the epicardium with a 2-D electrophysiological model of the heart. IEEE Transactions on Biomedical Engineering, 2006, 53, 1457-1466.	2.5	31
63	Spatio-Temporal Tensor Decomposition of a Polyaffine Motion Model for a Better Analysis of Pathological Left Ventricular Dynamics. IEEE Transactions on Medical Imaging, 2015, 34, 1562-1575.	5.4	31
64	Biophysical Modeling Predicts Ventricular Tachycardia Inducibility and Circuit Morphology: A Combined Clinical Validation and Computer Modeling Approach. Journal of Cardiovascular Electrophysiology, 2016, 27, 851-860.	0.8	31
65	A Framework for the Generation of Realistic Synthetic Cardiac Ultrasound and Magnetic Resonance Imaging Sequences From the Same Virtual Patients. IEEE Transactions on Medical Imaging, 2018, 37, 741-754.	5.4	31
66	Fusion of optical imaging and MRI for the evaluation and adjustment of macroscopic models of cardiac electrophysiology: A feasibility study. Medical Image Analysis, 2009, 13, 370-380.	7.0	30
67	Correspondence Between Simple 3-D MRI-Based Computer Models and In-Vivo EP Measurements in Swine With Chronic Infarctions. IEEE Transactions on Biomedical Engineering, 2011, 58, 3483-3486.	2.5	30
68	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
69	Preliminary specificity study of the Bestelâ€“ClÃ©mentâ€“Sorine electromechanical model of the heart using parameter calibration from medical images. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 20, 259-271.	1.5	30
70	Computational modelling of the right ventricle in repaired tetralogy of Fallot: can it provide insight into patient treatment?. European Heart Journal Cardiovascular Imaging, 2013, 14, 381-386.	0.5	30
71	A multi-front eikonal model of cardiac electrophysiology for interactive simulation of radio-frequency ablation. Computers and Graphics, 2011, 35, 431-440.	1.4	29
72	Transfer Learning From Simulations on a Reference Anatomy for ECGI in Personalized Cardiac Resynchronization Therapy. IEEE Transactions on Biomedical Engineering, 2019, 66, 343-353.	2.5	29

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73	Cardiac Motion Recovery and Boundary Conditions Estimation by Coupling an Electromechanical Model and Cine-MRI Data. Lecture Notes in Computer Science, 2009, , 376-385.	1.0	29
74	Personalization of a Cardiac Electrophysiology Model Using Optical Mapping and MRI for Prediction of Changes With Pacing. IEEE Transactions on Biomedical Engineering, 2011, 58, 3339-3349.	2.5	28
75	Infarct Localization From Myocardial Deformation: Prediction and Uncertainty Quantification by Regression From a Low-Dimensional Space. IEEE Transactions on Medical Imaging, 2016, 35, 2340-2352.	5.4	28
76	Registration of 4D Time-Series of Cardiac Images with Multichannel Diffeomorphic Demons. Lecture Notes in Computer Science, 2008, 11, 972-979.	1.0	28
77	Group-wise construction of reduced models for understanding and characterization of pulmonary blood flows from medical images. Medical Image Analysis, 2014, 18, 63-82.	7.0	27
78	Construction of 3D MR image-based computer models of pathologic hearts, augmented with histology and optical fluorescence imaging to characterize action potential propagation. Medical Image Analysis, 2012, 16, 505-523.	7.0	26
79	Relationship Between MDCTâ€Imaged Myocardial Fat and Ventricular Tachycardia Substrate in Arrhythmogenic Right Ventricular Cardiomyopathy. Journal of the American Heart Association, 2014, 3, .	1.6	26
80	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. Annals of Thoracic Surgery, 2017, 103, 645-654.	0.7	26
81	Towards an interactive electromechanical model of the heart. Interface Focus, 2013, 3, 20120091.	1.5	24
82	Physically-Constrained Diffeomorphic Demons for the Estimation of 3D Myocardium Strain from Cine-MRI. Lecture Notes in Computer Science, 2009, , 201-210.	1.0	24
83	Three-dimensional right ventricular shape and strain in congenital heart disease patients with right ventricular chronic volume loading. European Heart Journal Cardiovascular Imaging, 2021, 22, 1174-1181.	0.5	23
84	Breaking the state of the heart: meshless model for cardiac mechanics. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1549-1561.	1.4	22
85	Automatically Segmenting the Left Atrium from Cardiac Images Using Successive 3D U-Nets and a Contour Loss. Lecture Notes in Computer Science, 2019, , 221-229.	1.0	22
86	Cardiac segmentation on late gadolinium enhancement MRI: A benchmark study from multi-sequence cardiac MR segmentation challenge. Medical Image Analysis, 2022, 81, 102528.	7.0	22
87	Automated Quantification of Right Ventricular Fat at Contrast-enhanced Cardiac Multidetector CT in Arrhythmogenic Right Ventricular Cardiomyopathy. Radiology, 2015, 275, 683-691.	3.6	20
88	Model-Based Feature Augmentation for Cardiac Ablation Target Learning From Images. IEEE Transactions on Biomedical Engineering, 2019, 66, 30-40.	2.5	20
89	Fast myocardial motion and strain estimation in 3D cardiac ultrasound with Sparse Demons. , 2013, , .		19
90	Cardiac Electrophysiological Activation Pattern Estimation From Images Using a Patient-Specific Database of Synthetic Image Sequences. IEEE Transactions on Biomedical Engineering, 2014, 61, 235-245.	2.5	19

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91	A Statistical Model of Right Ventricle in Tetralogy of Fallot for Prediction of Remodelling and Therapy Planning. Lecture Notes in Computer Science, 2009, 12, 214-221.	1.0	19
92	Interactive training system for interventional electrocardiology procedures. Medical Image Analysis, 2017, 35, 225-237.	7.0	18
93	Velocity-based cardiac contractility personalization from images using derivative-free optimization. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 43, 35-52.	1.5	17
94	Multifidelity-CMA: a multifidelity approach for efficient personalisation of 3D cardiac electromechanical models. Biomechanics and Modeling in Mechanobiology, 2018, 17, 285-300.	1.4	16
95	A Fast-Marching Approach to Cardiac Electrophysiology Simulation for XMR Interventional Imaging. Lecture Notes in Computer Science, 2005, 8, 607-615.	1.0	16
96	Progress towards an electromechanical model of the heart for cardiac image analysis. , 0, , .		13
97	In Silico Tumor Growth: Application to Glioblastomas. Lecture Notes in Computer Science, 2004, , 337-345.	1.0	13
98	Image-Based Biophysical Simulation of Intracardiac Abnormal Ventricular Electrograms. IEEE Transactions on Biomedical Engineering, 2017, 64, 1446-1454.	2.5	13
99	Atlas-Based Reduced Models of Blood Flows for Fast Patient-Specific Simulations. Lecture Notes in Computer Science, 2010, , 95-104.	1.0	13
100	An Incompressible Log-Domain Demons Algorithm for Tracking Heart Tissue. Lecture Notes in Computer Science, 2012, , 55-67.	1.0	13
101	Quantitative comparison of two cardiac electrophysiology models using personalisation to optical and MR data. , 2009, , .		12
102	Personalised Electromechanical Model of the Heart for the Prediction of the Acute Effects of Cardiac Resynchronisation Therapy. Lecture Notes in Computer Science, 2009, , 239-248.	1.0	11
103	Low-dimensional representation of cardiac motion using Barycentric Subspaces: A new group-wise paradigm for estimation, analysis, and reconstruction. Medical Image Analysis, 2018, 45, 1-12.	7.0	11
104	3D MRI of explanted sheep hearts with submillimeter isotropic spatial resolution: comparison between diffusion tensor and structure tensor imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2021, 34, 741-755.	1.1	11
105	Automatic Multi-Atlas Segmentation of Myocardium with SVF-Net. Lecture Notes in Computer Science, 2018, , 170-177.	1.0	11
106	Towards a Statistical Atlas of Cardiac Fiber Structure. Lecture Notes in Computer Science, 2006, 9, 297-304.	1.0	11
107	XMR guided cardiac electrophysiology study and radio frequency ablation. , 2004, 5369, 10.		10
108	Modeling and Registration for Electrophysiology Procedures Based on Three-Dimensional Imaging. Current Cardiovascular Imaging Reports, 2011, 4, 116-126.	0.4	10

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109	Populationâ€based priors in cardiac model personalisation for consistent parameter estimation in heterogeneous databases. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3158.	1.0	10
110	Novel atlas of fiber directions built from ex-vivo diffusion tensor images of porcine hearts. Computer Methods and Programs in Biomedicine, 2020, 187, 105200.	2.6	9
111	Deep learning formulation of electrocardiographic imaging integrating image and signal information with data-driven regularization. Europace, 2021, 23, i55-i62.	0.7	9
112	Deep Learning Formulation of ECGI for Data-Driven Integration of Spatiotemporal Correlations and Imaging Information. Lecture Notes in Computer Science, 2019, , 20-28.	1.0	9
113	A Parallel Implementation of Non-rigid Registration Using a Volumetric Biomechanical Model. Lecture Notes in Computer Science, 2003, , 398-407.	1.0	9
114	Evaluation of the use of multimodality skin markers for the registration of pre-procedure cardiac MR images and intra-procedure x-ray fluoroscopy images for image guided cardiac electrophysiology procedures. Proceedings of SPIE, 2008, , .	0.8	8
115	Towards an Identification of Tumor Growth Parameters from Time Series of Images. , 2007, 10, 549-556.		8
116	Anisotropic Wave Propagation and Apparent Conductivity Estimation in a Fast Electrophysiological Model: Application to XMR Interventional Imaging. , 2007, 10, 575-583.		8
117	Regional Analysis of Left Ventricle Function Using a Cardiac-Specific Polyaffine Motion Model. Lecture Notes in Computer Science, 2013, , 483-490.	1.0	8
118	Left atrial shape is independent predictor of arrhythmia recurrence after catheter ablation for atrial fibrillation: A shape statistics study. Heart Rhythm O2, 2021, 2, 622-632.	0.6	8
119	ECG imaging of ventricular tachycardia: evaluation against simultaneous non-contact mapping and CMR-derived grey zone. Medical and Biological Engineering and Computing, 2017, 55, 979-990.	1.6	7
120	Preliminary Validation Using in vivo Measures of a Macroscopic Electrical Model of the Heart. Lecture Notes in Computer Science, 2003, , 230-243.	1.0	7
121	Virtual Pulmonary Valve Replacement Interventions with a Personalised Cardiac Electromechanical Model. , 2009, , 75-90.		7
122	Combination of Polyaffine Transformations and Supervised Learning for the Automatic Diagnosis of LV Infarct. Lecture Notes in Computer Science, 2016, , 190-198.	1.0	7
123	Smoothed Particle Hydrodynamics for Electrophysiological Modeling: An Alternative to Finite Element Methods. Lecture Notes in Computer Science, 2017, , 333-343.	1.0	7
124	vtkINRIA3D: A VTK Extension for Spatiotemporal Data Synchronization, Visualization and Management. The Insight Journal, 2007, , .	0.2	7
125	Cardiac Motion Recovery by Coupling an Electromechanical Model and Cine-MRI Data: First Steps. , 2008, , .		7
126	Generation of ultra-realistic synthetic echocardiographic sequences to facilitate standardization of deformation imaging. , 2015, , .		6

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127	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
128	Biomechanical Model Construction from Different Modalities: Application to Cardiac Images. Lecture Notes in Computer Science, 2002, , 714-721.	1.0	6
129	Simulation of the Electromechanical Activity of the Heart Using XMR Interventional Imaging. Lecture Notes in Computer Science, 2004, , 786-794.	1.0	6
130	Statistical Comparison of Cardiac Fibre Architectures. , 2007, , 413-423.		6
131	Coupled Personalisation of Electrophysiology Models for Simulation of Induced Ischemic Ventricular Tachycardia. Lecture Notes in Computer Science, 2010, 13, 420-428.	1.0	6
132	Strain-Based Regional Nonlinear Cardiac Material Properties Estimation from Medical Images. Lecture Notes in Computer Science, 2012, 15, 617-624.	1.0	6
133	Localization of Abnormal Conduction Pathways for Tachyarrhythmia Treatment Using TaggedÂMRI. Lecture Notes in Computer Science, 2005, 8, 425-433.	1.0	6
134	Cardiac Electrophysiology Model Adjustment Using the Fusion of MR and Optical Imaging. Lecture Notes in Computer Science, 2008, 11, 678-685.	1.0	6
135	LogDemons Revisited: Consistent Regularisation and Incompressibility Constraint for Soft Tissue Tracking in Medical Images. Lecture Notes in Computer Science, 2010, 13, 652-659.	1.0	6
136	Clinical applications of image fusion for electrophysiology procedures. , 2012, , .		5
137	Improved Myocardial Motion Estimation Combining Tissue Doppler and B-Mode Echocardiographic Images. IEEE Transactions on Medical Imaging, 2014, 33, 2098-2106.	5.4	5
138	CMR-based 3D statistical shape modelling reveals left ventricular morphological differences between healthy controls and arterial switch operation survivors. Journal of Cardiovascular Magnetic Resonance, 2016, 18, Q2.	1.6	5
139	EP-Net 2.0: Out-of-Domain Generalisation for Deep Learning Models of Cardiac Electrophysiology. Lecture Notes in Computer Science, 2021, , 482-492.	1.0	5
140	Biophysics-based statistical learning: Application to heart and brain interactions. Medical Image Analysis, 2021, 72, 102089.	7.0	5
141	Personalized Computational Models of the Heart for Cardiac Resynchronization Therapy. , 2010, , 167-182.		5
142	Propagation of Myocardial Fibre Architecture Uncertainty on Electromechanical Model Parameter Estimation: A Case Study. Lecture Notes in Computer Science, 2015, , 448-456.	1.0	5
143	Sparse Bayesian Non-linear Regression for Multiple Onsets Estimation in Non-invasive Cardiac Electrophysiology. Lecture Notes in Computer Science, 2017, , 230-238.	1.0	5
144	Cardiac Mechanical Parameter Calibration Based on the Unscented Transform. Lecture Notes in Computer Science, 2012, 15, 41-48.	1.0	5

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145	Spatio-temporal Dimension Reduction of Cardiac Motion for Group-Wise Analysis and Statistical Testing. Lecture Notes in Computer Science, 2013, 16, 501-508.	1.0	5
146	Interactive Training System for Interventional Electrocardiology Procedures. Lecture Notes in Computer Science, 2014, , 11-19.	1.0	5
147	Estimation of volumetric myocardial apparent conductivity from endocardial electro-anatomical mapping. , 2009, 2009, 2907-10.		4
148	Voxel Based Adaptive Meshless Method for Cardiac Electrophysiology Simulation. Lecture Notes in Computer Science, 2009, , 182-190.	1.0	4
149	Cardiac Motion Evolution Model for Analysis of Functional Changes Using Tensor Decomposition and Cross-Sectional Data. IEEE Transactions on Biomedical Engineering, 2018, 65, 2769-2780.	2.5	4
150	Fully Automated Electrophysiological Model Personalisation Framework from CT Imaging. Lecture Notes in Computer Science, 2019, , 325-333.	1.0	4
151	EP-Net: Learning Cardiac Electrophysiology Models for Physiology-Based Constraints in Data-Driven Predictions. Lecture Notes in Computer Science, 2019, , 55-63.	1.0	4
152	Computational and Physical Phantom Setups for the Second Cardiac Motion Analysis Challenge (cMAC2). Lecture Notes in Computer Science, 2013, , 125-133.	1.0	4
153	Non-invasive Activation Times Estimation Using 3D Echocardiography. Lecture Notes in Computer Science, 2010, , 212-221.	1.0	4
154	Detecting the onset of myocardial contraction for establishing inverse electro-mechanical coupling in XMR guided RF ablation. , 0, , .		3
155	Statistical Atlases and Computational Models of the Heart. Imaging and Modelling Challenges. Lecture Notes in Computer Science, 2012, , .	1.0	3
156	Elastic registration vs. block matching for quantification of cardiac function with 3D ultrasound: Initial results of a direct comparison in silico based on a new evaluation pipeline. , 2014, , .		3
157	Right Ventricular Function Evolution With Pregnancy in Repaired Tetralogy of Fallot. Canadian Journal of Cardiology, 2018, 34, 1369.e9-1369.e11.	0.8	3
158	Large Scale Cardiovascular Model Personalisation for Mechanistic Analysis of Heart and Brain Interactions. Lecture Notes in Computer Science, 2019, , 285-293.	1.0	3
159	Shape Constraints in Deep Learning for Robust 2D Echocardiography Analysis. Lecture Notes in Computer Science, 2021, , 22-34.	1.0	3
160	Scar-Related Ventricular Arrhythmia Prediction from Imaging Using Explainable Deep Learning. Lecture Notes in Computer Science, 2021, , 461-470.	1.0	3
161	Cardiac Motion Modeling With Parallel Transport And Shape Splines. , 2021, , .		3
162	Automatic Multiplanar CT Reformatting from Trans-Axial into Left Ventricle Short-Axis View. Lecture Notes in Computer Science, 2021, , 14-22.	1.0	3

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163	Parallel Transport of Surface Deformations from Pole Ladder to Symmetrical Extension. Lecture Notes in Computer Science, 2018, , 116-124.	1.0	3
164	Symmetric Algorithmic Components for Shape Analysis with Diffeomorphisms. Lecture Notes in Computer Science, 2019, , 759-768.	1.0	3
165	Descriptive and Intuitive Population-Based Cardiac Motion Analysis via Sparsity Constrained Tensor Decomposition. Lecture Notes in Computer Science, 2015, , 419-426.	1.0	3
166	Estimation of Purkinje Activation from ECG: An Intermittent Left Bundle Branch Block Study. Lecture Notes in Computer Science, 2017, , 135-142.	1.0	3
167	Cardiac Motion Estimation Using a ProActive Deformable Model: Evaluation and Sensitivity Analysis. Lecture Notes in Computer Science, 2010, , 154-163.	1.0	3
168	Statistical Shape Analysis of Surfaces in Medical Images Applied to the Tetralogy of Fallot Heart. , 2013, , 165-191.		3
169	A Near-Incompressible Poly-affine Motion Model for Cardiac Function Analysis. Lecture Notes in Computer Science, 2013, , 288-297.	1.0	3
170	A Multiscale Cardiac Model for Fast Personalisation and Exploitation. Lecture Notes in Computer Science, 2016, , 174-182.	1.0	3
171	Prediction of Infarct Localization from Myocardial Deformation. Lecture Notes in Computer Science, 2016, , 51-59.	1.0	3
172	Meshless Electrophysiological Modeling of Cardiac Resynchronization Therapyâ€"Benchmark Analysis with Finite-Element Methods in Experimental Data. Applied Sciences (Switzerland), 2022, 12, 6438.	1.3	3
173	Simultaneous non-contact mapping fused with CMR derived grey zone to explore the relationship with ventricular tachycardia substrate in ischaemic cardiomyopathy. Journal of Cardiovascular Magnetic Resonance, 2013, 15, .	1.6	2
174	Estimation of the Spatial Resolution of a 2D Strain Estimator Using Synthetic Cardiac Images. , 2018, , .		2
175	Direction-Dependent Decomposition of Three-Dimensional Right Ventricular Motion: Beware of Approximations. Journal of the American Society of Echocardiography, 2021, 34, 201-203.	1.2	2
176	VT Scan: Towards an Efficient Pipeline from Computed Tomography Images to Ventricular Tachycardia Ablation. Lecture Notes in Computer Science, 2017, , 271-279.	1.0	2
177	Multilevel Non-parametric Groupwise Registration in Cardiac MRI: Application to Explanted Porcine Hearts. Lecture Notes in Computer Science, 2018, , 60-69.	1.0	2
178	An Experimental Framework to Validate 3D Models of Cardiac Electrophysiology Via Optical Imaging and MRI. , 2007, , 100-109.		2
179	Characterization of Post-infarct Scars in a Porcine Model â€“ A Combined Experimental and Theoretical Study. Lecture Notes in Computer Science, 2009, , 1-10.	1.0	2
180	Estimation of Reaction, Diffusion and Restitution Parameters for a 3D Myocardial Model Using Optical Mapping and MRI. Lecture Notes in Computer Science, 2010, , 270-280.	1.0	2

#	Article	IF	Citations
181	Synthetic Echocardiographic Image Sequences for Cardiac Inverse Electro-Kinematic Learning. Lecture Notes in Computer Science, 2011, 14, 500-507.	1.0	2
182	Value of 3D right ventricular function over 2D assessment in acute pulmonary embolism. Echocardiography, 2021, 38, 1694-1701.	0.3	2
183	Detecting and Comparing the Onset of Myocardial Activation and Regional Motion Changes in Tagged MR for XMR-Guided RF Ablation. Lecture Notes in Computer Science, 2005, , 348-358.	1.0	2
184	Le cÅ“ur numÃ©rique personnalisÃ©. Bulletin De L'Academie Nationale De Medecine, 2011, 195, 1855-1867.	0.0	2
185	In vivo Contact EP Data and ex vivo MR-Based Computer Models: Registration and Model-Dependent Errors. Lecture Notes in Computer Science, 2013, , 364-374.	1.0	2
186	Confidence-Based Training for Clinical Data Uncertainty in Image-Based Prediction of Cardiac Ablation Targets. Lecture Notes in Computer Science, 2014, , 148-159.	1.0	2
187	Barycentric Subspace Analysis: A New Symmetric Group-Wise Paradigm for Cardiac Motion Tracking. Lecture Notes in Computer Science, 2016, , 300-307.	1.0	2
188	Cardiac computational modeling of ventricular tachycardia and cardiac resynchronization therapy: a clinical perspective. Minerva Cardiology and Angiology, 2017, 65, 380-397.	0.4	2
189	MUSIC: Cardiac Imaging, Modelling and Visualisation Software for Diagnosis and Therapy. Applied Sciences (Switzerland), 2022, 12, 6145.	1.3	2
190	Estimating Local Apparent Conductivity with a 2-D Electrophysiological Model of the Heart. Lecture Notes in Computer Science, 2005, , 256-266.	1.0	1
191	A Theoretical Model of Ventricular Reentry and its Radiofrequency Ablation Therapy. , 0, , .		1
192	Highly reduced model of the cardiac function for fast simulation. , 2016, , .		1
193	Generation of Realistic 4D Synthetic CSPAMM Tagged MR Sequences for Benchmarking Cardiac Motion Tracking Algorithms. Lecture Notes in Computer Science, 2016, , 108-117.	1.0	1
194	Personal-by-Design: A 3D Electromechanical Model of the Heart Tailored for Personalisation. Lecture Notes in Computer Science, 2021, , 447-457.	1.0	1
195	Novel Framework to Integrate Real-Time MR-Guided EP Data with T1 Mapping-Based Computational Heart Models. Lecture Notes in Computer Science, 2017, , 11-20.	1.0	1
196	Prediction of Post-Ablation Outcome in Atrial Fibrillation Using Shape Parameterization and Partial Least Squares Regression. Lecture Notes in Computer Science, 2017, , 311-321.	1.0	1
197	Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. , 0, .		1
198	Constructing an average geometry and diffusion tensor magnetic resonance field from freshly explanted porcine hearts. , 2019, , .		1

#	Article	IF	Citations
199	Personalisation of a 3D Ventricular Electrophysiological Model, Using Endocardial and Epicardial Contact Mapping and MRI. Lecture Notes in Computer Science, 2012, , 14-22.	1.0	1
200	EP Challenge - STACOMâ€™11: Forward Approaches to Computational Electrophysiology Using MRI-Based Models and In-Vivo CARTO Mapping in Swine Hearts. Lecture Notes in Computer Science, 2012, , 1-13.	1.0	1
201	Progress on Customization of Predictive MRI-Based Macroscopic Models from Experimental Data. Lecture Notes in Computer Science, 2014, , 152-161.	1.0	1
202	Improving Understanding of Long-Term Cardiac Functional Remodelling via Cross-Sectional Analysis of Polyaffine Motion Parameters. Lecture Notes in Computer Science, 2017, , 51-59.	1.0	1
203	STACOM-SLAWT Challenge: Left Atrial Wall Segmentation and Thickness Measurement Using Region Growing and Marker-Controlled Geodesic Active Contour. Lecture Notes in Computer Science, 2017, , 211-219.	1.0	1
204	Pipeline to Build and Test Robust 3D T1 Mapping-Based Heart Models for EP Interventions: Preliminary Results. Lecture Notes in Computer Science, 2019, , 64-72.	1.0	1
205	Towards Hyper-Reduction of Cardiac Models Using Poly-affine Transformations. Lecture Notes in Computer Science, 2020, , 100-108.	1.0	1
206	Biocomputing: Is There Useful to Compute Radiotherapy Margin. International Journal of Radiation Oncology Biology Physics, 2005, 63, S271-S272.	0.4	0
207	CARDIOSENSE3D : PATIENT-SPECIFIC CARDIAC SIMULATION. , 2007, , .		0
208	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
209	Integration of different cardiac electrophysiological models into a single simulation pipeline. , 2012, , .		0
210	The role of the image phase in cardiac strain imaging. , 2015, , .		0
211	Local late gadolinium enhancement features to identify the electrophysiological substrate of post-infarction ventricular tachycardia: a machine learning approach. Journal of Cardiovascular Magnetic Resonance, 2015, 17, P234.	1.6	0
212	Novel T1 Mapping-Based Preclinical Models for Cardiac Electrophysiology: A Combined Experimental and Theoretical Study. Biophysical Journal, 2018, 114, 472a.	0.2	0
213	Estimation of Imaging Biomarkerâ€™s Progression in Post-infarct Patients Using Cross-sectional Data. Lecture Notes in Computer Science, 2021, , 108-116.	1.0	0
214	Velocity-Based Cardiac Contractility Personalization with Derivative-Free Optimization. Lecture Notes in Computer Science, 2014, , 228-235.	1.0	0
215	Evaluation of Personalised Canine Electromechanical Models. Lecture Notes in Computer Science, 2015, , 74-82.	1.0	0
216	Longitudinal Parameter Estimation in 3D Electromechanical Models: Application to Cardiovascular Changes in Digestion. Lecture Notes in Computer Science, 2017, , 432-440.	1.0	0

#	Article	IF	Citations
217	Phase-Based Registration of Cardiac Tagged MR Images by Incorporating Anatomical Constraints. Lecture Notes in Computer Science, 2017, , 39-47.	1.0	0
218	Non-invasive Pressure Estimation in Patients with Pulmonary Arterial Hypertension: Data-Driven or Model-Based?. Lecture Notes in Computer Science, 2020, , 147-156.	1.0	0
219	End-to-end Cardiac Ultrasound Simulation for a Better Understanding ofÂImage Quality. Lecture Notes in Computer Science, 2020, , 167-175.	1.0	0
220	Joint Data Imputation and Mechanistic Modelling for Simulating Heart-Brain Interactions in Incomplete Datasets. Lecture Notes in Computer Science, 2020, , 478-486.	1.0	0
221	CA-533-01 MULTIMODALITY PLANNING OF STEREOTACTIC RADIO-ABLATION FOR VENTRICULAR TACHYCARDIA: RESULTS FROM THE INTERNATIONAL MUSIC CONSORTIUM. Heart Rhythm, 2022, 19, S57-S58.	0.3	0