Nicolas Duchateau

List of Publications by Year
in descending order

60 papers	1,507 citations	430874 18 h-index	330143 37 g-index
62 all docs	62 docs citations	62 times ranked	2056 citing authors

#	Article	IF	Citations
1	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.	1.2	23
2	Direction-Dependent Decomposition of Three-Dimensional Right Ventricular Motion: Beware of Approximations. Journal of the American Society of Echocardiography, 2021, 34, 201-203.	2.8	2
3	Right ventricular area strain from 3-dimensional echocardiography: Mechanistic insight of right ventricular dysfunction in pediatric pulmonary hypertension. Journal of Heart and Lung Transplantation, 2021, 40, 138-148.	0.6	13
4	Investigation of the Impact of Normalization on the Study of Interactions Between Myocardial Shape and Deformation. Lecture Notes in Computer Science, 2021, , 223-231.	1.3	0
5	Population-Based Personalization of Geometric Models of Myocardial Infarction. Lecture Notes in Computer Science, 2021, , 3-11.	1.3	1
6	Value of 3D right ventricular function over 2D assessment in acute pulmonary embolism. Echocardiography, 2021, 38, 1694-1701.	0.9	2
7	Variability in the Assessment of Myocardial Strain Patterns: Implications for Adequate Interpretation. Ultrasound in Medicine and Biology, 2020, 46, 244-254.	1.5	4
8	Proposed Requirements for Cardiovascular Imaging-Related Machine Learning Evaluation (PRIME): A Checklist. JACC: Cardiovascular Imaging, 2020, 13, 2017-2035.	5.3	123
9	Learning Interactions Between Cardiac Shape and Deformation: Application to Pulmonary Hypertension. Lecture Notes in Computer Science, 2020, , 119-127.	1.3	1
10	Domain Adaptation via Dimensionality Reduction for the Comparison of Cardiac Simulation Models. Lecture Notes in Computer Science, 2019, , 276-284.	1.3	0
11	THREE DIMENSIONAL RIGHT VENTRICULAR STRAIN IN PEDIATRIC PULMONARY HYPERTENSION. Journal of the American College of Cardiology, 2019, 73, 1910.	2.8	1
12	Machine learningâ€based phenogrouping in heart failure to identify responders to cardiac resynchronization therapy. European Journal of Heart Failure, 2019, 21, 74-85.	7.1	175
13	Machine Learning Approaches for Myocardial Motion and Deformation Analysis. Frontiers in Cardiovascular Medicine, 2019, 6, 190.	2.4	14
14	Left Ventricular Shape and Motion Reconstruction Through a Healthy Model for Characterizing Remodeling After Infarction. Lecture Notes in Computer Science, 2019, , 159-167.	1.3	0
15	Machine Learning Analysis of Left Ventricular Function to Characterize Heart Failure With Preserved Ejection Fraction. Circulation: Cardiovascular Imaging, 2018, 11, e007138.	2.6	95
16	3-D Consistent and Robust Segmentation of Cardiac Images by Deep Learning With Spatial Propagation. IEEE Transactions on Medical Imaging, 2018, 37, 2137-2148.	8.9	138
17	Statistical Shape Modeling of the Left Ventricle: Myocardial Infarct Classification Challenge. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 503-515.	6.3	61
18	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.	8.9	34

#	Article	IF	Citations
19	Three-dimensional right-ventricular regional deformation and survival in pulmonary hypertension. European Heart Journal Cardiovascular Imaging, 2018, 19, 450-458.	1.2	62
20	Right Ventricular Function Evolution With Pregnancy in Repaired Tetralogy of Fallot. Canadian Journal of Cardiology, 2018, 34, 1369.e9-1369.e11.	1.7	3
21	Parallel Transport of Surface Deformations from Pole Ladder to Symmetrical Extension. Lecture Notes in Computer Science, 2018, , 116-124.	1.3	3
22	Characterization of myocardial motion patterns by unsupervised multiple kernel learning. Medical Image Analysis, 2017, 35, 70-82.	11.6	49
23	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.	3.7	11
24	Segmentation and Registration Coupling from Short-Axis Cine MRI: Application to Infarct Diagnosis. Lecture Notes in Computer Science, 2017, , 48-56.	1.3	1
25	Strain-Based Parameters for Infarct Localization: Evaluation via a Learning Algorithm on a Synthetic Database of Pathological Hearts. Lecture Notes in Computer Science, 2017, , 106-114.	1.3	2
26	Differential atrial performance at rest and exercise in athletes: Potential trigger for developing atrial dysfunction?. Scandinavian Journal of Medicine and Science in Sports, 2016, 26, 1444-1454.	2.9	30
27	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.	8.9	28
28	Dyssynchronization reduces dynamic obstruction without affecting systolic function in patients with hypertrophic obstructive cardiomyopathy: a pilot study. International Journal of Cardiovascular Imaging, 2016, 32, 1179-1188.	1.5	7
29	Automatic Model Generation Framework for Computational Simulation of Cochlear Implantation. Annals of Biomedical Engineering, 2016, 44, 2453-2463.	2.5	12
30	Prediction of Infarct Localization from Myocardial Deformation. Lecture Notes in Computer Science, 2016, , 51-59.	1.3	3
31	Interatrial Dyssynchrony May Contribute to Heart Failure Symptoms in Patients with Preserved Ejection Fraction. Echocardiography, 2015, 32, 1655-1661.	0.9	7
32	Left atrial dysfunction relates to symptom onset in patients with heart failure and preserved left ventricular ejection fraction. European Heart Journal Cardiovascular Imaging, 2015, 16, 62-67.	1.2	84
33	Quantification of local changes in myocardial motion by diffeomorphic registration via currents: Application to paced hypertrophic obstructive cardiomyopathy in 2D echocardiographic sequences. Medical Image Analysis, 2015, 19, 203-219.	11.6	5
34	Atrial functional and geometrical remodeling in highly trained male athletes: for better or worse?. European Journal of Applied Physiology, 2014, 114, 1143-1152.	2.5	41
35	Myocardial motion and deformation patterns in an experimental swine model of acute LBBB/CRT and chronic infarct. International Journal of Cardiovascular Imaging, 2014, 30, 875-887.	1.5	12
36	Improved Myocardial Motion Estimation Combining Tissue Doppler and B-Mode Echocardiographic Images. IEEE Transactions on Medical Imaging, 2014, 33, 2098-2106.	8.9	5

#	Article	IF	Citations
37	Image-Based Estimation of Myocardial Acceleration Using TDFFD: A Phantom Study. Lecture Notes in Computer Science, 2014, , 262-270.	1.3	1
38	Model generation of coronary artery bifurcations from CTA and single plane angiography. Medical Physics, 2013, 40, 013701.	3.0	5
39	Development of a Swine Model of Left Bundle Branch Block for Experimental Studies of Cardiac Resynchronization Therapy. Journal of Cardiovascular Translational Research, 2013, 6, 616-622.	2.4	18
40	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.	2.8	30
41	A High-Resolution Atlas and Statistical Model of the Human Heart From Multislice CT. IEEE Transactions on Medical Imaging, 2013, 32, 28-44.	8.9	75
42	Image based cardiac acceleration map using statistical shape and 3D+t myocardial tracking models; in-vitro study on heart phantom. Proceedings of SPIE, 2013, , .	0.8	0
43	Temporal Diffeomorphic Free Form Deformation to Quantify Changes Induced by Left and Right Bundle Branch Block and Pacing. Lecture Notes in Computer Science, 2013, , 134-141.	1.3	4
44	Manifold Learning Characterization of Abnormal Myocardial Motion Patterns: Application to CRT-Induced Changes. Lecture Notes in Computer Science, 2013, , 450-457.	1.3	1
45	Adaptation of Multiscale Function Extension to Inexact Matching: Application to the Mapping of Individuals to a Learnt Manifold. Lecture Notes in Computer Science, 2013, , 578-586.	1.3	6
46	Myocardial Motion Estimation Combining Tissue Doppler and B-mode Echocardiographic Images. Lecture Notes in Computer Science, 2013, 16, 484-491.	1.3	2
47	Temporal Diffeomorphic Free Form Deformation (TDFFD) Applied to Motion and Deformation Quantification of Tagged MRI Sequences. Lecture Notes in Computer Science, 2012, , 68-77.	1.3	12
48	Atlas-Based Quantification of Myocardial Motion Abnormalities: Added-Value for Understanding the Effect of Cardiac Resynchronization Therapy. Ultrasound in Medicine and Biology, 2012, 38, 2186-2197.	1.5	8
49	Constrained manifold learning for the characterization of pathological deviations from normality. Medical Image Analysis, 2012, 16, 1532-1549.	11.6	33
50	Temporal diffeomorphic free-form deformation: Application to motion and strain estimation from 3D echocardiography. Medical Image Analysis, 2012, 16, 427-450.	11.6	123
51	Which Reorientation Framework for the Atlas-Based Comparison of Motion from Cardiac Image Sequences?. Lecture Notes in Computer Science, 2012, , 25-37.	1.3	7
52	A spatiotemporal statistical atlas of motion for the quantification of abnormal myocardial tissue velocities. Medical Image Analysis, 2011, 15, 316-328.	11.6	68
53	Characterizing Pathological Deviations from Normality Using Constrained Manifold-Learning. Lecture Notes in Computer Science, 2011, 14, 256-263.	1.3	4
54	A groupwise mutual information metric for cost efficient selection of a suitable reference in cardiac computational atlas construction. , 2010, , .		6

#	Article	IF	Citations
55	Temporal Diffeomorphic Free-Form Deformation for Strain Quantification in 3D-US Images. Lecture Notes in Computer Science, 2010, 13, 1-8.	1.3	16
56	Atlas Construction and Image Analysis Using Statistical Cardiac Models. Lecture Notes in Computer Science, 2010, , 1-13.	1.3	0
57	Atlas-Based Quantification of Myocardial Motion Abnormalities: Added-value for the Understanding of CRT Outcome?. Lecture Notes in Computer Science, 2010, , 65-74.	1.3	0
58	Septal Flash Assessment on CRT Candidates Based on Statistical Atlases of Motion. Lecture Notes in Computer Science, 2009, 12, 759-766.	1.3	6
59	Optimization of beam parameters and iodine quantification in dual-energy contrast enhanced digital breast tomosynthesis. , 2008, , .		12
60	Assessment of laser-dazzling effects on TV-cameras by means of pattern recognition algorithms. Proceedings of SPIE, 2007, 6738, 155.	0.8	17