Wenjia Bai

List of Publications by Year
in descending order

104 papers	5,988 citations	94433 37 h-index	79698 73 g-index
113 all docs	113 docs citations	113 times ranked	6492 citing authors

#	Article	IF	Citations
1	Anatomically Constrained Neural Networks (ACNNs): Application to Cardiac Image Enhancement and Segmentation. IEEE Transactions on Medical Imaging, 2018, 37, 384-395.	8.9	493
2	Automated cardiovascular magnetic resonance image analysis with fully convolutional networks. Journal of Cardiovascular Magnetic Resonance, 2018, 20, 65.	3.3	468
3	Deep Learning for Cardiac Image Segmentation: A Review. Frontiers in Cardiovascular Medicine, 2020, 7, 25.	2.4	467
4	DeepCut: Object Segmentation From Bounding Box Annotations Using Convolutional Neural Networks. IEEE Transactions on Medical Imaging, 2017, 36, 674-683.	8.9	260
5	Semi-supervised Learning for Network-Based Cardiac MR Image Segmentation. Lecture Notes in Computer Science, 2017, , 253-260.	1.3	209
6	Right ventricle segmentation from cardiac MRI: A collation study. Medical Image Analysis, 2015, 19, 187-202.	11.6	189
7	A Probabilistic Patch-Based Label Fusion Model for Multi-Atlas Segmentation With Registration Refinement: Application to Cardiac MR Images. IEEE Transactions on Medical Imaging, 2013, 32, 1302-1315.	8.9	174
8	Automatic 3D Bi-Ventricular Segmentation of Cardiac Images by a Shape-Refined Multi- Task Deep Learning Approach. IEEE Transactions on Medical Imaging, 2019, 38, 2151-2164.	8.9	155
9	Shared genetic pathways contribute to risk of hypertrophic and dilated cardiomyopathies with opposite directions of effect. Nature Genetics, 2021, 53, 128-134.	21.4	155
10	Cardiac Image Super-Resolution with Global Correspondence Using Multi-Atlas PatchMatch. Lecture Notes in Computer Science, 2013, 16, 9-16.	1.3	150
11	A global benchmark of algorithms for segmenting the left atrium from late gadolinium-enhanced cardiac magnetic resonance imaging. Medical Image Analysis, 2021, 67, 101832.	11.6	150
12	Multi-atlas segmentation with augmented features for cardiac MR images. Medical Image Analysis, 2015, 19, 98-109.	11.6	137
13	Evaluation of current algorithms for segmentation of scar tissue from late Gadolinium enhancement cardiovascular magnetic resonance of the left atrium: an open-access grand challenge. Journal of Cardiovascular Magnetic Resonance, 2013, 15, 105.	3.3	136
14	Automated analysis of atrial late gadolinium enhancement imaging that correlates with endocardial voltage and clinical outcomes: A 2-center study. Heart Rhythm, 2013, 10, 1184-1191.	0.7	120
15	A bi-ventricular cardiac atlas built from 1000+ high resolution MR images of healthy subjects and an analysis of shape and motion. Medical Image Analysis, 2015, 26, 133-145.	11.6	119
16	Multi-input Cardiac Image Super-Resolution Using Convolutional Neural Networks. Lecture Notes in Computer Science, 2016, , 246-254.	1.3	119
17	Fully Automated, Quality-Controlled Cardiac Analysis From CMR. JACC: Cardiovascular Imaging, 2020, 13, 684-695.	5.3	113
18	A population-based phenome-wide association study of cardiac and aortic structure and function. Nature Medicine, 2020, 26, 1654-1662.	30.7	98

#	Article	IF	Citations
19	Clinical quantitative cardiac imaging for the assessment of myocardial ischaemia. Nature Reviews Cardiology, 2020, 17, 427-450.	13.7	94
20	Genetic and functional insights into the fractal structure of the heart. Nature, 2020, 584, 589-594.	27.8	86
21	Reverse Classification Accuracy: Predicting Segmentation Performance in the Absence of Ground Truth. IEEE Transactions on Medical Imaging, 2017, 36, 1597-1606.	8.9	85
22	Automated quality control in image segmentation: application to the UK Biobank cardiovascular magnetic resonance imaging study. Journal of Cardiovascular Magnetic Resonance, 2019, 21, 18.	3.3	78
23	Self-Supervised Learning for Cardiac MR Image Segmentation by Anatomical Position Prediction. Lecture Notes in Computer Science, 2019, , 541-549.	1.3	78
24	A Multicenter, Scan-Rescan, Human and Machine Learning CMR Study to Test Generalizability and Precision in Imaging Biomarker Analysis. Circulation: Cardiovascular Imaging, 2019, 12, e009214.	2.6	75
25	Joint Learning of Motion Estimation and Segmentation for Cardiac MR Image Sequences. Lecture Notes in Computer Science, 2018, , 472-480.	1.3	74
26	Improving the Generalizability of Convolutional Neural Network-Based Segmentation on CMR Images. Frontiers in Cardiovascular Medicine, 2020, 7, 105.	2.4	74
27	Regularized B-spline deformable registration for respiratory motion correction in PET images. Physics in Medicine and Biology, 2009, 54, 2719-2736.	3.0	72
28	Recurrent Neural Networks for Aortic Image Sequence Segmentation with Sparse Annotations. Lecture Notes in Computer Science, 2018, , 586-594.	1.3	69
29	Multiatlas whole heart segmentation of CT data using conditional entropy for atlas ranking and selection. Medical Physics, 2015, 42, 3822-3833.	3.0	66
30	Motion Correction and Attenuation Correction for Respiratory Gated PET Images. IEEE Transactions on Medical Imaging, 2011, 30, 351-365.	8.9	65
31	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
32	Stratified Decision Forests for Accurate Anatomical Landmark Localization in Cardiac Images. IEEE Transactions on Medical Imaging, 2017, 36, 332-342.	8.9	56
33	Phenotypic Expression and Outcomes in Individuals With Rare Genetic Variants of Hypertrophic Cardiomyopathy. Journal of the American College of Cardiology, 2021, 78, 1097-1110.	2.8	55
34	Temporal sparse free-form deformations. Medical Image Analysis, 2013, 17, 779-789.	11.6	50
35	Abnormal brain white matter microstructure is associated with both pre-hypertension and hypertension. PLoS ONE, 2017, 12, e0187600.	2.5	47
36	Independent Left Ventricular Morphometric Atlases Show Consistent Relationships with Cardiovascular Risk Factors: A UK Biobank Study. Scientific Reports, 2019, 9, 1130.	3.3	43

#	Article	IF	Citations
37	Associations of Regional Brain Structural Differences With Aging, Modifiable Risk Factors for Dementia, and Cognitive Performance. JAMA Network Open, 2019, 2, e1917257.	5.9	42
38	Learning-Based Quality Control for Cardiac MR Images. IEEE Transactions on Medical Imaging, 2019, 38, 1127-1138.	8.9	42
39	VS-Net: Variable Splitting Network for Accelerated Parallel MRI Reconstruction. Lecture Notes in Computer Science, 2019, , 713-722.	1.3	42
40	Ventricular remodeling in preterm infants: computational cardiac magnetic resonance atlasing shows significant early remodeling of the left ventricle. Pediatric Research, 2019, 85, 807-815.	2.3	41
41	Voltage during atrial fibrillation is superior to voltage during sinus rhythm in localizing areas of delayed enhancement on magnetic resonance imaging: An assessment of the posterior left atrium in patients with persistent atrial fibrillation. Heart Rhythm, 2019, 16, 1357-1367.	0.7	40
42	Automated Detection of Motion Artefacts in MR Imaging Using Decision Forests. Journal of Medical Engineering, 2017, 2017, 1-9.	1.1	38
43	A framework for combining a motion atlas with non-motion information to learn clinically useful biomarkers: Application to cardiac resynchronisation therapy response prediction. Medical Image Analysis, 2017, 35, 669-684.	11.6	35
44	Learning Interpretable Anatomical Features Through Deep Generative Models: Application to Cardiac Remodeling. Lecture Notes in Computer Science, 2018, , 464-471.	1.3	35
45	Three-dimensional cardiovascular imaging-genetics: a mass univariate framework. Bioinformatics, 2018, 34, 97-103.	4.1	34
46	Explainable Anatomical Shape Analysis Through Deep Hierarchical Generative Models. IEEE Transactions on Medical Imaging, 2020, 39, 2088-2099.	8.9	34
47	Automatic dendritic spine analysis in twoâ€photon laser scanning microscopy images. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2007, 71A, 818-826.	1.5	33
48	Unsupervised Multi-modal Style Transfer for Cardiac MR Segmentation. Lecture Notes in Computer Science, 2020, , 209-219.	1.3	33
49	Realistic Adversarial Data Augmentation for MR Image Segmentation. Lecture Notes in Computer Science, 2020, , 667-677.	1.3	32
50	Precision measurement of cardiac structure and function in cardiovascular magnetic resonance using machine learning. Journal of Cardiovascular Magnetic Resonance, 2022, 24, 16.	3.3	30
51	Learning Shape Priors for Robust Cardiac MR Segmentation from Multi-view Images. Lecture Notes in Computer Science, 2019, , 523-531.	1.3	28
52	Automatic View Planning with Multi-scale Deep Reinforcement Learning Agents. Lecture Notes in Computer Science, 2018, , 277-285.	1.3	27
53	Fibrosis Microstructure Modulates Reentry in Non-ischemic Dilated Cardiomyopathy: Insights From Imaged Guided 2D Computational Modeling. Frontiers in Physiology, 2018, 9, 1832.	2.8	25
54	Real-Time Prediction of Segmentation Quality. Lecture Notes in Computer Science, 2018, , 578-585.	1.3	23

#	Article	IF	Citations
55	Bayesian Deep Learning for Accelerated MR Image Reconstruction. Lecture Notes in Computer Science, 2018, , 64-71.	1.3	22
56	Large-scale Quality Control of Cardiac Imaging in Population Studies: Application to UK Biobank. Scientific Reports, 2020, 10, 2408.	3.3	22
57	Registration Using Sparse Free-Form Deformations. Lecture Notes in Computer Science, 2012, 15, 659-666.	1.3	20
58	Fully automated myocardial strain estimation from cine MRI using convolutional neural networks. , 2018, , .		19
59	Multi-task Learning for Left Atrial Segmentation on GE-MRI. Lecture Notes in Computer Science, 2019, , 292-301.	1.3	19
60	Deep Nested Level Sets: Fully Automated Segmentation of Cardiac MR Images in Patients with Pulmonary Hypertension. Lecture Notes in Computer Science, 2018, , 595-603.	1.3	17
61	Alcohol consumption in the general population is associated with structural changes in multiple organ systems. ELife, 2021, 10, .	6.0	16
62	Fully Automated Segmentation-Based Respiratory Motion Correction of Multiplanar Cardiac Magnetic Resonance Images for Large-Scale Datasets. Lecture Notes in Computer Science, 2017, , 332-340.	1.3	16
63	Cardiac MR Segmentation from Undersampled k-space Using Deep Latent Representation Learning. Lecture Notes in Computer Science, 2018, , 259-267.	1.3	15
64	Joint Motion Estimation and Segmentation from Undersampled Cardiac MR Image. Lecture Notes in Computer Science, 2018, , 55-63.	1.3	14
65	Data-Driven Microscopic Pose and Depth Estimation for Optical Microrobot Manipulation. ACS Photonics, 2020, 7, 3003-3014.	6.6	13
66	Late-Gadolinium Enhancement Interface Area and Electrophysiological Simulations Predict Arrhythmic Events in Patients With Nonischemic Dilated Cardiomyopathy. JACC: Clinical Electrophysiology, 2021, 7, 238-249.	3.2	13
67	Patch-Based Evaluation of Image Segmentation. , 2014, , .		12
68	Automatic Quality Control of Cardiac MRI Segmentation in Large-Scale Population Imaging. Lecture Notes in Computer Science, 2017, , 720-727.	1.3	12
69	Cooperative Training and Latent Space Data Augmentation for Robust Medical Image Segmentation. Lecture Notes in Computer Science, 2021, , 149-159.	1.3	12
70	Application-Driven MRI: Joint Reconstruction and Segmentation from Undersampled MRI Data. Lecture Notes in Computer Science, 2014, 17, 106-113.	1.3	12
71	Genetic and environmental determinants of diastolic heart function. , 2022, 1, 361-371.		12
72	Scar shape analysis and simulated electrical instabilities in a non-ischemic dilated cardiomyopathy patient cohort. PLoS Computational Biology, 2019, 15, e1007421.	3.2	10

#	Article	IF	Citations
73	Joint Motion Correction and Super Resolution for Cardiac Segmentation viaÂLatent Optimisation. Lecture Notes in Computer Science, 2021, , 14-24.	1.3	9
74	Biomechanics-Informed Neural Networks for Myocardial Motion Tracking in MRI. Lecture Notes in Computer Science, 2020, , 296-306.	1.3	9
75	Deep Generative Model-Based Quality Control for Cardiac MRI Segmentation. Lecture Notes in Computer Science, 2020, , 88-97.	1.3	9
76	Multi-Atlas Segmentation Using Partially Annotated Data: Methods and Annotation Strategies. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 1683-1696.	13.9	8
77	Prospective Identification of CRT Super Responders Using a Motion Atlas and Random Projection Ensemble Learning. Lecture Notes in Computer Science, 2015, , 493-500.	1.3	8
78	Myocardial strain computed at multiple spatial scales from tagged magnetic resonance imaging: Estimating cardiac biomarkers for CRT patients. Medical Image Analysis, 2018, 43, 169-185.	11.6	7
79	Sex and regional differences in myocardial plasticity in aortic stenosis are revealed by 3D model machine learning. European Heart Journal Cardiovascular Imaging, 2019, 21, 417-427.	1.2	7
80	Dynamic Spatio-Temporal Graph Convolutional Networks For Cardiac Motion Analysis. , 2021, , .		7
81	Multi-atlas Spectral PatchMatch: Application to Cardiac Image Segmentation. Lecture Notes in Computer Science, 2014, 17, 348-355.	1.3	7
82	Quality-Aware Semi-supervised Learning for CMR Segmentation. Lecture Notes in Computer Science, 2021, 2020, 97-107.	1.3	6
83	Spatio-temporal image registration for respiratory motion correction in PET imaging. , 2009, , .		5
84	A Comprehensive Approach for Learning-Based Fully-Automated Inter-slice Motion Correction for Short-Axis Cine Cardiac MR Image Stacks. Lecture Notes in Computer Science, 2018, , 268-276.	1.3	5
85	Multiscale Graph Convolutional Networks for Cardiac Motion Analysis. Lecture Notes in Computer Science, 2021, , 264-272.	1.3	5
86	Going Deeper into Cardiac Motion Analysis to Model Fine Spatio-Temporal Features. Communications in Computer and Information Science, 2020, , 294-306.	0.5	5
87	Micro-object pose estimation with sim-to-real transfer learning using small dataset. Communications Physics, 2022, 5, .	5.3	5
88	TRACKING OF MIGRATING GLIOMA CELLS IN FEATURE SPACE. , 2007, , .		4
89	Towards Left Ventricular Scar Localisation Using Local Motion Descriptors. Lecture Notes in Computer Science, 2016, , 30-39.	1.3	3
90	Combining Deep Learning and Shape Priors for Bi-Ventricular Segmentation of Volumetric Cardiac Magnetic Resonance Images. Lecture Notes in Computer Science, 2018, , 258-267.	1.3	3

#	Article	IF	Citations
91	DeepMCAT: Large-Scale Deep Clustering for Medical Image Categorization. Lecture Notes in Computer Science, 2021, , 259-267.	1.3	3
92	Learning-Based Heart Coverage Estimation for Short-Axis Cine Cardiac MR Images. Lecture Notes in Computer Science, 2017, , 73-82.	1.3	3
93	Prediction of Clinical Information from Cardiac MRI Using Manifold Learning. Lecture Notes in Computer Science, 2015, , 91-98.	1.3	3
94	Respiratory Motion Correction for 2D Cine Cardiac MR Images using Probabilistic Edge Maps. , 0, , .		2
95	Beyond the AHA 17-Segment Model: Motion-Driven Parcellation of the Left Ventricle. Lecture Notes in Computer Science, 2016, , 13-20.	1.3	2
96	<title>Full-field OCT for developmental biology</title>. Proceedings of SPIE, 2007, , .	0.8	1
97	Imaging of Calcium Oscillation in Mouse Oocyte/zygote by Two Photon Laser Scanning Microscopy. , 2008, , .		1
98	A quantification model for apoptosis in mouse embryos in the early stage of fetation. Science in China Series C: Life Sciences, 2009, 52, 922-927.	1.3	1
99	Motion correction and attenuation correction in thoracic PET imaging. , 2010, , .		1
100	Development of integrated high-resolution three-dimensional MRI and computational modelling techniques to identify novel genetic and anthropometric determinants of cardiac form and function. Lancet, The, 2016, 387, S36.	13.7	1
101	<title>Two-photon excited fluorescence imaging of cell spindles for developmental biology</title>. Proceedings of SPIE, 2007, , .	0.8	0
102	Regularized B-spline deformable registration for respiratory motion correction in PET images. , 2008, , .		0
103	5â€…Defining the effects of genetic variation using machine learning analysis of CMRS: a study in hypertrophic cardiomyopathy and in a healthy population. , 2018, , .		0
104	Learning Optimal Spatial Scales for Cardiac Strain Analysis Using a Motion Atlas. Lecture Notes in Computer Science, 2017, , 57-65.	1.3	0