Wenjia Bai

List of Publications by Citations

104 papers	3,493 citations	31 h-index	57 g-index
113 ext. papers	4,686 ext. citations	6.4 avg, IF	5.46 L-index

#	Paper	IF	Citations
104	Anatomically Constrained Neural Networks (ACNNs): Application to Cardiac Image Enhancement and Segmentation. *IEEE Transactions on Medical Imaging*, **2018**, 37, 384-395	11.7	333
103	Automated cardiovascular magnetic resonance image analysis with fully convolutional networks. *Journal of Cardiovascular Magnetic Resonance*, **2018**, 20, 65	6.9	285
102	Deep Learning for Cardiac Image Segmentation: A Review. *Frontiers in Cardiovascular Medicine*, **2020**, 7, 25	5.4	203
101	DeepCut: Object Segmentation From Bounding Box Annotations Using Convolutional Neural Networks. *IEEE Transactions on Medical Imaging*, **2017**, 36, 674-683	11.7	146
100	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, 1302-15	11.7	145
99	Right ventricle segmentation from cardiac MRI: a collation study. *Medical Image Analysis*, **2015**, 19, 187-202	15.4	144
98	Multi-atlas segmentation with augmented features for cardiac MR images. *Medical Image Analysis*, **2015**, 19, 98-109	15.4	116
97	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	6.9	111
96	Cardiac image super-resolution with global correspondence using multi-atlas patchmatch. *Lecture Notes in Computer Science*, **2013**, 16, 9-16	0.9	100
95	Semi-supervised Learning for Network-Based Cardiac MR Image Segmentation. *Lecture Notes in Computer Science*, **2017**, 253-260	0.9	98
94	Automated analysis of atrial late gadolinium enhancement imaging that correlates with endocardial voltage and clinical outcomes: a 2-center study. *Heart Rhythm*, **2013**, 10, 1184-91	6.7	95
93	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	11.7	85
92	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, 133-45	15.4	84
91	Multi-input Cardiac Image Super-Resolution Using Convolutional Neural Networks. *Lecture Notes in Computer Science*, **2016**, 246-254	0.9	78
90	Fully Automated, Quality-Controlled Cardiac Analysis From CMR: Validation and Large-Scale Application to Characterize Cardiac Function. *JACC: Cardiovascular Imaging*, **2020**, 13, 684-695	8.4	61
89	Regularized B-spline deformable registration for respiratory motion correction in PET images. *Physics in Medicine and Biology*, **2009**, 54, 2719-36	3.8	59
88	Reverse Classification Accuracy: Predicting Segmentation Performance in the Absence of Ground Truth. *IEEE Transactions on Medical Imaging*, **2017**, 36, 1597-1606	11.7	57

87	Multiatlas whole heart segmentation of CT data using conditional entropy for atlas ranking and selection. *Medical Physics*, **2015**, 42, 3822-33	4.4	53
86	Motion correction and attenuation correction for respiratory gated PET images. *IEEE Transactions on Medical Imaging*, **2011**, 30, 351-65	11.7	53
85	Automated quality control in image segmentation: application to the UK Biobank cardiovascular magnetic resonance imaging study. *Journal of Cardiovascular Magnetic Resonance*, **2019**, 21, 18	6.9	49
84	Temporal sparse free-form deformations. *Medical Image Analysis*, **2013**, 17, 779-89	15.4	48
83	Joint Learning of Motion Estimation and Segmentation for Cardiac MR Image Sequences. *Lecture Notes in Computer Science*, **2018**, 472-480	0.9	44
82	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	3.9	43
81	Improving the Generalizability of Convolutional Neural Network-Based Segmentation on CMR Images. *Frontiers in Cardiovascular Medicine*, **2020**, 7, 105	5.4	40
80	Stratified Decision Forests for Accurate Anatomical Landmark Localization in Cardiac Images. *IEEE Transactions on Medical Imaging*, **2017**, 36, 332-342	11.7	40
79	Recurrent Neural Networks for Aortic Image Sequence Segmentation with Sparse Annotations. *Lecture Notes in Computer Science*, **2018**, 586-594	0.9	40
78	Clinical quantitative cardiac imaging for the assessment of myocardial ischaemia. *Nature Reviews Cardiology*, **2020**, 17, 427-450	14.8	37
77	Statistical shape modeling of the left ventricle: myocardial infarct classification challenge. *IEEE Journal of Biomedical and Health Informatics*, **2018**, 22, 503-515	7.2	35
76	Shared genetic pathways contribute to risk of hypertrophic and dilated cardiomyopathies with opposite directions of effect. *Nature Genetics*, **2021**, 53, 128-134	36.3	35
75	Self-Supervised Learning for Cardiac MR Image Segmentation by Anatomical Position Prediction. *Lecture Notes in Computer Science*, **2019**, 541-549	0.9	31
74	Learning-Based Quality Control for Cardiac MR Images. *IEEE Transactions on Medical Imaging*, **2019**, 38, 1127-1138	11.7	31
73	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	15.4	30
72	A global benchmark of algorithms for segmenting the left atrium from late gadolinium-enhanced cardiac magnetic resonance imaging. *Medical Image Analysis*, **2021**, 67, 101832	15.4	30
71	Abnormal brain white matter microstructure is associated with both pre-hypertension and hypertension. *PLoS ONE*, **2017**, 12, e0187600	3.7	29
70	Ventricular remodeling in preterm infants: computational cardiac magnetic resonance atlasing shows significant early remodeling of the left ventricle. *Pediatric Research*, **2019**, 85, 807-815	3.2	26

69	Genetic and functional insights into the fractal structure of the heart. *Nature*, **2020**, 584, 589-594	50.4	26
68	Learning Interpretable Anatomical Features Through Deep Generative Models: Application to Cardiac Remodeling. *Lecture Notes in Computer Science*, **2018**, 464-471	0.9	25
67	A population-based phenome-wide association study of cardiac and aortic structure and function. *Nature Medicine*, **2020**, 26, 1654-1662	50.5	23
66	Independent Left Ventricular Morphometric Atlases Show Consistent Relationships with Cardiovascular Risk Factors: A UK Biobank Study. *Scientific Reports*, **2019**, 9, 1130	4.9	23
65	Associations of Regional Brain Structural Differences With Aging, Modifiable Risk Factors for Dementia, and Cognitive Performance. *JAMA Network Open*, **2019**, 2, e1917257	10.4	23
64	Three-dimensional cardiovascular imaging-genetics: a mass univariate framework. *Bioinformatics*, **2018**, 34, 97-103	7.2	22
63	Automatic dendritic spine analysis in two-photon laser scanning microscopy images. *Cytometry Part A: the Journal of the International Society for Analytical Cytology*, **2007**, 71, 818-26	4.6	22
62	Unsupervised Multi-modal Style Transfer for Cardiac MR Segmentation. *Lecture Notes in Computer Science*, **2020**, 209-219	0.9	22
61	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	6.7	21
60	Automated Detection of Motion Artefacts in MR Imaging Using Decision Forests. *Journal of Medical Engineering*, **2017**, 2017, 4501647		20
59	Automatic View Planning with Multi-scale Deep Reinforcement Learning Agents. *Lecture Notes in Computer Science*, **2018**, 277-285	0.9	20
58	VS-Net: Variable Splitting Network for Accelerated Parallel MRI Reconstruction. *Lecture Notes in Computer Science*, **2019**, 713-722	0.9	20
57	Registration using sparse free-form deformations. *Lecture Notes in Computer Science*, **2012**, 15, 659-66	0.9	16
56	Realistic Adversarial Data Augmentation for MR Image Segmentation. *Lecture Notes in Computer Science*, **2020**, 667-677	0.9	16
55	Fibrosis Microstructure Modulates Reentry in Non-ischemic Dilated Cardiomyopathy: Insights From Imaged Guided 2D Computational Modeling. *Frontiers in Physiology*, **2018**, 9, 1832	4.6	16
54	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	0.9	15
53	Real-Time Prediction of Segmentation Quality. *Lecture Notes in Computer Science*, **2018**, 578-585	0.9	14
52	Large-scale Quality Control of Cardiac Imaging in Population Studies: Application to UK Biobank. *Scientific Reports*, **2020**, 10, 2408	4.9	13

51	Deep Nested Level Sets: Fully Automated Segmentation of Cardiac MR Images in Patients with Pulmonary Hypertension. *Lecture Notes in Computer Science*, **2018**, 595-603	0.9	13
50	Multi-task Learning for Left Atrial Segmentation on GE-MRI. *Lecture Notes in Computer Science*, **2019**, 292-301	0.9	12
49	Learning Shape Priors for Robust Cardiac MR Segmentation from Multi-view Images. *Lecture Notes in Computer Science*, **2019**, 523-531	0.9	12
48	Explainable Anatomical Shape Analysis Through Deep Hierarchical Generative Models. *IEEE Transactions on Medical Imaging*, **2020**, 39, 2088-2099	11.7	12
47	Automatic Quality Control of Cardiac MRI Segmentation in Large-Scale Population Imaging. *Lecture Notes in Computer Science*, **2017**, 720-727	0.9	11
46	Bayesian Deep Learning for Accelerated MR Image Reconstruction. *Lecture Notes in Computer Science*, **2018**, 64-71	0.9	11
45	Fully automated myocardial strain estimation from cine MRI using convolutional neural networks **2018**,		11
44	Patch-Based Evaluation of Image Segmentation **2014**,		10
43	Application-driven MRI: joint reconstruction and segmentation from undersampled MRI data. *Lecture Notes in Computer Science*, **2014**, 17, 106-13	0.9	10
42	Joint Motion Estimation and Segmentation from Undersampled Cardiac MR Image. *Lecture Notes in Computer Science*, **2018**, 55-63	0.9	10
41	Cardiac MR Segmentation from Undersampled k-space Using Deep Latent Representation Learning. *Lecture Notes in Computer Science*, **2018**, 259-267	0.9	9
40	Multi-Atlas Segmentation Using Partially Annotated Data: Methods and Annotation Strategies. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2018**, 40, 1683-1696	13.3	7
39	Prospective Identification of CRT Super Responders Using a Motion Atlas and Random Projection Ensemble Learning. *Lecture Notes in Computer Science*, **2015**, 493-500	0.9	6
38	Cooperative Training and Latent Space Data Augmentation for Robust Medical Image Segmentation. *Lecture Notes in Computer Science*, **2021**, 149-159	0.9	6
37	Scar shape analysis and simulated electrical instabilities in a non-ischemic dilated cardiomyopathy patient cohort. *PLoS Computational Biology*, **2019**, 15, e1007421	5	5
36	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	15.4	5
35	Sex and regional differences in myocardial plasticity in aortic stenosis are revealed by 3D model machine learning. *European Heart Journal Cardiovascular Imaging*, **2020**, 21, 417-427	4.1	5
34	Spatio-temporal image registration for respiratory motion correction in PET imaging **2009**,		5

33	Deep Generative Model-Based Quality Control for Cardiac MRI Segmentation. *Lecture Notes in Computer Science*, **2020**, 88-97	0.9	5
32	Multi-atlas spectral PatchMatch: application to cardiac image segmentation. *Lecture Notes in Computer Science*, **2014**, 17, 348-55	0.9	5
31	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	0.9	5
30	Biomechanics-Informed Neural Networks for Myocardial Motion Tracking in MRI. *Lecture Notes in Computer Science*, **2020**, 296-306	0.9	4
29	Quality-aware semi-supervised learning for CMR segmentation. *Lecture Notes in Computer Science*, **2020**, 2020, 97-107	0.9	4
28	Learning a Global Descriptor of Cardiac Motion from a Large Cohort of 1000+ Normal Subjects. *Lecture Notes in Computer Science*, **2015**, 3-11	0.9	3
27	Towards Left Ventricular Scar Localisation Using Local Motion Descriptors. *Lecture Notes in Computer Science*, **2016**, 30-39	0.9	3
26	TRACKING OF MIGRATING GLIOMA CELLS IN FEATURE SPACE **2007**,		3
25	Going Deeper into Cardiac Motion Analysis to Model Fine Spatio-Temporal Features. *Communications in Computer and Information Science*, **2020**, 294-306	0.3	3
24	Probabilistic Edge Map (PEM) for 3D Ultrasound Image Registration and Multi-atlas Left Ventricle Segmentation. *Lecture Notes in Computer Science*, **2015**, 223-230	0.9	3
23	Learning-Based Heart Coverage Estimation for Short-Axis Cine Cardiac MR Images. *Lecture Notes in Computer Science*, **2017**, 73-82	0.9	3
22	Prediction of Clinical Information from Cardiac MRI Using Manifold Learning. *Lecture Notes in Computer Science*, **2015**, 91-98	0.9	3
21	Data-Driven Microscopic Pose and Depth Estimation for Optical Microrobot Manipulation. *ACS Photonics*, **2020**, 7, 3003-3014	6.3	3
20	Alcohol consumption in the general population is associated with structural changes in multiple organ systems. *ELife*, **2021**, 10,	8.9	3
19	Late-Gadolinium Enhancement Interface Area and Electrophysiological Simulations Predict Arrhythmic Events in Patients With Nonischemic Dilated Cardiomyopathy. *JACC: Clinical Electrophysiology*, **2021**, 7, 238-249	4.6	3
18	Modelling Cardiac Motion via Spatio-Temporal Graph Convolutional Networks to Boost the Diagnosis of Heart Conditions. *Lecture Notes in Computer Science*, **2021**, 56-65	0.9	3
17	Combining Deep Learning and Shape Priors for Bi-Ventricular Segmentation of Volumetric Cardiac Magnetic Resonance Images. *Lecture Notes in Computer Science*, **2018**, 258-267	0.9	3
16	Phenotypic Expression and Outcomes in Individuals With Rare Genetic Variants of Hypertrophic Cardiomyopathy. *Journal of the American College of Cardiology*, **2021**, 78, 1097-1110	15.1	3

List of Publications

15	Respiratory Motion Correction for 2D Cine Cardiac MR Images using Probabilistic Edge Maps		2
14	Beyond the AHA 17-Segment Model: Motion-Driven Parcellation of the Left Ventricle. *Lecture Notes in Computer Science*, **2016**, 13-20	0.9	2
13	Dynamic Spatio-Temporal Graph Convolutional Networks For Cardiac Motion Analysis **2021**,		2
12	Multiscale Graph Convolutional Networks for Cardiac Motion Analysis. *Lecture Notes in Computer Science*, **2021**, 264-272	0.9	2
11	Joint Motion Correction and Super Resolution for Cardiac Segmentation via Latent Optimisation. *Lecture Notes in Computer Science*, **2021**, 14-24	0.9	2
10	Precision measurement of cardiac structure and function in cardiovascular magnetic resonance using machine learning.. *Journal of Cardiovascular Magnetic Resonance*, **2022**, 24, 16	6.9	2
9	A quantification model for apoptosis in mouse embryos in the early stage of fetation. *Science in China Series C: Life Sciences*, **2009**, 52, 922-7		1
8	Imaging of Calcium Oscillation in Mouse Oocyte/zygote by Two Photon Laser Scanning Microscopy **2008**,		1
7	Genomic analysis reveals a functional role for myocardial trabeculae in adults		1
6	Genetic and environmental determinants of diastolic heart function		1
5	Alcohol consumption is associated with structural changes in various organ systems: A population-based study in UK Biobank		1
4	Outcomes and phenotypic expression of rare variants in hypertrophic cardiomyopathy genes amongst UK Biobank participants		1
3	DeepMCAT: Large-Scale Deep Clustering for Medical Image Categorization. *Lecture Notes in Computer Science*, **2021**, 259-267	0.9	0
2	Genetic and environmental determinants of diastolic heart function. **2022**, 1, 361-371		0
1	Learning Optimal Spatial Scales for Cardiac Strain Analysis Using a Motion Atlas. *Lecture Notes in Computer Science*, **2017**, 57-65	0.9	