

# Su Ruan

## List of Publications by Year in descending order

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158  
papers

4,202  
citations

186209

28  
h-index

128225

60  
g-index

174  
all docs

174  
docs citations

174  
times ranked

4900  
citing authors

#	ARTICLE	IF	CITATIONS
1	Medical Image Synthesis with Deep Convolutional Adversarial Networks. IEEE Transactions on Biomedical Engineering, 2018, 65, 2720-2730.	2.5	392
2	Multi-task deep learning based CT imaging analysis for COVID-19 pneumonia: Classification and segmentation. Computers in Biology and Medicine, 2020, 126, 104037.	3.9	369
3	Medical Image Synthesis with Context-Aware Generative Adversarial Networks. Lecture Notes in Computer Science, 2017, 10435, 417-425.	1.0	321
4	A review: Deep learning for medical image segmentation using multi-modality fusion. Array, 2019, 3-4, 100004.	2.5	307
5	Right ventricle segmentation from cardiac MRI: A collation study. Medical Image Analysis, 2015, 19, 187-202.	7.0	189
6	Kernel feature selection to fuse multi-spectral MRI images for brain tumor segmentation. Computer Vision and Image Understanding, 2011, 115, 256-269.	3.0	153
7	A framework of fuzzy information fusion for the segmentation of brain tumor tissues on MR images. Image and Vision Computing, 2007, 25, 164-171.	2.7	150
8	Brain tissue classification of magnetic resonance images using partial volume modeling. IEEE Transactions on Medical Imaging, 2000, 19, 1179-1187.	5.4	124
9	Automatic COVID-19 CT segmentation using U-Net integrated spatial and channel attention mechanism. International Journal of Imaging Systems and Technology, 2021, 31, 16-27.	2.7	118
10	A multistep Unsupervised Fuzzy Clustering Analysis of fMRI time series. Human Brain Mapping, 2000, 10, 160-178.	1.9	107
11	Feature selection for outcome prediction in oesophageal cancer using genetic algorithm and random forest classifier. Computerized Medical Imaging and Graphics, 2017, 60, 42-49.	3.5	95
12	Latent Correlation Representation Learning for Brain Tumor Segmentation With Missing MRI Modalities. IEEE Transactions on Image Processing, 2021, 30, 4263-4274.	6.0	92
13	Joint Tumor Segmentation in PET-CT Images Using Co-Clustering and Fusion Based on Belief Functions. IEEE Transactions on Image Processing, 2019, 28, 755-766.	6.0	77
14	Graph cut segmentation with a statistical shape model in cardiac MRI. Computer Vision and Image Understanding, 2013, 117, 1027-1035.	3.0	74
15	On the number of clusters and the fuzziness index for unsupervised FCA application to BOLD fMRI time series. Medical Image Analysis, 2001, 5, 55-67.	7.0	72
16	Selecting radiomic features from FDG-PET images for cancer treatment outcome prediction. Medical Image Analysis, 2016, 32, 257-268.	7.0	59
17	Binary-image comparison with local-dissimilarity quantification. Pattern Recognition, 2008, 41, 1461-1478.	5.1	56
18	An evidential classifier based on feature selection and two-step classification strategy. Pattern Recognition, 2015, 48, 2318-2327.	5.1	56

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19	Fuzzy Markovian Segmentation in Application of Magnetic Resonance Images. Computer Vision and Image Understanding, 2002, 85, 54-69.	3.0	55
20	Fusion of multi-tracer PET images for dose painting. Medical Image Analysis, 2014, 18, 1247-1259.	7.0	41
21	Segmentation of Organs at Risk in thoracic CT images using a SharpMask architecture and Conditional Random Fields. , 2017, 2017, 1003-1006.		40
22	Predictive value of initial FDG-PET features for treatment response and survival in esophageal cancer patients treated with chemo-radiation therapy using a random forest classifier. PLoS ONE, 2017, 12, e0173208.	1.1	37
23	Fuzzy kappa for the agreement measure of fuzzy classifications. Neurocomputing, 2007, 70, 726-734.	3.5	36
24	Prediction of Lung Tumor Evolution During Radiotherapy in Individual Patients With PET. IEEE Transactions on Medical Imaging, 2014, 33, 995-1003.	5.4	34
25	TUMOR SEGMENTATION FROM A MULTISPECTRAL MRI IMAGES BY USING SUPPORT VECTOR MACHINE CLASSIFICATION. , 2007, , .		33
26	Three-dimensional motion and reconstruction of coronary arteries from biplane cineangiography. Image and Vision Computing, 1994, 12, 683-689.	2.7	32
27	Dissimilarity Metric Learning in the Belief Function Framework. IEEE Transactions on Fuzzy Systems, 2016, 24, 1555-1564.	6.5	32
28	Spatial Evidential Clustering With Adaptive Distance Metric for Tumor Segmentation in FDG-PET Images. IEEE Transactions on Biomedical Engineering, 2018, 65, 21-30.	2.5	31
29	Semi-automatic lymphoma detection and segmentation using fully conditional random fields. Computerized Medical Imaging and Graphics, 2018, 70, 1-7.	3.5	31
30	3-D RPET-NET: Development of a 3-D PET Imaging Convolutional Neural Network for Radiomics Analysis and Outcome Prediction. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 225-231.	2.7	31
31	AI-Based Detection, Classification and Prediction/Prognosis in Medical Imaging. PET Clinics, 2022, 17, 183-212.	1.5	31
32	Segmentation of heterogeneous or small FDG PET positive tissue based on a 3D-locally adaptive random walk algorithm. Computerized Medical Imaging and Graphics, 2014, 38, 753-763.	3.5	28
33	Segmenting Multi-Source Images Using Hidden Markov Fields With Copula-Based Multivariate Statistical Distributions. IEEE Transactions on Image Processing, 2017, 26, 3187-3195.	6.0	27
34	A Multi-Modality Fusion Network Based on Attention Mechanism for Brain Tumor Segmentation. , 2020, , .		27
35	A Sparse Representation Method for Magnetic Resonance Spectroscopy Quantification. IEEE Transactions on Biomedical Engineering, 2010, 57, 1620-1627.	2.5	25
36	Joint tumor growth prediction and tumor segmentation on therapeutic follow-up PET images. Medical Image Analysis, 2015, 23, 84-91.	7.0	25

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37	Knowledge-based segmentation and labeling of brain structures from MRI images. Pattern Recognition Letters, 2001, 22, 395-405.	2.6	24
38	Robust feature selection to predict tumor treatment outcome. Artificial Intelligence in Medicine, 2015, 64, 195-204.	3.8	24
39	Joint Segmentation of Multiple Thoracic Organs in CT Images with Two Collaborative Deep Architectures. Lecture Notes in Computer Science, 2017, 10553, 21-29.	1.0	24
40	Multiorgan segmentation using distance-aware adversarial networks. Journal of Medical Imaging, 2019, 6, 1.	0.8	24
41	Deep co-supervision and attention fusion strategy for automatic COVID-19 lung infection segmentation on CT images. Pattern Recognition, 2022, 124, 108452.	5.1	24
42	A deep Boltzmann machine-driven level set method for heart motion tracking using cine MRI images. Medical Image Analysis, 2018, 47, 68-80.	7.0	23
43	Detection and segmentation of lymphomas in 3D PET images via clustering with entropy-based optimization strategy. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1715-1724.	1.7	23
44	Fusion based on attention mechanism and context constraint for multi-modal brain tumor segmentation. Computerized Medical Imaging and Graphics, 2020, 86, 101811.	3.5	22
45	Treatment Outcome Prediction for Cancer Patients Based on Radiomics and Belief Function Theory. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 216-224.	2.7	21
46	A Tri-Attention fusion guided multi-modal segmentation network. Pattern Recognition, 2022, 124, 108417.	5.1	21
47	Dealing with uncertainty and imprecision in image segmentation using belief function theory. International Journal of Approximate Reasoning, 2014, 55, 376-387.	1.9	20
48	Feature-enhanced generation and multi-modality fusion based deep neural network for brain tumor segmentation with missing MR modalities. Neurocomputing, 2021, 466, 102-112.	3.5	20
49	Brain Tumor Segmentation with Missing Modalities via Latent Multi-source Correlation Representation. Lecture Notes in Computer Science, 2020, , 533-541.	1.0	19
50	Eikonal-based region growing for efficient clustering. Image and Vision Computing, 2014, 32, 1045-1054.	2.7	18
51	Eikonal based region growing for superpixels generation: Application to semi-supervised real time organ segmentation in CT images. Irbm, 2014, 35, 20-26.	3.7	18
52	Phantom-based performance evaluation: Application to brain segmentation from magnetic resonance images. Medical Image Analysis, 2000, 4, 303-316.	7.0	16
53	Lymphoma segmentation from 3D PET-CT images using a deep evidential network. International Journal of Approximate Reasoning, 2022, 149, 39-60.	1.9	16
54	Multi-kernel SVM based classification for brain tumor segmentation of MRI multi-sequence. , 2009, , .		15

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55	A topology preserving non-rigid registration algorithm with integration shape knowledge to segment brain subcortical structures from MRI images. Pattern Recognition, 2010, 43, 2418-2427.	5.1	15
56	3D random walk based segmentation for lung tumor delineation in PET imaging. , 2012, , .		14
57	An integrated model-driven method for in-treatment upper airway motion tracking using cine MRI in head and neck radiation therapy. Medical Physics, 2016, 43, 4700-4710.	1.6	14
58	Hausdorff Distance based 3D Quantification of Brain Tumor Evolution from MRI Images. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5597-600.	0.5	13
59	Fully automated esophagus segmentation with a hierarchical deep learning approach. , 2017, 2017, 503-506.		13
60	Mixed Integer Programming For Sparse Coding: Application to Image Denoising. IEEE Transactions on Computational Imaging, 2019, 5, 354-365.	2.6	12
61	Esophagus Segmentation from 3D CT Data Using Skeleton Prior-Based Graph Cut. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-6.	0.7	11
62	Segmentation of Biological Target Volumes on Multi-tracer PET Images Based on Information Fusion for Achieving Dose Painting in Radiotherapy. Lecture Notes in Computer Science, 2012, 15, 545-552.	1.0	9
63	Does enhanced CT influence the biological GTV measurement on FDG-PET images?. Radiotherapy and Oncology, 2013, 108, 86-90.	0.3	9
64	Belief Function-Based Semi-Supervised Learning For Brain Tumor Segmentation. , 2021, , .		9
65	Knowledge based fuzzy information fusion applied to classification of abnormal brain tissues from MRI. , 2003, , .		8
66	Graph cut segmentation technique for MRI brain tumor extraction. , 2010, , .		8
67	Image fusion for following-up brain tumor evolution. , 2011, , .		8
68	3D automated lymphoma segmentation in PET images based on cellular automata. , 2014, , .		8
69	Segmentation of lymphoma tumor in PET images using cellular automata: A preliminary study. Irbm, 2016, 37, 3-10.	3.7	8
70	3D Lymphoma Segmentation in PET/CT Images Based on Fully Connected CRFs. Lecture Notes in Computer Science, 2017, , 3-12.	1.0	8
71	Cerebral magnetic resonance image segmentation using fuzzy Markov Random Fields. , 0, , .		7
72	Multilabel statistical shape prior for image segmentation. IET Image Processing, 2016, 10, 710-716.	1.4	7

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73	Histogram-Based Generation Method of Membership Function for Extracting Features of Brain Tissues on MRI Images. Lecture Notes in Computer Science, 2005, , 189-194.	1.0	7
74	Weakly Supervised Tumor Detection in PET Using Class Response for Treatment Outcome Prediction. Journal of Imaging, 2022, 8, 130.	1.7	7
75	Multi-kernel SVM based classification for tumor segmentation by fusion of MRI images. , 2009, , .		6
76	Prostate cancer segmentation from multiparametric MRI based on fuzzy Bayesian model. , 2014, , .		6
77	Outcome prediction in tumour therapy based on Dempster-Shafer theory. , 2015, , .		6
78	Feature selection and classification using multiple kernel learning for brain tumor segmentation. , 2018, , .		6
79	Unsupervised co-segmentation of tumor in PET-CT images using belief functions based fusion. , 2018, , .		6
80	Deep Learning Using Havrda-Charvat Entropy for Classification of Pulmonary Optical Endomicroscopy. Irbm, 2021, 42, 400-406.	3.7	6
81	A fast binary-image comparison method with local-dissimilarity quantification. , 2006, , .		5
82	Hausdorff distance-based multiresolution maps applied to image similarity measure. Imaging Science Journal, 2007, 55, 164-174.	0.2	5
83	3D Medical Multi-modal Segmentation Network Guided by Multi-source Correlation Constraint. , 2021, , .		5
84	Using Belief Function Theory to Deal with Uncertainties and Imprecisions in Image Processing. Advances in Intelligent and Soft Computing, 2012, , 197-204.	0.2	5
85	Evidential Segmentation of 3D PET/CT Images. Lecture Notes in Computer Science, 2021, , 159-167.	1.0	5
86	RADIOGAN:Deep Convolutional Conditional Generative Adversarial Network to Generate PET Images. , 2020, , .		5
87	A Quantitative Comparison between Shannon and Tsallisâ€™Havrdaâ€™Charvat Entropies Applied to Cancer Outcome Prediction. Entropy, 2022, 24, 436.	1.1	5
88	Missing Data Imputation via Conditional Generator and Correlation Learning for Multimodal Brain Tumor Segmentation. Pattern Recognition Letters, 2022, 158, 125-132.	2.6	5
89	Detection of Brain Activation Signal from Functional Magnetic Resonance Imaging Data. Journal of Neuroimaging, 1996, 6, 207-212.	1.0	4
90	Segmentation of anatomical structures from 3d brain mri using automatically-built statistical shape models. , 0, , .		4

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91	An Improved Level Set Method for Automatically Volume Measure: Application in Tumor Tracking from MRI Images. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 808-11.	0.5	4
92	Ornamental Letters Image Classification Using Local Dissimilarity Maps. , 2009, , .		4
93	Gray Level Local Dissimilarity Map and Global Dissimilarity Index for Quality of Medical Images. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 281-286.	0.4	4
94	Five-Year Longitudinal MRI Follow-up and 1H Single Voxel MRS in 14 Patients with Gliomatosis Treated with Temodal, Radiotherapy and Antiangiogenic Therapy. Neuroradiology Journal, 2011, 24, 401-414.	0.6	4
95	Dempster-Shafer Theory Based Feature Selection with Sparse Constraint for Outcome Prediction in Cancer Therapy. Lecture Notes in Computer Science, 2015, , 695-702.	1.0	4
96	Segmentation of pelvic organs at risk using superpixels and graph diffusion in prostate radiotherapy. , 2015, , .		4
97	Active learning with noise modeling for medical image annotation. , 2018, , .		4
98	Deep Learning Model Integrating Dilated Convolution and Deep Supervision for Brain Tumor Segmentation in Multi-parametric MRI. Lecture Notes in Computer Science, 2019, , 574-582.	1.0	4
99	Robust Cancer Treatment Outcome Prediction Dealing with Small-Sized and Imbalanced Data from FDG-PET Images. Lecture Notes in Computer Science, 2016, , 61-69.	1.0	4
100	A new similarity measure using hausdorff distance map. , 0, , .		3
101	Fuzzy modelling of different tumorous cerebral tissues on MRI images based on fusion of feature information. , 2005, 2005, 3104-7.		3
102	A novel scheme of face verification using active appearance models. , 0, , .		3
103	Fuzzy Information Fusion Scheme Used to Segment Brain Tumor from MR Images. Lecture Notes in Computer Science, 2006, , 208-215.	1.0	3
104	Statistical Shape Model-based Segmentation of brain MRI Images. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5255-8.	0.5	3
105	Fuzzy adaptive level set algorithm for brain tissue segmentation. , 2008, , .		3
106	Factor analysis-based approach for early uptake automatic quantification of breast cancer by 18F-FDG PET images sequence. Biomedical Signal Processing and Control, 2014, 9, 19-31.	3.5	3
107	18F-FDG-PET partial volume effect correction using a modified recovery coefficient approach based on functional volume and local contrast: physical validation and clinical feasibility in oncology. Quarterly Journal of Nuclear Medicine and Molecular Imaging, 2017, 61, 301-313.	0.4	3
108	Adaptive kernelized evidential clustering for automatic 3D tumor segmentation in FDGâ€“PET images. Multimedia Systems, 2019, 25, 127-133.	3.0	3

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109	Automatic brain tumor extraction using fuzzy information fusion. , 2002, , .		2
110	Segmentation based on information fusion applied to brain tissue on MRI. , 2004, 5298, 492.		2
111	An improved method of &#x201C;Demons&#x201D; non-rigid image registration algorithm. , 2008, , .		2
112	Effects of reactive oxygen species on metabolism monitored by longitudinal <sup>1</sup> H single voxel MRS follow-up in patients with mitochondrial disease or cerebral tumors. Journal of Physics: Conference Series, 2011, 261, 012011.	0.3	2
113	A priori knowledge based frequency-domain quantification of prostate Magnetic Resonance Spectroscopy. Biomedical Signal Processing and Control, 2011, 6, 13-20.	3.5	2
114	Predicting lung tumor evolution during radiotherapy from PET images using a patient specific model. , 2013, , .		2
115	A Background-based Data Enhancement Method for Lymphoma Segmentation in 3D PET Images. , 2019, , .		2
116	Deep PET/CT Fusion with Dempster-Shafer Theory for Lymphoma Segmentation. Lecture Notes in Computer Science, 2021, , 30-39.	1.0	2
117	Mixture modeling applied to the partial volume effect in MRI data. , 0, , .		1
118	TUMOR SEGMENTATION FROM PET/CT IMAGES USING LEVEL SETS METHOD. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 255-260.	0.4	1
119	FUZZY FUSION SYSTEM FOR BRAIN MRI IMAGE SEGMENTATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 249-254.	0.4	1
120	A brain tissue segmentation approach integrating fuzzy information into level set method. , 2008, , .		1
121	A deformable model-based system for 3D analysis and visualization of tumor in PET/CT images. , 2008, 2008, 3130-3.		1
122	SVM Based Follow-up System for Brain Tumor Evolution from Magnetic Resonance Images. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 292-297.	0.4	1
123	A Priori Knowledge Based Frequencyâ€™Domain Quantification of Magnetic Resonance Spectroscopy. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 210-215.	0.4	1
124	Level set method based on a statistical shape constraint for MRI brain segmentation. , 2010, , .		1
125	Nonrigid Medical Image Registration Based on Mesh Deformation Constraints. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-8.	0.7	1
126	Brain tumor segmentation from multiple MRI sequences using multiple kernel learning. , 2014, , .		1



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127	FDG-PET imaging for radiotherapy target volume definition in lung cancer. <i>Irjm</i> , 2014, 35, 41-45.	3.7	1
128	Accurate tumor segmentation in FDG-PET images with guidance of complementary CT images. , 2017, , .		1
129	3D lymphoma detection in PET-CT images with supervoxel and CRFs. , 2018, , .		1
130	Heart motion tracking on cine MRI based on a deep Boltzmann machine-driven level set method. , 2018, , .		1
131	Learning-Based Cancer Treatment Outcome Prognosis Using Multimodal Biomarkers. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2022, 6, 231-244.	2.7	1
132	A Smart Identification Card System Using Facial Biometric: From Architecture to Application. <i>Lecture Notes in Computer Science</i> , 2006, , 61-70.	1.0	1
133	Research on the Topology Preservation of the Demons Non-rigid Registration Algorithm. <i>Zidonghua Xuebao/Acta Automatica Sinica</i> , 2010, 36, 179-183.	0.3	1
134	Joint Feature Transformation and Selection Based on Dempster-Shafer Theory. <i>Communications in Computer and Information Science</i> , 2016, , 253-261.	0.4	1
135	Possibilistic-clustering-based MR brain image segmentation with accurate initialization. , 2004, 5308, 876.		0
136	Brain tumor segmentation in MRI based on fuzzy aggregators. , 2005, , .		0
137	Non-rigid registration based segmentation of brain subcortical structures using a priori knowledge. , 2008, 2008, 3971-4.		0
138	Segmentation of Brain Internal Structures Automatically Using Non-rigid Registration with Simultaneous Intensity and Geometric Match. , 2008, , .		0
139	An automatic method of brain tumor segmentation from MRI volume based on the symmetry of brain and level set method. , 2010, , .		0
140	Fusion and classification of multi-source images by SVM with selected features in a kernel space. , 2010, , .		0
141	Binary pattern matching from a local dissimilarity measure. , 2010, , .		0
142	Analyzing the intrinsic relations between the diffusion and fluid deformable registration methods. , 2012, , .		0
143	Signal Separation with A Priori Knowledge Using Sparse Representation. , 2013, , 315-332.		0
144	Advanced approach for PET breast cancer segmentation based on FAMIS methodology. , 2014, , .		0

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145	Myocardium segmentation using a priori knowledge of shape and a spatial relation. , 2014, , .		0
146	PO-0971: Segmentation of organs at risk using superpixels on MRI or CT images in prostate radiotherapy. Radiotherapy and Oncology, 2015, 115, S515.	0.3	0
147	Comparison of 2D and 3D region-based deformable models and random walker methods for PET segmentation. , 2016, , .		0
148	Notice of Removal Tumor segmentation by fusion of MRI images using copula based statistical methods. , 2016, , .		0
149	Tumor delineation in FDG-PET images using a new evidential clustering algorithm with spatial regularization and adaptive distance metric. , 2017, , .		0
150	K-SVD with a Real $\hat{\alpha}$ Optimization: Application to Image Denoising. , 2018, , .		0
151	Gaussian-based Spatial Hybrid Distances for Detection and Segmentation of Lymphoid Lesions in 3D PET Images. , 2019, , .		0
152	A Prior Knowledge Intergrated Scheme for Detection and Segmentation of Lymphomas in 3D PET Images based on DBSCAN and GAs. , 2019, , .		0
153	Incoherent dictionary learning via mixed-integer programming and hybrid augmented Lagrangian. , 2020, 101, 102703.		0
154	A novel systematic approach for cancer treatment prognosis and its applications in oropharyngeal cancer with microRNA biomarkers. Bioinformatics, 2021, 37, 3106-3114.	1.8	0
155	Modelling and Tracking of Deformable Structures in Medical Images. Lecture Notes in Computer Science, 2015, , 475-490.	1.0	0
156	Robust Feature Selection to Predict Lung Tumor Recurrence. Lecture Notes in Computational Vision and Biomechanics, 2015, , 103-112.	0.5	0
157	Deep learning based automatic detection of uninformative images in pulmonary optical endomicroscopy. , 2020, , .		0
158	Segmentation of multicorrelated images with copula models and conditionally random fields. Journal of Medical Imaging, 2022, 9, 014001.	0.8	0