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List of Publications by Year
in descending order

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84 papers	3,134 citations	218677 26 h-index	175258 52 g-index
87 all docs	87 docs citations	87 times ranked	3308 citing authors

#	Article	IF	Citations
1	AI in Medical Imaging Informatics: Current Challenges and Future Directions. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 1837-1857.	6.3	215
2	Leaf segmentation in plant phenotyping: a collation study. Machine Vision and Applications, 2016, 27, 585-606.	2.7	204
3	Finely-grained annotated datasets for image-based plant phenotyping. Pattern Recognition Letters, 2016, 81, 80-89.	4.2	192
4	Image Analysis: The New Bottleneck in Plant Phenotyping [Applications Corner]. IEEE Signal Processing Magazine, 2015, 32, 126-131.	5.6	181
5	Multimodal MR Synthesis via Modality-Invariant Latent Representation. IEEE Transactions on Medical Imaging, 2018, 37, 803-814.	8.9	178
6	Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Segmentation: The M&Ms Challenge. IEEE Transactions on Medical Imaging, 2021, 40, 3543-3554.	8.9	168
7	Anomalous video event detection using spatiotemporal context. Computer Vision and Image Understanding, 2011, 115, 323-333.	4.7	163
8	Machine Learning for Plant Phenotyping Needs Image Processing. Trends in Plant Science, 2016, 21, 989-991.	8.8	116
9	Disentangled representation learning in cardiac image analysis. Medical Image Analysis, 2019, 58, 101535.	11.6	105
10	Image-based plant phenotyping with incremental learning and active contours. Ecological Informatics, 2014, 23, 35-48.	5.2	104
11	Phenotiki: an open software and hardware platform for affordable and easy imageâ€based phenotyping of rosetteâ€shaped plants. Plant Journal, 2017, 90, 204-216.	5.7	96
12	Adversarial Image Synthesis for Unpaired Multi-modal Cardiac Data. Lecture Notes in Computer Science, 2017, , 3-13.	1.3	96
13	Chronic Manifestation of Postreperfusion Intramyocardial Hemorrhage as Regional Iron Deposition. Circulation: Cardiovascular Imaging, 2013, 6, 218-228.	2.6	79
14	Phenoâ€Deep Counter: a unified and versatile deep learning architecture for leaf counting. Plant Journal, 2018, 96, 880-890.	5.7	72
15	DiCyc: GAN-based deformation invariant cross-domain information fusion for medical image synthesis. Information Fusion, 2021, 67, 147-160.	19.1	62
16	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
17	Semi-automated registration-based anatomical labelling, voxel based morphometry and cortical thickness mapping of the mouse brain. Journal of Neuroscience Methods, 2016, 267, 62-73.	2.5	51
18	Doing More With Less: A Multitask Deep Learning Approach in Plant Phenotyping. Frontiers in Plant Science, 2020, 11, 141.	3.6	46

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19	A â€œDo-It-Yourselfâ€•phenotyping system: measuring growth and morphology throughout the diel cycle in rosette shaped plants. Plant Methods, 2017, 13, 95.	4.3	42
20	Learning to Segment From Scribbles Using Multi-Scale Adversarial Attention Gates. IEEE Transactions on Medical Imaging, 2021, 40, 1990-2001.	8.9	42
21	Leveraging Multiple Datasets for Deep Leaf Counting. , 2017, , .		38
22	Disentangle, Align and Fuse for Multimodal and Semi-Supervised Image Segmentation. IEEE Transactions on Medical Imaging, 2021, 40, 781-792.	8.9	38
23	Factorised Spatial Representation Learning: Application in Semi-supervised Myocardial Segmentation. Lecture Notes in Computer Science, 2018, , 490-498.	1.3	37
24	ARIGAN: Synthetic Arabidopsis Plants Using Generative Adversarial Network. , 2017, , .		35
25	Citizen crowds and experts: observer variability in image-based plant phenotyping. Plant Methods, 2018, 14, 12.	4.3	33
26	Explicit Shift-Invariant Dictionary Learning. IEEE Signal Processing Letters, 2014, 21, 6-9.	3.6	31
27	How can DNA computing be applied to digital signal processing?. IEEE Signal Processing Magazine, 2004, 21, 57-61.	5.6	29
28	Detecting Myocardial Ischemia at Rest With Cardiac Phaseâ€“Resolved Blood Oxygen Levelâ€“Dependent Cardiovascular Magnetic Resonance. Circulation: Cardiovascular Imaging, 2013, 6, 311-319.	2.6	29
29	Affordable and robust phenotyping framework to analyse root system architecture of soilâ€grown plants. Plant Journal, 2020, 103, 2330-2343.	5.7	29
30	Pseudo-healthy synthesis with pathology disentanglement and adversarial learning. Medical Image Analysis, 2020, 64, 101719.	11.6	26
31	Learning disentangled representations in the imaging domain. Medical Image Analysis, 2022, 80, 102516.	11.6	26
32	Special issue on computer vision and image analysis in plant phenotyping. Machine Vision and Applications, 2016, 27, 607-609.	2.7	25
33	Robust Multi-modal MR Image Synthesis. Lecture Notes in Computer Science, 2017, , 347-355.	1.3	24
34	Iron Deposition following Chronic Myocardial Infarction as a Substrate for Cardiac Electrical Anomalies: Initial Findings in a Canine Model. PLoS ONE, 2013, 8, e73193.	2.5	23
35	Low-Complexity Tracking-Aware H.264 Video Compression for Transportation Surveillance. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1378-1389.	8.3	21
36	Assessment of Myocardial Reactivity to Controlled Hypercapnia with Free-breathing T2-prepared Cardiac Blood Oxygen Levelâ€“Dependent MR Imaging. Radiology, 2014, 272, 397-406.	7.3	21

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37	Leaf Counting Without Annotations Using Adversarial Unsupervised Domain Adaptation. , 2019, , .		21
38	Sharing the Right Data Right: A Symbiosis with Machine Learning. Trends in Plant Science, 2019, 24, 99-102.	8.8	21
39	Learning to synthesise the ageing brain without longitudinal data. Medical Image Analysis, 2021, 73, 102169.	11.6	20
40	Joint source-channel coding for wireless object-based video communications utilizing data hiding. IEEE Transactions on Image Processing, 2006, 15, 2158-2169.	9.8	19
41	Local feature extraction for video copy detection in a database. , 2008, , .		19
42	Semi-supervised Meta-learning with Disentanglement for Domain-Generalised Medical Image Segmentation. Lecture Notes in Computer Science, 2021, , 307-317.	1.3	19
43	Unsupervised Myocardial Segmentation for Cardiac BOLD. IEEE Transactions on Medical Imaging, 2017, 36, 2228-2238.	8.9	18
44	Ischemic extent as a biomarker for characterizing severity of coronary artery stenosis with blood oxygenâ€sensitive MRI. Journal of Magnetic Resonance Imaging, 2012, 35, 1338-1348.	3.4	17
45	Life sciences - DNA computing from a signal processing viewpoint. IEEE Signal Processing Magazine, 2004, 21, 100-106.	5.6	16
46	Active contour model driven by Globally Signed Region Pressure Force. , 2013, , .		15
47	The Generalized Complex Kernel Least-Mean-Square Algorithm. IEEE Transactions on Signal Processing, 2019, 67, 5213-5222.	5.3	15
48	Artifactâ€reduced twoâ€dimensional cine steady state free precession for myocardial bloodâ€oxygenâ€levelâ€dependent imaging. Journal of Magnetic Resonance Imaging, 2010, 31, 863-871.	3.4	14
49	Arterial CO₂ as a Potent Coronary Vasodilator: A Preclinical PET/MR Validation Study with Implications for Cardiac Stress Testing. Journal of Nuclear Medicine, 2017, 58, 953-960.	5.0	14
50	Unsupervised Myocardial Segmentation for Cardiac MRI. Lecture Notes in Computer Science, 2015, , 12-20.	1.3	12
51	Accurate needle-free assessment of myocardial oxygenation for ischemic heart disease in canines using magnetic resonance imaging. Science Translational Medicine, 2019, 11, .	12.4	12
52	Dictionary-Driven Ischemia Detection From Cardiac Phase-Resolved Myocardial BOLD MRI at Rest. IEEE Transactions on Medical Imaging, 2016, 35, 282-293.	8.9	11
53	The significance of image compression in plant phenotyping applications. Functional Plant Biology, 2015, 42, 971.	2.1	10
54	Adversarial Large-Scale Root Gap Inpainting. , 2019, , .		10

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55	Fast Watermarking of MPEG-1/2 Streams Using Compressed-Domain Perceptual Embedding and a Generalized Correlator Detector. Eurasip Journal on Advances in Signal Processing, 2004, 2004, 1.	1.7	9
56	Video anomaly detection in spatiotemporal context. , 2010, , .		9
57	Disentangled Representations for Domain-Generalized Cardiac Segmentation. Lecture Notes in Computer Science, 2021, , 187-195.	1.3	8
58	Synthetic Generation of Myocardial Bloodâ€“Oxygen-Level-Dependent MRI Time Series Via Structural Sparse Decomposition Modeling. IEEE Transactions on Medical Imaging, 2014, 33, 1422-1433.	8.9	7
59	Application-aware image compression for low cost and distributed plant phenotyping. , 2013, , .		6
60	Temporal Consistency Objectives Regularize the Learning of Disentangled Representations. Lecture Notes in Computer Science, 2019, , 11-19.	1.3	6
61	Multimodal Cardiac Segmentation Using Disentangled Representation Learning. Lecture Notes in Computer Science, 2020, , 128-137.	1.3	6
62	Application-Aware Approach to Compression and Transmission of H.264 Encoded Video for Automated and Centralized Transportation Surveillance. IEEE Transactions on Intelligent Transportation Systems, 2013, 14, 2002-2007.	8.0	5
63	Large-scale analysis of neuroimaging data on commercial clouds with content-aware resource allocation strategies. International Journal of High Performance Computing Applications, 2015, 29, 473-488.	3.7	5
64	Unsupervised Rotation Factorization in Restricted Boltzmann Machines. IEEE Transactions on Image Processing, 2020, 29, 2166-2175.	9.8	5
65	Max-Fusion U-Net for Multi-modal Pathology Segmentation with Attention and Dynamic Resampling. Lecture Notes in Computer Science, 2020, , 68-81.	1.3	5
66	T₂â€weighted STIR imaging of myocardial edema associated with ischemiaâ€reperfusion injury: The influence of proton density effect on image contrast. Journal of Magnetic Resonance Imaging, 2011, 33, 962-967.	3.4	4
67	Learning computationally efficient approximations of complex image segmentation metrics. , 2013, , .		4
68	Colorizing a Masterpiece [Applications Corner]. IEEE Signal Processing Magazine, 2011, 28, 113-119.	5.6	3
69	Unsupervised and supervised approaches to color space transformation for image coding. , 2014, , .		3
70	Stop Throwing Away Discriminators! Re-using Adversaries for Test-Time Training. Lecture Notes in Computer Science, 2021, , 68-78.	1.3	3
71	DNA Microarray Image Intensity Extraction using Eigenspots. , 2007, , .		2
72	Dual-Contrast Cellular Magnetic Resonance Imaging. Molecular Imaging, 2009, 8, 7290.2009.00024.	1.4	2

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73	Fully automated reconstruction of ungated ghost magnetic resonance angiograms. Journal of Magnetic Resonance Imaging, 2010, 31, 655-662.	3.4	2
74	Mouse neuroimaging phenotyping in the cloud. , 2012, , .		2
75	Classification-aware distortion metric for HEVC intra coding. , 2015, , .		2
76	Structured Dictionaries for Ischemia Estimation in Cardiac BOLD MRI at Rest. Lecture Notes in Computer Science, 2014, 17, 562-569.	1.3	2
77	Retrieval Efficiency of DNA-Based Databases of Digital Signals. IEEE Transactions on Nanobioscience, 2009, 8, 259-270.	3.3	1
78	On the mechanism of myocardial edema contrast in T2-STIR images. Journal of Cardiovascular Magnetic Resonance, 2010, 12, .	3.3	1
79	Data-driven feature learning for myocardial registration and segmentation. , 2021, , 185-225.		1
80	Joint Myocardial Registration andÂSegmentation of Cardiac BOLD MRI. Lecture Notes in Computer Science, 2018, , 12-20.	1.3	1
81	Computationally Efficient Data and Application Driven Color Transforms for the Compression and Enhancement of Images and Video. , 2015, , 371-393.		1
82	Self-supervised Multi-scale Consistency for Weakly Supervised Segmentation Learning. Lecture Notes in Computer Science, 2021, , 14-24.	1.3	0
83	Semi-Supervised Domain Adaptation for Holistic Counting under Label Gap. Journal of Imaging, 2021, 7, 198.	3.0	0
84	Cardiovascular Magnetic Resonance Assessment of Myocardial Oxygenation. , 2019, , 84-96.e3.		0