Aurelio Jc Campilho

List of Publications by Year
in descending order

112 papers	3,944 citations	331538 21 h-index	128225 60 g-index
121 all docs	121 docs citations	121 times ranked	4196 citing authors

#	Article	IF	Citations
1	Segmentation of retinal blood vessels by combining the detection of centerlines and morphological reconstruction. IEEE Transactions on Medical Imaging, 2006, 25, 1200-1213.	5.4	758
2	Classification of breast cancer histology images using Convolutional Neural Networks. PLoS ONE, 2017, 12, e0177544.	1.1	683
3	BACH: Grand challenge on breast cancer histology images. Medical Image Analysis, 2019, 56, 122-139.	7.0	356
4	End-to-End Adversarial Retinal Image Synthesis. IEEE Transactions on Medical Imaging, 2018, 37, 781-791.	5.4	277
5	An Automatic Graph-Based Approach for Artery/Vein Classification in Retinal Images. IEEE Transactions on Image Processing, 2014, 23, 1073-1083.	6.0	172
6	IDRiD: Diabetic Retinopathy â€" Segmentation and Grading Challenge. Medical Image Analysis, 2020, 59, 101561.	7.0	162
7	The <i>Arabidopsis</i> D-Type Cyclin CYCD2;1 and the Inhibitor ICK2/KRP2 Modulate Auxin-Induced Lateral Root Formation. Plant Cell, 2011, 23, 641-660.	3.1	111
8	Time-lapse analysis of stem-cell divisions in theArabidopsis thalianaroot meristem. Plant Journal, 2006, 48, 619-627.	2.8	100
9	On combining classifiers using sum and product rules. Pattern Recognition Letters, 2001, 22, 1283-1289.	2.6	99
10	Optic disc segmentation using the sliding band filter. Computers in Biology and Medicine, 2015, 56, 1-12.	3.9	92
11	Cell Nuclei and Cytoplasm Joint Segmentation Using the Sliding Band Filter. IEEE Transactions on Medical Imaging, 2010, 29, 1463-1473.	5.4	91
12	Segmentation of the carotid intima-media region in B-mode ultrasound images. Image and Vision Computing, 2010, 28, 614-625.	2.7	80
13	DR|GRADUATE: Uncertainty-aware deep learning-based diabetic retinopathy grading in eye fundus images. Medical Image Analysis, 2020, 63, 101715.	7.0	68
14	Automatic localization of the optic disc by combining vascular and intensity information. Computerized Medical Imaging and Graphics, 2013, 37, 409-417.	3.5	62
15	Classification of Breast Cancer Histology Images Through Transfer Learning Using a Pre-trained Inception Resnet V2. Lecture Notes in Computer Science, 2018, , 763-770.	1.0	59
16	Segmentation of ultrasound images of the carotid using RANSAC and cubic splines. Computer Methods and Programs in Biomedicine, 2011, 101, 94-106.	2.6	41
17	MedAL: Accurate and Robust Deep Active Learning for Medical Image Analysis. , 2018, , .		38
18	Automated Arabidopsis plant root cell segmentation based on SVM classification and region merging. Computers in Biology and Medicine, 2009, 39, 785-793.	3.9	32

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19	Data Augmentation for Improving Proliferative Diabetic Retinopathy Detection in Eye Fundus Images. IEEE Access, 2020, 8, 182462-182474.	2.6	31
20	Microaneurysm detection in color eye fundus images for diabetic retinopathy screening. Computers in Biology and Medicine, 2020, 126, 103995.	3.9	27
21	Detection of Lung Nodule Candidates in Chest Radiographs. Lecture Notes in Computer Science, 2007, , 170-177.	1.0	25
22	Watershed framework to region-based image segmentation. , 2008, , .		25
23	Deep Convolutional Artery/Vein Classification of Retinal Vessels. Lecture Notes in Computer Science, 2018, , 622-630.	1.0	23
24	Automatic segmentation of carotid B-mode images using fuzzy classification. Medical and Biological Engineering and Computing, 2012, 50, 533-545.	1.6	21
25	Learning Lung Nodule Malignancy Likelihood from Radiologist Annotations or Diagnosis Data. Journal of Medical and Biological Engineering, 2018, 38, 424-442.	1.0	19
26	A multi-task CNN approach for lung nodule malignancy classification and characterization. Expert Systems With Applications, 2021, 184, 115469.	4.4	19
27	Gradient convergence filters and a phase congruency approach for in vivo cell nuclei detection. Machine Vision and Applications, 2012, 23, 623-638.	1.7	18
28	Oâ€MedAL: Online active deep learning for medical image analysis. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2020, 10, e1353.	4.6	18
29	Illumination Correction by Dehazing for Retinal Vessel Segmentation. , 2017, , .		17
30	Automatic Lung Nodule Detection Combined With Gaze Information Improves Radiologistsâ€™ Screening Performance. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 2894-2901.	3.9	15
31	Carotid Ultrasound Boundary Study (CUBS): An Open Multicenter Analysis of Computerized Intimaâ€"Media Thickness Measurement Systems and Their Clinical Impact. Ultrasound in Medicine and Biology, 2021, 47, 2442-2455.	0.7	15
32	Carotid Ultrasound Boundary Study (CUBS): Technical considerations on an open multi-center analysis of computerized measurement systems for intima-media thickness measurement on common carotid artery longitudinal B-mode ultrasound scans. Computers in Biology and Medicine, 2022, 144, 105333.	3.9	15
33	Automatic Localization of the Optic Disc in Retinal Images Based on the Entropy of Vascular Directions. Lecture Notes in Computer Science, 2012, , 424-431.	1.0	14
34	Automatic detection of the carotid lumen axis in B-mode ultrasound images. Computer Methods and Programs in Biomedicine, 2014, 115, 110-118.	2.6	14
35	EyeWeS: Weakly Supervised Pre-Trained Convolutional Neural Networks for Diabetic Retinopathy Detection. , 2019, , .		14
36	Rehab@home: a tool for home-based motor function rehabilitation. Disability and Rehabilitation: Assistive Technology, 2015, 10, 67-74.	1.3	13

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37	Wivern: a Web-Based System Enabling Computer-Aided Diagnosis and Interdisciplinary Expert Collaboration for Vascular Research. Journal of Medical and Biological Engineering, 2017, 37, 920-935.	1.0	13
38	Optical Flow Based Arabidopsis Thaliana Root Meristem Cell Division Detection. Lecture Notes in Computer Science, 2010, , 217-226.	1.0	13
39	Evaluation of Contrast Enhancement Filters for Lung Nodule Detection. Lecture Notes in Computer Science, 2007, , 878-888.	1.0	12
40	UOLO - Automatic Object Detection and Segmentation in Biomedical Images. Lecture Notes in Computer Science, 2018, , 165-173.	1.0	11
41	Automatic classification of retinal blood vessels based on multilevel thresholding and graph propagation. Visual Computer, 2021, 37, 1247-1261.	2.5	11
42	A Deep Neural Network for Vessel Segmentation of Scanning Laser Ophthalmoscopy Images. Lecture Notes in Computer Science, 2017, , 507-515.	1.0	11
43	Automatic Lane and Band Detection in Images of Thin Layer Chromatography. Lecture Notes in Computer Science, 2004, , 158-165.	1.0	10
44	Automatic Lumen Detection on Longitudinal Ultrasound B-Mode Images of the Carotid Using Phase Symmetry. Sensors, 2016, 16, 350.	2.1	10
45	Automatic cell segmentation from confocal microscopy images of the Arabidopsis root. , 2008, , .		9
46	Chromatographic Pattern Classification. IEEE Transactions on Biomedical Engineering, 2008, 55, 1687-1696.	2.5	8
47	An automatic method for the estimation of Arteriolar-to-Venular Ratio in retinal images. , 2013, , .		8
48	RetinaCAD, a system for the assessment of retinal vascular changes. , 2014, 2014, 6328-31.		8
49	Towards an Automatic Lung Cancer Screening System in Low Dose Computed Tomography. Lecture Notes in Computer Science, 2018, , 310-318.	1.0	8
50	LNDb challenge on automatic lung cancer patient management. Medical Image Analysis, 2021, 70, 102027.	7.0	8
51	Automatic Tracking of Arabidopsis thaliana Root Meristem in Confocal Microscopy. Lecture Notes in Computer Science, 2004, , 166-174.	1.0	7
52	Dissimilarity-based classification of chromatographic profiles. Pattern Analysis and Applications, 2008, 11, 409-423.	3.1	7
53	Robust common carotid artery lumen detection in B-mode ultrasound images using local phase symmetry. , 2013, , .		7
54	A Multiclassifier Approach for Lung Nodule Classification. Lecture Notes in Computer Science, 2006, , 612-623.	1.0	7

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55	A Pipelined Real-Time Optical Flow Algorithm. Lecture Notes in Computer Science, 2004, , 372-380.	1.0	6
56	Automatic Lane Segmentation in TLC Images Using the Continuous Wavelet Transform. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-19.	0.7	6
57	3D lung nodule candidate detection in multiple scales. , 2015, , .		6
58	A robust anisotropic edge detection method for carotid ultrasound image processing. Procedia Computer Science, 2018, 126, 723-732.	1.2	6
59	A Hybrid Approach for Arabidopsis Root Cell Image Segmentation. Lecture Notes in Computer Science, 2008, , 739-749.	1.0	6
60	Cancer cell detection and invasion depth estimation in brightfield images. , 2009, , .		6
61	Enhancement of Retinal Fundus Images via Pixel Color Amplification. Lecture Notes in Computer Science, 2020, , 299-312.	1.0	6
62	Evaluation of Symmetry Enhanced Sliding Band Filter for Plant Cell Nuclei Detection in Low Contrast Noisy Fluorescent Images. Lecture Notes in Computer Science, 2009, , 824-831.	1.0	5
63	Automatic Lane Detection in Chromatography Images. Lecture Notes in Computer Science, 2012, , 180-187.	1.0	5
64	Hand Detection and Tracking Using the Skeleton of the Blob for Medical Rehabilitation Applications. Lecture Notes in Computer Science, 2012, , 130-137.	1.0	5
65	Objective quality assessment of retinal images based on texture features. , 2017, , .		5
66	Reliable Lung Segmentation Methodology by Including Juxtapleural Nodules. Lecture Notes in Computer Science, 2014, , 227-235.	1.0	5
67	Arabidopsis Thaliana Automatic Cell File Detection and Cell Length Estimation. Lecture Notes in Computer Science, 2011, , 1-11.	1.0	5
68	Assessing clinical applicability of COVID-19 detection in chest radiography with deep learning. Scientific Reports, 2022, 12, 6596.	1.6	5
69	Convolutional Neural Network Architectures for Texture Classification of Pulmonary Nodules. Lecture Notes in Computer Science, 2019, , 783-791.	1.0	4
70	Lung Parenchyma Segmentation from CT Images Based on Material Decomposition. Lecture Notes in Computer Science, 2006, , 624-635.	1.0	4
71	Tracking of Arabidopsis thaliana root cells in time-lapse microscopy. , 2008, , .		3
72	Distance measures for image segmentation evaluation. , 2012, , .		3

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73	Radiologists' Gaze Characterization During Lung Nodule Search in Thoracic CT. , 2018, , .		3
74	Learned Pre-processing for Automatic Diabetic Retinopathy Detection on Eye Fundus Images. Lecture Notes in Computer Science, 2019, , 362-368.	1.0	3
75	Optimal Detection of Symmetry Axis in Digital Chest X-ray Images. Lecture Notes in Computer Science, 2003, , 1082-1089.	1.0	3
76	Minimizing the Imbalance Problem in Chromatographic Profile Classification with One-Class Classifiers. Lecture Notes in Computer Science, 2008, , 413-422.	1.0	3
77	3D Cell Nuclei Fluorescence Quantification Using Sliding Band Filter. , 2010, , .		2
78	Low frame rate cell tracking: A Delaunay graph matching approach. , 2011, , .		2
79	Automatic segmentation of chromatographic images for region of interest delineation. Proceedings of SPIE, 2011, , .	0.8	2
80	Automatic Estimation of the Arteriolar-to-Venular Ratio in Retinal Images Using a Graph-Based Approach for Artery/Vein Classification. Lecture Notes in Computer Science, 2013, , 530-538.	1.0	2
81	Assessment of vascular changes in retinal images. , 2014, , .		2
82	Assessment of Retinal Vascular Changes Through Arteriolar-to-Venular Ratio Calculation. Lecture Notes in Computer Science, 2015, , 335-343.	1.0	2
83	Wide Residual Network for Lung-Radsâ„¢ Screening Referral. , 2019, , .		2
84	Bounds for the Average Generalization Error of the Mixture of Experts Neural Network. Lecture Notes in Computer Science, 2004, , 618-625.	1.0	2
85	Genetic Model-Based Segmentation of Chest X-Ray Images Using Free Form Deformations. Lecture Notes in Computer Science, 2005, , 958-965.	1.0	2
86	An Electronic Instrumentation Course for Non-Electronic Engineering Students. International Journal of Electrical Engineering and Education, 2004, 41, 43-55.	0.4	1
87	Optical Flow Based Approach for Automatic Cardiac Cycle Estimation in Ultrasound Images of the Carotid. Lecture Notes in Computer Science, 2015, , 360-367.	1.0	1
88	Automatic and semi-automatic approaches for arteriolar-to-venular computation in retinal photographs. , 2017, , .		1
89	Segmentation of COVID-19 Lesions in CT Images. , 2021, , .		1
90	The Class Imbalance Problem in TLC Image Classification. Lecture Notes in Computer Science, 2006, , 513-523.	1.0	1

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91	Detection of Rib Borders on X-ray Chest Radiographs. Lecture Notes in Computer Science, 2004, , 108-115.	1.0	1
92	Classification of Lung Nodules in CT Volumes Using the Lung-RADSâ„¢ Guidelines with Uncertainty Parameterization. , 2020, , .		1
93	A Probabilistic Model for the Cooperative Modular Neural Network. Lecture Notes in Computer Science, 2003, , 11-18.	1.0	1
94	Chromatographic Pattern Recognition Using Optimized One-Class Classifiers. Lecture Notes in Computer Science, 2009, , 449-456.	1.0	1
95	Optic Disc and Fovea Detection in Color Eye Fundus Images. Lecture Notes in Computer Science, 2020, , 332-343.	1.0	1
96	Retinal and choroidal vasoreactivity in central serous chorioretinopathy. Graefe's Archive for Clinical and Experimental Ophthalmology, 0, , .	1.0	1
97	Optic Disk Localization for Gray-Scale Retinal Images Based on Patch Filtering. Lecture Notes in Computer Science, 2014, , 277-284.	1.0	0
98	Creation of Retinal Mosaics for Diabetic Retinopathy Screening: A Comparative Study. Lecture Notes in Computer Science, 2018, , 669-678.	1.0	0
99	Epistemic and Heteroscedastic Uncertainty Estimation in Retinal Blood Vessel Segmentation. U Porto Journal of Engineering, 2021, 7, 93-100.	0.2	0
100	Ribcage Boundary Delineation in Chest X-ray Images. Lecture Notes in Computer Science, 2004, , 59-67.	1.0	0
101	Classification-Based Segmentation of the Region of Interest in Chromatographic Images. Lecture Notes in Computer Science, 2011, , 68-78.	1.0	0
102	Classification Approach for Measurement of Atherosclerosis Using B-Mode Ultrasound Carotid Images. Lecture Notes in Computer Science, 2013, , 539-546.	1.0	0
103	Lane Background Removal for the Classification of Thin-Layer Chromatography Images. Lecture Notes in Computer Science, 2013, , 556-564.	1.0	0
104	Correction of Geometrical Distortions in Bands of Chromatography Images. Lecture Notes in Computer Science, 2013, , 274-281.	1.0	0
105	Segmentation of Carotid Ultrasound Images. , 2014, , 269-286.		0
106	Automatic Lung Reference Model. IFMBE Proceedings, 2020, , 999-1008.	0.2	0
107	LNDetector: A Flexible Gaze Characterisation Collaborative Platform for Pulmonary Nodule Screening. IFMBE Proceedings, 2020, , 333-343.	0.2	0
108	Region and Graph-Based Motion Segmentation. Lecture Notes in Computer Science, 2008, , 609-618.	1.0	0

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109	Review on Deep Learning Methods for Chest X-Ray based Abnormality Detection and Thoracic Pathology Classification. U Porto Journal of Engineering, 2021, 7, 16-32.	0.2	0
110	Automatic Label Detection in Chest Radiography Images. , 2022, , .		0
111	Chest Radiography Few-Shot Image Synthesis for Automated Pathology Screening Applications. , 2021, , .		0
112	Lesion-Based Chest Radiography Image Retrieval forÂExplainability inÂPathology Detection. Lecture Notes in Computer Science, 2022, , 81-94.	1.0	0