Leonardo Rundo

List of Publications by Year
in descending order

85 papers	2,734 citations	236925 25 h-index	243625 44 g-index
93 all docs	93 docs citations	93 times ranked	2261 citing authors

#	Article	IF	Citations
1	AI applications to medical images: From machine learning to deep learning. Physica Medica, 2021, 83, 9-24.	0.7	253
2	Unified Focal loss: Generalising Dice and cross entropy-based losses to handle class imbalanced medical image segmentation. Computerized Medical Imaging and Graphics, 2022, 95, 102026.	5.8	186
3	USE-Net: Incorporating Squeeze-and-Excitation blocks into U-Net for prostate zonal segmentation of multi-institutional MRI datasets. Neurocomputing, 2019, 365, 31-43.	5.9	185
4	GAN-based synthetic brain MR image generation. , 2018, , .		173
5	Combining Noise-to-Image and Image-to-Image GANs: Brain MR Image Augmentation for Tumor Detection. IEEE Access, 2019, 7, 156966-156977.	4.2	138
6	MADGAN: unsupervised medical anomaly detection GAN using multiple adjacent brain MRI slice reconstruction. BMC Bioinformatics, 2021, 22, 31.	2.6	86
7	MedGA: A novel evolutionary method for image enhancement in medical imaging systems. Expert Systems With Applications, 2019, 119, 387-399.	7.6	85
8	Synthesizing Diverse Lung Nodules Wherever Massively: 3D Multi-Conditional GAN-Based CT Image Augmentation for Object Detection. , 2019, , .		74
9	Focus U-Net: A novel dual attention-gated CNN for polyp segmentation during colonoscopy. Computers in Biology and Medicine, 2021, 137, 104815.	7.0	68
10	Learning More with Less. , 2019, , .		56
11	Recent advances of HCI in decision-making tasks for optimized clinical workflows and precision medicine. Journal of Biomedical Informatics, 2020, 108, 103479.	4.3	56
12	Automated Prostate Gland Segmentation Based on an Unsupervised Fuzzy C-Means Clustering Technique Using Multispectral T1w and T2w MR Imaging. Information (Switzerland), 2017, 8, 49.	2.9	48
13	A semi-automatic approach for epicardial adipose tissue segmentation and quantification on cardiac CT scans. Computers in Biology and Medicine, 2019, 114, 103424.	7.0	47
14	Infinite Brain MR Images: PGGAN-Based Data Augmentation forÂTumor Detection. Smart Innovation, Systems and Technologies, 2020, , 291-303.	0.6	46
15	Biochemical parameter estimation vs. benchmark functions: A comparative study of optimization performance and representation design. Applied Soft Computing Journal, 2019, 81, 105494.	7.2	45
16	A novel framework for MR image segmentation and quantification by using MedGA. Computer Methods and Programs in Biomedicine, 2019, 176, 159-172.	4.7	43
17	NeXt for neuroâ€radiosurgery: A fully automatic approach for necrosis extraction in brain tumor MRI using an unsupervised machine learning technique. International Journal of Imaging Systems and Technology, 2018, 28, 21-37.	4.1	41
18	Hyperpolarized ¹³C MRI of Tumor Metabolism Demonstrates Early Metabolic Response to Neoadjuvant Chemotherapy in Breast Cancer. Radiology Imaging Cancer, 2020, 2, e200017.	1.6	40

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19	A fully automatic approach for multimodal PET and MR image segmentation in gamma knife treatment planning. Computer Methods and Programs in Biomedicine, 2017, 144, 77-96.	4.7	39
20	Combining split-and-merge and multi-seed region growing algorithms for uterine fibroid segmentation in MRgFUS treatments. Medical and Biological Engineering and Computing, 2016, 54, 1071-1084.	2.8	38
21	Gamma Knife treatment planning: MR brain tumor segmentation and volume measurement based on unsupervised Fuzzy C-Means clustering. International Journal of Imaging Systems and Technology, 2015, 25, 213-225.	4.1	36
22	Semi-automated and interactive segmentation of contrast-enhancing masses on breast DCE-MRI using spatial fuzzy clustering. Biomedical Signal Processing and Control, 2022, 71, 103113.	5.7	35
23	GTVcut for neuro-radiosurgery treatment planning: an MRI brain cancer seeded image segmentation method based on a cellular automata model. Natural Computing, 2018, 17, 521-536.	3.0	32
24	A Survey on Nature-Inspired Medical Image Analysis: A Step Further in Biomedical Data Integration. Fundamenta Informaticae, 2019, 171, 345-365.	0.4	31
25	3D DCE-MRI Radiomic Analysis for Malignant Lesion Prediction in Breast Cancer Patients. Academic Radiology, 2022, 29, 830-840.	2.5	31
26	A fully automatic 2D segmentation method for uterine fibroid in MRgFUS treatment evaluation. Computers in Biology and Medicine, 2015, 62, 277-292.	7.0	30
27	A Novel Bio-Inspired Approach for High-Performance Management in Service-Oriented Networks. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 1709-1722.	4.6	30
28	Integrative radiogenomics for virtual biopsy and treatment monitoring in ovarian cancer. Insights Into Imaging, 2020, 11, 94.	3.4	30
29	Comparative performance of fully-automated and semi-automated artificial intelligence methods for the detection of clinically significant prostate cancer on MRI: a systematic review. Insights Into Imaging, 2022, 13, 59.	3.4	29
30	Robustness of radiomic features in CT images with different slice thickness, comparing liver tumour and muscle. Scientific Reports, 2021, 11, 8262.	3.3	28
31	Comparative performance of MRI-derived PRECISE scores and delta-radiomics models for the prediction of prostate cancer progression in patients on active surveillance. European Radiology, 2022, 32, 680-689.	4.5	28
32	Tissue-specific and interpretable sub-segmentation of whole tumour burden on CT images by unsupervised fuzzy clustering. Computers in Biology and Medicine, 2020, 120, 103751.	7.0	27
33	GenHap: a novel computational method based on genetic algorithms for haplotype assembly. BMC Bioinformatics, 2019, 20, 172.	2.6	26
34	Assessing robustness of carotid artery CT angiography radiomics in the identification of culprit lesions in cerebrovascular events. Scientific Reports, 2021, 11, 3499.	3.3	26
35	Multimodal medical image registration using Particle Swarm Optimization: A review. , 2016, , .		25
36	A quantum-inspired classifier for clonogenic assay evaluations. Scientific Reports, 2021, 11, 2830.	3.3	25

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37	Hyperpolarized Carbon-13 MRI for Early Response Assessment of Neoadjuvant Chemotherapy in Breast Cancer Patients. Cancer Research, 2021, 81, 6004-6017.	0.9	25
38	Hercules: Deep Hierarchical Attentive Multilevel Fusion Model With Uncertainty Quantification for Medical Image Classification. IEEE Transactions on Industrial Informatics, 2023, 19, 274-285.	11.3	25
39	Fingerprint Classification Based on Deep Learning Approaches: Experimental Findings and Comparisons. Symmetry, 2021, 13, 750.	2.2	24
40	Proactive Particles in Swarm Optimization: A settings-free algorithm for real-parameter single objective optimization problems. , 2017, , .		22
41	A framework for data-driven adaptive GUI generation based on DICOM. Journal of Biomedical Informatics, 2018, 88, 37-52.	4.3	22
42	Computational Intelligence for Parameter Estimation of Biochemical Systems. , 2018, , .		21
43	Ultrasound-guided targeted biopsies of CT-based radiomic tumour habitats: technical development and initial experience in metastatic ovarian cancer. European Radiology, 2021, 31, 3765-3772.	4.5	20
44	CNN-Based Prostate Zonal Segmentation on T2-Weighted MR Images: AÂCross-Dataset Study. Smart Innovation, Systems and Technologies, 2020, , 269-280.	0.6	20
45	Area-based cell colony surviving fraction evaluation: A novel fully automatic approach using general-purpose acquisition hardware. Computers in Biology and Medicine, 2017, 89, 454-465.	7.0	19
46	A Hybrid End-to-End Approach Integrating Conditional Random Fields into CNNs for Prostate Cancer Detection on MRI. Applied Sciences (Switzerland), 2020, 10, 338.	2.5	19
47	Correlating Radiomic Features of Heterogeneity on CT with Circulating Tumor DNA in Metastatic Melanoma. Cancers, 2020, 12, 3493.	3.7	18
48	Impact of GAN-based lesion-focused medical image super-resolution on the robustness of radiomic features. Scientific Reports, 2021, 11, 21361.	3.3	18
49	MRI-derived radiomics model for baseline prediction of prostate cancer progression on active surveillance. Scientific Reports, 2021, 11, 12917.	3.3	17
50	CT texture-based radiomics analysis of carotid arteries identifies vulnerable patients: a preliminary outcome study. Neuroradiology, 2021, 63, 1043-1052.	2.2	16
51	Reproducibility of CT-based radiomic features against image resampling and perturbations for tumour and healthy kidney in renal cancer patients. Scientific Reports, 2021, 11, 11542.	3.3	16
52	Bridging the Gap Between AI and Healthcare Sides: Towards Developing Clinically Relevant AI-Powered Diagnosis Systems. IFIP Advances in Information and Communication Technology, 2020, , 320-333.	0.7	15
53	MF2C3: Multi-Feature Fuzzy Clustering to Enhance Cell Colony Detection in Automated Clonogenic Assay Evaluation. Symmetry, 2020, 12, 773.	2.2	14
54	Clinically Interpretable Radiomics-Based Prediction of Histopathologic Response to Neoadjuvant Chemotherapy in High-Grade Serous Ovarian Carcinoma. Frontiers in Oncology, 0, 12, .	2.8	12

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55	Reboot strategies in particle swarm optimization and their impact on parameter estimation of biochemical systems. , 2017, , .		11
56	HaraliCU: GPU-Powered Haralick Feature Extraction on Medical Images Exploiting the Full Dynamics of Gray-Scale Levels. Lecture Notes in Computer Science, 2019, , 304-318.	1.3	10
57	A Low-Dose CT-Based Radiomic Model to Improve Characterization and Screening Recall Intervals of Indeterminate Prevalent Pulmonary Nodules. Diagnostics, 2021, 11, 1610.	2.6	10
58	Serial changes in tumour measurements and apparent diffusion coefficients in prostate cancer patients on active surveillance with and without histopathological progression. British Journal of Radiology, 2022, 95, 20210842.	2.2	10
59	ACDC: Automated Cell Detection and Counting for Time-Lapse Fluorescence Microscopy. Applied Sciences (Switzerland), 2020, 10, 6187.	2.5	9
60	3D deformable registration of longitudinal abdominopelvic CT images using unsupervised deep learning. Computer Methods and Programs in Biomedicine, 2021, 208, 106261.	4.7	9
61	GAN-Based Multiple Adjacent Brain MRI Slice Reconstruction for Unsupervised Alzheimerâ€™s Disease Diagnosis. Lecture Notes in Computer Science, 2020, , 44-54.	1.3	9
62	Semi-automatic Brain Lesion Segmentation in Gamma Knife Treatments Using an Unsupervised Fuzzy C-Means Clustering Technique. Smart Innovation, Systems and Technologies, 2016, , 15-26.	0.6	9
63	On Unsupervised Methods for Medical Image Segmentation: Investigating Classic Approaches in Breast Cancer DCE-MRI. Applied Sciences (Switzerland), 2022, 12, 162.	2.5	9
64	Fully Automatic Multispectral MR Image Segmentation of Prostate Gland Based on the Fuzzy C-Means Clustering Algorithm. Smart Innovation, Systems and Technologies, 2018, , 23-37.	0.6	8
65	A multimodal retinaâ€iris biometric system using the Levenshtein distance for spatial feature comparison. IET Biometrics, 2021, 10, 44-64.	2.5	8
66	Semantic learning machine improves the CNN-Based detection of prostate cancer in non-contrast-enhanced MRI. , 2019, , .		7
67	GPU-Powered Multi-Swarm Parameter Estimation of Biological Systems: A Master-Slave Approach. , 2018, , .		6
68	A CUDA-powered method for the feature extraction and unsupervised analysis of medical images. Journal of Supercomputing, 2021, 77, 8514-8531.	3.6	6
69	SMGen: A Generator of Synthetic Models of Biochemical Reaction Networks. Symmetry, 2022, 14, 119.	2.2	6
70	Computational Intelligence for Life Sciences. Fundamenta Informaticae, 2019, 171, 57-80.	0.4	5
71	Three-dimensional MRI evaluation of the effect of bladder volume on prostate translocation and distortion. Radiology and Oncology, 2020, 54, 48-56.	1.7	5
72	An edge-driven 3D region-growing approach for upper airway morphology and volume evaluation in patients with Pierre Robin sequence. International Journal of Adaptive and Innovative Systems, 2015, 2, 232.	0.1	4

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73	Neuro-Radiosurgery Treatments: MRI Brain Tumor Seeded Image Segmentation Based on a Cellular Automata Model. Lecture Notes in Computer Science, 2016, , 323-333.	1.3	4
74	Robustness Analysis of DCE-MRI-Derived Radiomic Features in Breast Masses: Assessing Quantization Levels and Segmentation Agreement. Applied Sciences (Switzerland), 2022, 12, 5512.	2.5	4
75	Energy Efficiency Evaluation of Dynamic Partial Reconfiguration in Field Programmable Gate Arrays: An Experimental Case Study. Energies, 2018, 11, 739.	3.1	3
76	Focal Attention Networks: Optimising Attention for Biomedical Image Segmentation. , 2022, , .		3
77	A Computational Study on Temperature Variations in MRgFUS Treatments Using PRF Thermometry Techniques and Optical Probes. Journal of Imaging, 2021, 7, 63.	3.0	2
78	Advanced Computational Methods for Oncological Image Analysis. Journal of Imaging, 2021, 7, 237.	3.0	2
79	Enhancing classification performance of convolutional neural networks for prostate cancer detection on magnetic resonance images. , 2019, , .		1
80	High Performance Computing for Haplotyping: Models and Platforms. Lecture Notes in Computer Science, 2019, , 650-661.	1.3	1
81	HCI for biomedical decision-making: From diagnosis to therapy. Journal of Biomedical Informatics, 2020, 111, 103593.	4.3	1
82	Quantifying the effect of biopsy lateral decubitus patient positioning compared to supine prostate MRI scanning on prostate translocation and distortion. Canadian Urological Association Journal, 2020, 14, E445-E452.	0.6	1
83	FiCoS: A fine-grained and coarse-grained GPU-powered deterministic simulator for biochemical networks. PLoS Computational Biology, 2021, 17, e1009410.	3.2	1
84	Computer-Assisted Approaches for Uterine Fibroid Segmentation in MRgFUS Treatments: Quantitative Evaluation and Clinical Feasibility Analysis. Smart Innovation, Systems and Technologies, 2019, , 229-241.	0.6	1
85	Estimation of Kinetic Reaction Constants: Exploiting Reboot Strategies to Improve PSOâ€™s Performance. Lecture Notes in Computer Science, 2019, , 92-102.	1.3	0